
**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**North American Electric Reliability
Corporation**

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Docket No. _____

**PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS IRO-010-5, AND TOP-
003-6.1**

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Pursuant to section 215(d)(1) of the Federal Power Act (“FPA”)¹ and section 39.5² of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) regulations, the North American Electric Reliability Corporation (“NERC”)³ hereby submits for Commission approval proposed revisions to two Reliability Standards: IRO-010-5 (Reliability Coordinator Data and Information Specification and Collection), and TOP-003-6.1 (Transmission Operator and Balancing Authority Data and Information Specification and Collection) (collectively, the “Modifications to IRO-010 and TOP-003”).

As discussed more fully herein, the proposals set forth in this petition originate from the second phase of work under NERC’s Standards Efficiency Review (“SER”). This initiative, which began in 2017, reviewed the body of NERC Reliability Standards as a part of NERC’s ongoing commitment to continually improve its standards and to review requirements that may be duplicative to other standards or provide no benefit to reliability. The proposed Modifications to IRO-010 and TOP-003, discussed herein, address recommendations arising from the SER Phase 2

¹ 16 U.S.C. § 824o.

² 18 C.F.R. § 39.5.

³ The Commission certified NERC as the electric reliability organization (“ERO”) in accordance with Section 215 of the FPA on July 20, 2006. *N. Am. Elec. Reliability Corp.*, 116 FERC ¶ 61,062 (2006), *order on reh’g & compliance*, 117 FERC ¶ 61,126 (2006), *aff’d sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

Team by clarifying, consolidating, and improving approaches for data and information specification and exchange. The proposed revisions are intended to advance the reliability of the Bulk-Power System (“BPS”)⁴ by ensuring that Registered Entities with operational responsibilities are able to request and receive the data and information necessary to support Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions in an optimal manner.

NERC requests that the Commission approve the proposed Modifications to IRO-010 and TOP-003, as shown in **Exhibit A**, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. NERC also requests that the Commission approve: (i) the associated Violation Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”) (**Exhibit E**); (ii) the retirement of currently effective Reliability Standards IRO-010-4, and TOP-003-5; and (iii) the proposed implementation plan (**Exhibit B**).

As required by section 39.5(a)⁵ of the Commission’s regulations, this petition presents the technical basis and purpose of the proposed Reliability Standards, a demonstration that the proposed Reliability Standards meet the criteria identified by the Commission in Order No. 672⁶ (**Exhibit D**), and a summary of the standard development history (**Exhibit F**). The NERC Board of Trustees adopted the proposed Reliability Standards on August 17, 2023.

⁴ Unless otherwise indicated, all capitalized terms used in this petition shall have the meaning set forth in the *Glossary of Terms used in NERC Reliability Standards* (“NERC Glossary”), https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf.

⁵ 18 C.F.R. § 39.5(a).

⁶ The Commission specified in Order No. 672 certain general factors it would consider when assessing whether a particular Reliability Standard is just and reasonable. *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, 114 FERC ¶ 61,104, at P 262, 321-37 (“Order No. 672”), *order on reh’g*, Order No. 672-A, 114 FERC ¶ 61,328 (2006).

This petition is organized as follows: Section I presents the history and an overview of the SER and a summary of the proposals in this filing. Section II of the petition provides the individuals to whom notices and communications related to the filing should be provided. Section III provides relevant background regarding: (i) the regulatory structure governing the Reliability Standards approval process; (ii) information on the development process for the proposed Modifications to IRO-010 and TOP-003; and (iii) the Project 2021-06 proposed Modifications to IRO-010 and TOP-003. Section IV of the petition provides an overview and justification for the proposed Modifications to IRO-010 and TOP-003. Section V of the petition provides a summary of the proposed implementation plan.

I. THE STANDARDS EFFICIENCY REVIEW

NERC's mission is to assure effective and efficient reduction of risks to the reliability and security of the North American BPS. Mandatory Reliability Standards play an integral role in helping NERC achieve its mission of a highly reliable and secure grid. Over the years NERC has engaged in several efficiency and process review efforts to improve the body of Reliability Standards, *e.g.*, the Standards Process Input Group in 2012, NERC's "paragraph 81" initiative (Project 2013-02 Paragraph 81),⁷ and most recently, the SER in 2017.⁸

In March 2017, during a NERC Member Representatives Committee meeting, the suggestion was made that NERC should review the existing set of reliability standards for further efficiencies, similar to the prior Paragraph 81 review.⁹ In response, NERC launched the SER to determine whether, following a decade of experience with developing and implementing mandatory Reliability Standards in the United States, there were opportunities to improve the

⁷ *N. Am. Elec. Reliability Corp.*, 138 FERC ¶ 61,193, at P 81 (2012) ("Paragraph 81 Order").

⁸ *Standards Efficiency Review Report and Transition Plan*, at p. 1 (May 3, 2021) ("SER Report"); available at [SER_Project_Final_Recommendation_and_Transition_05042021.pdf\(nerc.com\)](https://www.nerc.com/pdfs/SER_Project_Final_Recommendation_and_Transition_05042021.pdf).

⁹ *Id.* at p. 2.

overall effectiveness and efficiency of its Reliability Standards.¹⁰ This comprehensive, multi-year review project comprised a key element of NERC's plan to achieve its long-term strategic goal of establishing risk-based controls to minimize BPS reliability risk while also driving operational efficiencies and effectiveness.¹¹

For the first phase of the SER, review teams consisting of industry experts in Real-time operations, long-term planning, and operations planning performed a comprehensive review of the operations and planning Reliability Standards. These Phase 1 working teams were collectively tasked with analyzing the industry input and identifying unconditional retirements and consolidations or modifications.¹² The review process was conducted in an open and transparent manner, with broad industry participation. As a result, NERC proposed the retirement of a number of Reliability Standard requirements, 18 of which were approved by FERC on September 17, 2020.¹³

The SER Phase 1 discussions identified additional efficiency opportunities as an alternative to outright retirement of requirements.¹⁴ These opportunities and concepts evolved into SER Phase 2, which sought to identify standards-based solutions applicable to all Reliability Standards in lieu of further unconditional retirements.¹⁵ The SER Phase 2 Team developed and presented the following six efficiency concepts to industry in February 2019 and solicited its feedback: (1) Evidence Retention Overhaul; (2) Consolidate Information/Data Exchange Requirements; (3)

¹⁰ *Id.* at 2.

¹¹ See ERO Enterprise Long-Term Strategy (Approved by the NERC Board of Trustees on December 12, 2019), available on NERC's website at <https://www.nerc.com/AboutNERC/Pages/Strategic-Documents.aspx>.

¹² SER Report at p. 2.

¹³ *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards Under the NERC Standards Efficiency Review*, Order No. 873, 172 FERC ¶ 61,225 (2020).

¹⁴ SER Report at p. 3.

¹⁵ *Id.*

Move Requirements to Guidance; (4) Prototype Standard; (5) Consolidate & Simplify Training Requirements; and (6) Relocate Competency-based Requirements to Certification Program/CMEP Controls Review process.¹⁶ Based on industry feedback, the SER Phase 2 Team prioritized the first four concepts to pursue.¹⁷

The instant petition focuses on Concept 2: Consolidate Information/Data Exchange Requirements. The primary purpose of Concept 2 was to enhance and simplify Reliability Standards that facilitate the exchange of information and data necessary to plan and operate the Bulk Electric System (“BES”).¹⁸ The SER Report stated that “[a]s written the requirements potentially create unnecessary administrative burdens for the Registered Entity to demonstrate compliance, including excessive data collection and retention.”¹⁹ The SER Report further noted that a secondary purpose for the SER Phase 2 Team was to evaluate retirement of other dispersed requirements that have become redundant and unnecessary.²⁰ The SER Phase 2 sub-team that worked on this concept focused on the IRO-010 and TOP-003 requirements, since more activity and potential benefit is associated with the exchange of information and data in the operations horizon.²¹ The SER Phase 2 sub-team developed and submitted the Standard Authorization Request (“SAR”) in June 2020 that was endorsed by the Standards Committee in their meeting on January 20, 2021.²²

The purpose of the SAR is to simplify administrative burdens identified by the SER Phase 2 Team associated with Reliability Standards IRO-010-4 and TOP-003-5; limit unnecessary data

¹⁶ *Id.* at pp. 3-4.

¹⁷ *Id.* at p. 3.

¹⁸ *Id.* at p. 5.

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

retention requirements that do not contribute to BES reliability and resiliency; reduce administrative burdens associated with a zero-defect compliance expectation, including excessive data retention; clarify expectations for the “data specification” with a broader definition or scope description; and evaluate removing and consolidating within IRO-010 or TOP-003 other data exchange requirements dispersed in other standards that are related to the four reliability tasks,²³ while ensuring that Registered Entities maintain the ability to request and receive any information needed from other Registered Entities to perform the tasks required under TOP-003 and IRO-010.²⁴

Reliability Standard TOP-003 ensures that each Transmission Operator and Balancing Authority have the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area. Reliability Standard IRO-010 contains the corresponding requirements to ensure that each Reliability Coordinator has the data and information it needs to plan, monitor and assess the operation of its Reliability Coordinator Area.

As discussed more fully in this petition, the proposed Modifications to Reliability Standards IRO-010 and TOP-003 improve the approaches used for data and information specification and exchange by, among other things: (i) clarifying that specifications include both data and information; (ii) requiring the identification of the applicable entity that is required to respond to the request for the specification; (iii) including a data conflict resolution provision within the data specification requirement; (iv) clarifying that specifications should include

²³ The four reliability tasks identified within IRO-010 and TOP-003 are: (1) Operational Planning Analysis, (2) Real-time Assessments, (3) Real-time monitoring, and (4) Balancing Authority analysis functions.

²⁴ Michael Cruz-Montes, *NERC Standard Authorization Request (SAR), Operational Data Exchange Simplification* (Revised on March 16, 2022); *see also* White Paper Project 2021-06 Modifications to TOP-003 and IRO-010 (April 2023) (White Paper); available at: https://www.nerc.com/pa/Stand/202105%20Modifications%20to%20IRO010%20and%20TOP003%20DL/2021-06_Mod_to_IRO-010_and_TOP-003_White_Paper_Clean_05052023.pdf.

protocols to address periodicity, performance criterion, and update and correction mechanisms; and (v) consolidating the format and security protocols within the data specification requirements. The proposed modifications would advance the reliability of the BPS by facilitating improved coordination of information and data sharing, thus allowing the entities responsible for the reliable operation of the BPS to request and receive data and information necessary to support Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions in an optimal manner.

NERC respectfully requests that the Commission approve the proposed Modifications to IRO-010 and TOP-003 as just, reasonable, not unduly discriminatory or preferential, and in the public interest.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to the

following:²⁵

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III. BACKGROUND

A. Regulatory Framework

By enacting the Energy Policy Act of 2005,²⁶ Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the BPS, and with the duties of certifying an ERO that would be charged with developing and enforcing mandatory Reliability Standards, subject to Commission approval. Section 215(b)(1)²⁷ of the FPA states that all users, owners, and operators of the BPS in the United States will be subject to Commission-approved

²⁵ Persons to be included on the Commission's service list are identified by an asterisk. NERC respectfully requests a waiver of Rule 203 of the Commission's regulations, 18 C.F.R. § 385.203, to allow the inclusion of more than two persons on the service list in this proceeding.

²⁶ 16 U.S.C. § 824o.

²⁷ *Id.* § 824o(b)(1).

Reliability Standards. Section 215(d)(5)²⁸ of the FPA authorizes the Commission to order the ERO to submit a new or modified Reliability Standard. Section 39.5(a)²⁹ of the Commission's regulations requires the ERO to file with the Commission for its approval each new Reliability Standard that the ERO proposes should become mandatory and enforceable in the United States, and each modification to a Reliability Standard that the ERO proposes should be made effective.

The Commission is vested with the regulatory responsibility to approve Reliability Standards that protect the reliability of the BPS and to ensure that Reliability Standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Pursuant to section 215(d)(2) of the FPA³⁰ and section 39.5(c)³¹ of the Commission's regulations, the Commission will give due weight to the technical expertise of the ERO with respect to the content of a Reliability Standard.

B. NERC Reliability Standards Development Procedure

The proposed Modifications to IRO-010 and TOP-003 were developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process. NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC Standard Processes Manual.³²

In its order certifying NERC as the Commission's ERO, the Commission found that NERC's rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards,³³ and thus satisfy several

²⁸ *Id.* § 824o(d)(5).

²⁹ 18 C.F.R. § 39.5(a).

³⁰ 16 U.S.C. § 824o(d)(2).

³¹ 18 C.F.R. § 39.5(c)(1).

³² The NERC Rules of Procedure, including Appendix 3A, NERC Standard Processes Manual, are available at <http://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>.

³³ *N. Am. Elec. Reliability Corp.*, 116 FERC ¶ 61,062, at P 250 (2006).

of the Commission’s criteria for approving Reliability Standards.³⁴ The development process is open to any person or entity with a legitimate interest in the reliability of the BPS. NERC considers the comments of all stakeholders. Stakeholders must approve, and the NERC Board of Trustees must adopt, a new or revised Reliability Standard before NERC submits the Reliability Standard to the Commission for approval.

C. Development of the Project 2021-06 Modifications

As further described in **Exhibit F** hereto, NERC initiated a Reliability Standard development project, Project 2021-06 Modifications to IRO-010 and TOP-003 (“Project 2021-06”), and appointed a standard drafting team (**Exhibit G**) to develop the revisions. This project was initiated by the SER Phase 2 sub-team to limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency, while ensuring that Registered Entities maintain the ability to request and receive any information needed from other Registered Entities to perform the tasks required under Reliability Standards TOP-003 and IRO-010. On October 25, 2022, NERC posted the initial drafts of proposed Reliability Standards TOP-003-6 and IRO-010-5 for a 45-day comment period and ballot. The initial ballot did not receive the requisite approval from the registered ballot body (“RBB”). After considering comments to the initial drafts, NERC posted second drafts of the proposed Reliability Standards for another 45-day comment period and ballot on May 5, 2023. The second drafts received the requisite approval from the RBB with an affirmative vote of 74.43 percent at 83.56 percent quorum for proposed TOP-003-6 and an affirmative vote of 74.89 percent at 82.88 percent quorum for proposed IRO-010-5. On July 21, 2023, NERC conducted a 10-day final ballot for the proposed Reliability Standards, which received an affirmative vote of 75.41 percent at 85.27 quorum for proposed TOP-003-6 and an

³⁴ Order No. 672, 114 FERC ¶ 61,104 at PP 268, 270.

affirmative vote of 76.36 percent at 84.59 quorum for proposed IRO-010-5. The NERC Board of Trustees adopted the proposed Reliability Standards on August 17, 2023. Subsequently, at its meeting on August 23, 2023, the Standards Committee approved correcting two errata: under NERC's naming convention, the errata standard was numbered TOP-003-6.1.³⁵ Under Section 12.0: Process for Correcting Errata in the Standard Processes Manual, errors may be corrected in a Reliability Standard:

(i) following a Final Ballot prior to Board of Trustees adoption, (ii) following Board of Trustees adoption prior to filing with Applicable Governmental Authorities; and (iii) following filing with Applicable Governmental Authorities. If the Standards Committee agrees that the correction of the error does not change the scope or intent of the associated Reliability Standard, and agrees that the correction has no material impact on the end users of the Reliability Standard, then the correction shall be filed for approval with Applicable Governmental Authorities as appropriate. The NERC Board of Trustees has resolved to concurrently approve any errata approved by the Standards Committee.³⁶

IV. JUSTIFICATION FOR APPROVAL

As discussed below and in **Exhibit C**, the proposed Reliability Standards are intended to limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency, while ensuring that Registered Entities maintain the ability to request and receive any information needed from other Registered Entities to perform the tasks required under TOP-003 and IRO-010. The following sections discuss the revisions to the standards:

- proposed Reliability Standard IRO-010-5 (Subsection B); and

³⁵ See Agenda of the NERC Standards Committee August 23, 2023 meeting at: <https://extranet.nerc.net/stdscommittee/Shared%20Documents/08%20August%202023,%202023/Agenda%20-%20August%202023.docx>.

³⁶ The NERC Rules of Procedure, including Appendix 3A, NERC Standard Processes Manual, are available at <http://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>.

- proposed Reliability Standard TOP-003-6.1 (Subsection C).

The drafting team’s review of additional Reliability Standards, for which revisions are not proposed at this time is included (Subsection D). A discussion of the enforceability of the proposed Reliability Standards is also included (Subsection E).

As discussed in **Exhibit D**, the proposed Reliability Standards meet the Commission’s criteria for approval in Order No. 672 and are just, reasonable, not unduly discriminatory, and in the public interest. NERC respectfully requests that the Commission approve the proposed Modifications to IRO-010 and TOP-003, to become effective in accordance with the proposed implementation plan discussed in Section V.

A. Reliability Standards IRO-010 and TOP-003

The Commission first approved Reliability Standard TOP-003 in 2007³⁷ and Reliability Standard IRO-010 in 2011.³⁸ Reliability Standard TOP-003 contains requirements for Balancing Authority and Transmission Operator data specifications, while Reliability Standard IRO-010 contains requirements for Reliability Coordinator data specifications. Since their initial approval, both standards have been revised multiple times. The Commission approved the currently effective versions of Reliability Standards IRO-010-4 – Reliability Coordinator Data Specification and Collection and TOP-003-5 – Operational Reliability Data in 2021.³⁹

The data specification requirements in IRO-010 and TOP-003 are substantively similar, if not functionally identical. The stated purpose of Reliability Standard IRO-010-4 is “to prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by

³⁷ *Mandatory Reliability Standards for the Bulk-Power Sys.*, Order No. 693, 118 FERC ¶ 61,218, *order on reh’g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

³⁸ *Mandatory Reliability Standards for Interconnection Reliability Operating Limits*, Order No. 748, 134 FERC ¶ 61,213 (2011).

³⁹ *N. Am. Elec. Reliability Corp.*, 176 FERC ¶ 61,119 (2021).

ensuring the Reliability Coordinator has the data it needs to monitor and assess the operation of its Reliability Coordinator Area.” Similarly, the stated purpose of Reliability Standard TOP-003-005 is “to ensure that the Transmission Operator and Balancing Authority have data needed to fulfill their operational and planning responsibilities.”

Due to the similarities between the requirements of IRO-010 and TOP-003, NERC proposes revisions to both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements. The proposed revisions are intended to retain flexibility for applicable entities to utilize available technologies, integrate new technologies, and define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform their functions and promote reliability.⁴⁰

B. Proposed Reliability Standard IRO-010-5

The proposed requirement provides as follows:

- R1.** The Reliability Coordinator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include but not be limited to: (Violation Risk Factor: Low) (Time Horizon: Operations Planning)
- 1.1.** A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data, and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
- 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
- 1.3.** Provisions for notification of BES generating unit(s) during local forecasted

⁴⁰ See Exhibit C-2, *Technical Rationale for Reliability Standard TOP-003-6* at p. 1; Exhibit C-1 *Technical Rationale for Reliability Standard IRO-010-5* at p. 1.

cold weather to include:

1.3.1 Operating limitations based on:

1.3.1.1. capability and availability;

1.3.1.2. fuel supply and inventory concerns;

1.3.1.3. fuel switching capabilities; and

1.3.1.4. environmental constraints

1.3.2. Generating unit(s) minimum:

1.3.2.1. design temperature; or

1.3.2.2. historical operating temperature; or

1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

~~**1.4.** A periodicity for providing data.~~

~~**1.4.** The deadline by which Identification of a mutually agreeable process for resolving conflicts.~~

~~**1.5.** Method(s) for the respondent is entity identified in Part 1.1 to provide data and information that includes but is not limited to.~~

~~**1.5.1** Specific deadlines or periodicity in which data and information is to be provided;~~

~~**1.4.1.5.2** Performance criteria for the indicated data availability and accuracy of data and information, as applicable;~~

~~**1.5.3** Provisions to update or correct data and information, as applicable or necessary.~~

~~**1.5.4** A mutually agreeable format.~~

~~**1.5.5** A mutually agreeable method(s) for securely transferring data and information.~~

R2. The Reliability Coordinator shall distribute its data and information specification(s) to entities that have data required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. (Violation

Risk Factor: Low) (Time Horizon: Operations Planning)

R3. Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) in Requirement R2 shall satisfy the obligations of the documented specifications ~~using:~~ (Violation Risk Factor: Medium) (Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations)

~~3.1. A mutually agreeable format~~

~~3.2. A mutually agreeable process for resolving data conflicts~~

~~3.3. A mutually agreeable security protocol~~

Proposed Reliability Standard IRO-010-5 would modify the title of Reliability Standard IRO-010-4 to include data “and information”. The proposed title change from “Reliability Coordinator Data Specification and Collection” to “Reliability Coordinator Data and information Specification and Collection” acknowledges that the specifications are for the collection of both data and information.⁴¹ Corresponding revisions to capture data “and information” also appear in the purpose, Requirement R1, Parts 1, 1.1, 1.5, and Requirement R2.

The purpose set forth in proposed Reliability Standard IRO-010-5 would be revised to specify “each” instead of “the” Reliability Coordinator, expand “data” to include “data and information”, and include the need to “plan” in addition to the existing requirements to monitor and assess the operation of the Reliability Coordinator’s area.⁴² As proposed, the new purpose would be “to prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring each Reliability Coordinator has the data and information it needs to plan, monitor and assess the operation of its Reliability Coordinator Area.” These proposed changes are intended to align with the purpose of TOP-003-6.1, as discussed *infra*. In addition,

⁴¹ See Exhibit C-1, *Technical Rationale for Reliability Standard IRO-010-5*, at p. 2.

⁴² For comparison, the purpose of IRO-010-4 is “to prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring the Reliability Coordinator has the data it needs to monitor and assess the operation of its Reliability Coordinator Area.”

NERC uses the terms data “and information” to clarify that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.⁴³

Proposed Reliability Standard IRO-010-5 maintains the general framework of the currently effective standards, which consists of three sets of requirements. Under Requirement R1 of the proposed Reliability Standard, the Reliability Coordinator would maintain documented specifications for the data and information needed for their Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.⁴⁴ This modifies current Requirement R1 by including “and information” in addition to data that should be maintained, thus clarifying that specifications include both data and information that a Reliability Coordinator requires.⁴⁵ Proposed Requirement R1 Part 1.1 would include data “and information” and require “identification of the entities responsible for responding to the specification”. This revision includes not only the list of data and information that the requestor needs for the core reliability tasks, but also the identification of the applicable entity that is required to respond to the request for the specification. This proposed revision is intended to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.⁴⁶

Requirement R1 Part 1.4 proposes requiring the establishment of a mutually agreeable conflict resolution process. This replaces the “mutually agreeable process for resolving data conflicts” that was previously included in Requirement R3 Part 3.2.⁴⁷ This proposed revision

⁴³ See Exhibit C-1, *Technical Rationale for Reliability Standard IRO-010-5*, at p. 2.

⁴⁴ See proposed Reliability Standard IRO-010-5 Requirement R1.

⁴⁵ See Exhibit C-1, *Technical Rationale for Reliability Standard IRO-010-5*, at p. 2.

⁴⁶ *Id.*

⁴⁷ For purposes of the TOP-003-6.1 discussion *infra*, the parallel language concerning conflict resolution for TOP-003-5 is located in Requirement R5 Part 5.2.

moves the data conflict resolution provision into the data specification requirements, thus including this process within the data specification itself.⁴⁸ By establishing conflict resolution as a subpart of the requirement, requestors would be expected to establish processes with the responding parties, to improve upon, requests, responses, and performance expectations.⁴⁹ The provision would establish the process for resolving disagreements while retaining the requestor's authority to request data it needs.⁵⁰ Respondents would be expected to engage the requestor about the respondent's concerns using the established process contained in the data request.⁵¹ These could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.⁵²

As revised, Requirement R1 Part 1.5 would set forth the methods for entities providing data and information. The proposed revisions to Requirement R1 Part 1.5.1 combine the currently effective Requirement R1 Parts 1.4 and 1.5 and requires specific deadlines and periodicity (previously included in Requirement R1 Part 1.4) for data and information that is expected to be updated on different time frames.⁵³ The inclusion of deadlines would address data provisions that may be immediate, one-time, or that do not have recurring periods.⁵⁴

Proposed Requirement R1 Part 1.5.2 would require the establishment of performance criteria for the availability and accuracy of data and information.⁵⁵ At the onset of this project, one

⁴⁸ See Exhibit C-1, *Technical Rationale for Reliability Standard IRO-010-5*, at p. 2.

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² *Id.* at pp. 2-3.

⁵³ *Id.* at 3.

⁵⁴ *Id.*

⁵⁵ See proposed Requirement R1 Part 1.5.2.

of the key motivators was the perception that the original standards were written to require entities to demonstrate perfect compliance with all data specifications at all times – a so-called “zero defect” approach. The drafting team considered this portion of the SAR and determined that the standard would benefit by requiring the Reliability Coordinator to specify their expectations for data availability and accuracy, taking into account their data needs and planning processes. The purpose of these proposed revisions is not to excuse noncompliance or lessen reliability, but align expectations across reliability entities and responding entities, and promote continuous improvement in data and information exchange.

The proposed revisions to Requirement R1 Part 1.5.3 would include provisions to update or correct Respondent data and information.⁵⁶ This would provide for the inclusion of protocols to aid in rectifying data and information errors.⁵⁷

As proposed, Requirement R1 Part 1.5.4 would move the necessity for a mutually agreeable format from Requirement R3 Part 3.1⁵⁸ into the specification, as a requirement of the specification itself.⁵⁹ The proposed revisions to Requirement R1 Part 1.5.5 move and revise the security protocol obligations from Requirement R3⁶⁰ into Requirement R1 Part 1.5.5, making it a part of the specification. The proposed revisions replace “[a] mutually agreeable security protocol”⁶¹ with

⁵⁶ See proposed Requirement R1 Part 1.5.3.

⁵⁷ See Exhibit C-1, *Technical Rationale for Reliability Standard IRO-010-5*, at p. 3.

⁵⁸ For purposes of the TOP-003-6.1 discussion *infra*, the parallel language concerning a “mutually agreeable format” for TOP-003-5 is located in Requirement R5 Part 5.1. Thus, the proposed TOP-003-6.1 revisions would similarly move the “mutually agreeable format” within the specification itself, i.e., Requirement R1 Part 1.5.4 for each Transmission Operator and Requirement 2.5.4 for each Balancing Authority.

⁵⁹ See Exhibit C-1, *Technical Rationale for Reliability Standard IRO-010-5*, at p. 3.

⁶⁰ For purposes of the TOP-003-6.1 discussion *infra*, the language concerning conflict resolution for TOP-003-5 is located in Requirement R5 Part 5.3. The proposed TOP-003-6.1 revisions would similarly revise and relocate the “mutually agreeable security protocol” concept to state a “mutually agreeable method(s) for securely transferring data and information” within the specification itself, i.e., Requirement R1 Part 1.5.5 for each Transmission Operator and Requirement 2.5.5 for each Balancing Authority.

⁶¹ See Reliability Standard TOP-003-5 Requirement R3 Part 3.3.

“[a] mutually agreeable method(s) for securely transferring data and information.”⁶² This revision acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both.⁶³

The proposed revisions that consolidate the legacy “mutually agree” language,⁶⁴ currently embodied in Requirement R3 into Requirement R1, effectively place the responsibility on the Reliability Coordinator⁶⁵ to, as part of their data specifications, include a “mutually agreed to” (1) data and information format, (2) process for resolving conflicts, and (3) method for securely transferring data and information. The expectation would be that the Reliability Coordinator would demonstrate its efforts to “mutually agree” on those items, but this would not necessarily require explicit evidence of agreement from every entity. For example: Independent System Operators (“ISOs”) and Regional Transmission Organizations (“RTOs”) may use their consensus driven stakeholder processes (which each entity agreed to when they joined the ISO/RTO) to determine the (1) process for resolving conflicts, (2) data format, and (3) method for submitting the data. Evidence going through the stakeholder process would satisfy “mutual agreement” by all the entities in that footprint, even if the agreement was developed through a less than unanimous consent process.

“Mutual agreement” may also be achieved through other means (*e.g.*, the requesting entity’s data specification states that submitting evidence indicates agreement to the format, or establishment of a process by which an entity’s data conflicts or inability to meet the specified

⁶² See proposed Reliability Standard TOP-003-6.1 Requirement R1 Part 1.5.5.

⁶³ See Exhibit C-1, *Technical Rationale for Reliability Standard IRO-010-5*, at p. 3.

⁶⁴ The requirement for a “mutually agreeable format” originated in Reliability Standard IRO-010-1a, the first FERC-approved version of this standard, and Reliability Standard TOP-003-3, which was first approved by the Commission in 2015. The requirements pertaining to a “mutually agreeable format”, a “mutually agreeable process for resolving data conflicts”, and a “mutually agreeable security protocol” are all included within currently-effective IRO-010-4 and TOP-003-5.

⁶⁵ The analysis in this section is also applicable to the proposed Balancing Authority/Transmission Operator revisions proposed in TOP-003-6.1 discussed *infra*.

format/method for sending data is handled on a case by case basis.) It is NERC’s expectation that each Reliability Coordinator will intentionally pursue “mutual agreement” to satisfy the obligations of Requirement R1. Under the proposed revisions to Requirement R3, responding entities that receive a specification in Requirement R2 “shall satisfy the obligations of the documented specifications”.⁶⁶ In the event the requesting entity and the responding entity could not reach agreement on the format/method, such disagreement would not exempt a responding entity from providing the requested data.

These revisions are shown in **Exhibit A**.

C. Proposed Reliability Standard TOP-003-6.1

The proposed requirements provides as follows:

- R1.** Each Transmission Operator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. ~~The data~~ specification shall include, but not be limited to: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]
 - 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:

⁶⁶ See proposed Requirement R3.

- 1.3.1.1 capability and availability;
- 1.3.1.2. fuel supply and inventory concerns;
- 1.3.1.3. fuel switching capabilities; and
- 1.3.1.4. environmental constraints

1.3.2. Generating unit(s) minimum:

- 1.3.2.1. design temperature; or
- 1.3.2.2. historical operating temperature; or
- 1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

1.4. Identification of a mutually agreeable process for resolving conflicts.

1.5 Method(s) for the entity identified in Part 1.1 to provide the data and information that includes at a minimum the following.

~~1.4~~1.5.1. Specified deadlines or periodicity for providing data. The deadline by which the respondent data and information is to provide the indicated data be provided;

1.5.2. Performance criteria for the availability and accuracy of data and information as applicable;

1.5.3. Provisions to update or correct data and information, as applicable or necessary;

1.5.4. A mutually agreeable format;

1.5.5. Mutually agreeable method(s) for securely transferring data and information.

R2. Each Balancing Authority shall maintain a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

- 2.1. A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.
- 2.2. Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
- 2.3. Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
 - 2.3.1. Operating limitations based on:
 - 2.3.1.1. capability and availability;
 - 2.3.1.2. fuel supply and inventory concerns;
 - 2.3.1.3. fuel switching capabilities; and
 - 2.3.1.4. environmental constraints.
 - 2.3.2. Generating unit(s) minimum:
 - 2.3.2.1. design temperature; or
 - 2.3.2.2. historical operating temperature; or
 - 2.3.2.3. current cold weather performance temperature determined by an engineering analysis.
- 2.4. Identification of a mutually agreeable process in resolving conflicts
- 2.5. Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.
 - 2.5.1. Specific deadlines or periodicity for providing data. The deadline by in which the respondent data and information is to provide the indicated data be provided;
 - 2.5.2. Performance criteria for the availability and accuracy of data and information, as applicable;

2.5.3. Provisions to update or correct data and information, as applicable or necessary;

2.5.4. A mutually agreeable format.

2.5.5. A mutually agreeable method(s) for securely transferring data and information.

- R3.** Each Transmission Operator shall distribute its data and information specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]
- R4.** Each Balancing Authority shall distribute its data and information specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]
- R5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data and information specification(s) in Requirement R3 or R4 shall satisfy the obligations of the documented specifications ~~using:~~ [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]

~~5.1 — A mutually agreeable format~~

~~5.2 — A mutually agreeable process~~

~~5.3 — A mutually agreeable security protocol~~

Proposed Reliability Standard TOP-003-6.1 would change the title of the standard from “Operational Reliability Data” to “Transmission Operator and Balancing Authority Data and Information Specification and Collection”. This revision is intended to align with the title of proposed Reliability Standard IRO-010-5, and to better reflect the function of the Reliability

Standard.⁶⁷

As revised, the purpose set forth in proposed Reliability Standard TOP-003-6.1 would specify “each” instead of “the” “Transmission Operator and Balancing Authority”, expand “data” to include “data and information”, and replace the need for the data and information to “fulfill their operational and planning responsibilities” with the need to “plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area”. As revised, the purpose of proposed Reliability Standard TOP-003-6.1 would be “to ensure that each Transmission Operator and Balancing Authority has the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.” These proposed changes to the purpose of TOP-003-6.1 are intended to align with the purpose of proposed Reliability Standard IRO-010-5. In addition, NERC uses the terms data “and information” to clarify that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.⁶⁸

Proposed Reliability Standard TOP-003-6.1 maintains the general framework of the currently effective standard, which consists of five sets of requirements. NERC proposes to add nearly identical revisions for Transmission Operator data specifications to Requirement R1, Parts 1, 1.1, 1.4, and 1.5 in TOP-003-6.1 that are proposed in proposed Reliability Standard IRO-010-5, *supra*.⁶⁹ NERC also proposes to add parallel provisions to for each Balancing Authority in Requirement R2, Parts 2, 2.4, and 2.5 in TOP-003-6.1.⁷⁰ In line with the rationale discussed above

⁶⁷ See Exhibit C-2, *Technical Rationale for Reliability Standard TOP-003-6*, at p. 1.

⁶⁸ *Id.* at p. 2. For TOP-003-6.1, Requirement R1 Part 1.5 and Requirement R2 Part 2.5, the differences between the proposed revision to Reliability Standard IRO-010-5 and TOP-003-6.1 are as follows: IRO-010-5 Requirement R1 Part 1.5 applies to Method(s) for the entity identified in Part 1.1 to provide data and information that includes, “but is not limited to”, and TOP-003-6.1 Requirement R1 Part 1.5 and Requirement R2 Part 2.5 refer to data and information that includes “at a minimum”.

⁶⁹ See Exhibit C-2, *Technical Rationale for Reliability Standard TOP-003-6*, at pp. 2-3.

⁷⁰ See *id.* at pp. 3-5.

for proposed revisions to IRO-010-5, these proposed revisions clarify that specifications include both data and information that each Transmission Operator (Requirement R1) and each Balancing Authority (Requirement R2) requires.⁷¹ These proposed revisions would further require the identification of the applicable entity that is required to respond to the request for the specification.⁷² These revisions are intended to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.⁷³

Proposed Requirement R1 Part 1.4 and Requirement R2 Part 2.4 are revised to include a data conflict resolution provision, currently located in Requirement R5 Part 5.2. This aligns with the corresponding changes, and accompanying rationale,⁷⁴ that are proposed for Reliability Standard IRO-010-5 Requirement R1 Part 1.4.⁷⁵

Similarly, proposed Requirement R1 Part 1.5 and Requirement R2 Part 2.5, provide that specifications should include protocols to address periodicity, performance criterion, and provide update and correction mechanisms. In addition, identification of the mutually agreeable format is removed from Requirement R5 Part 5.1 and placed in Requirement R1 Part 1.5.4 for each Transmission Operator and Requirement R2 Part 2.5.4 for each Balancing Authority. Identification of mutually agreeable security protocols have been removed from Requirement R5

⁷¹ See *id.* at pp. 2-5.

⁷² See *id.* at p. 2. Proposed TOP-003-6.1 Requirement R2 Part 2.1 would require “A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring *including non-Bulk Electric System data and information, and external network data and information*, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.” (emphasis added). See proposed Reliability Standard TOP-003-6.1. By contrast, the parallel language in proposed IRO-010-5 Requirement R1 Part 1.1 would require “A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data, and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator.” See proposed Reliability Standard IRO-010-5.

⁷³ Exhibit C-2, *Technical Rationale for Reliability Standard TOP-003-6*, at p. 2.

⁷⁴ See discussion *supra* section IV (B).

⁷⁵ See Exhibit C-2, *Technical Rationale for Reliability Standard TOP-003-6*, at p. 4. See discussion, *supra* in section IV (B), for IRO-010-5 regarding the rationale for moving the data conflict provision within the data specification requirement.

Part 5.3 and placed in Requirement R1 Part 1.5.5 for each Transmission Operator and Requirement R2 Part 2.5.5 for each Balancing Authority. As proposed, Requirement R1 Part 1.5.5 (Transmission Operator) and Requirement R2 Part 2.5.5 (Balancing Authority) would be revised from a “mutually agreeable security protocol” to a “mutually agreeable method(s) for securely transferring data and information”. This is intended to acknowledge that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both.⁷⁶ These changes would be functionally equivalent to the proposed revisions, discussed above, for Reliability Standard IRO-010-5.⁷⁷

Requirement R3 and Requirement R4 are revised to add the term “and information” for consistency.⁷⁸ Requirement R5 is revised to require the Respondents to satisfy the documented specification based on the criterion established in Requirement R1 for requests originating from Transmission Operator specifications. Similarly, Requirement R5 is revised to require the Respondents to satisfy the documented specification based on criterion established in Requirement R2 for requests originating from Balancing Authority specifications.⁷⁹

These revisions are shown in **Exhibit A**.

D. Review of Other Standards

As directed by the SAR, the drafting team assessed whether IRO-010 and TOP-003 could address certain data requirements within other standards (BAL-005-1; EOP-005-3; FAC-014-3; IRO-008-3; IRO-017-1; TOP-001-6; and VAR-002-4.1)⁸⁰ in order to avoid potential duplications

⁷⁶ See Exh. C-2, *Technical Rationale for Reliability Standard TOP-003-6*, at pp. 3-5.

⁷⁷ See *supra* IV (B).

⁷⁸ See Exh. C-2, *Technical Rationale for Reliability Standard TOP-003-6*, at p. 5.

⁷⁹ *Id.*

⁸⁰ Michael Cruz-Montes, *NERC Standard Authorization Request (SAR), Operational Data Exchange Simplification* (Revised on March 16, 2022).

and perceived redundancies that add to the administrative burden or that may create unnecessary risks. At the time of review, the drafting team concluded that the requirements for data and information within those standards “served a greater purpose in their existing locations, and that removing or relocating to IRO-010 and TOP-003 risked misalignment or misunderstanding without extensive referencing”.⁸¹ In reaching this conclusion, the drafting team considered and evaluated each of those requirements to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003.⁸² The drafting team did not ballot these recommendations. In addition, the drafting team did not identify any new requirements necessary to perform the tasks identified in IRO-010-4 and TOP-003-5.⁸³ The drafting team’s rationale for not proposing changes to additional standards is explained in detail in the supporting white paper; the following is a high level summary.

The drafting team assessed Reliability Standard BAL-005-1, Balancing Authority Control. The drafting team noted that because the focus is strictly a bright line communication for a Balancing Authority to a Reliability Coordinator for times when the required data is not available, the context may be lost if a specific requirement is placed in IRO-010 and TOP-003 on its own rather than in a standard devoted to a Balancing Authority’s Area Control Error.⁸⁴

In evaluating Reliability Standard EOP-005-3, System Restoration from Blackstart Resources, the drafting team found that Requirements R13 and R14.2 would not fall under the four reliability tasks identified in TOP-003.⁸⁵

⁸¹ White Paper at v.

⁸² *Id.* at 2.

⁸³ *Id.*

⁸⁴ *Id.* at 3. The drafting team found that creating a specific list where the bright line criteria could be maintained in IRO-010 was inconsistent with the SAR guidance, “creating a minimum list of items to include in a data specification is not desired.”

⁸⁵ *Id.* at 3.

The drafting team reviewed Reliability Standard FAC-014-3, Establish and Communicate System Operating Limits, which will become mandatory and effective on April 1, 2024. Additionally, in review of the SER Phase 2 recommendation from FAC-014-2 Requirement R5, the following was noted “No action. Deferring to the team of Project 2015-09.”⁸⁶ The drafting team noted that the Technical Rationale for establishing Reliability Standard FAC-014-3 (Project 2015-09 Establish and Communicate System Operating Limits, April 2021) provided insight that Requirements R3 and R5 were “complementary” to IRO-010 and TOP-003 and not redundant.⁸⁷

The drafting team reviewed Reliability Standard IRO-008-3 Requirements R5 and R6, Reliability Coordinator Operational Analyses and Real-time Assessments. Because there are no requirements in TOP-003 for the Reliability Coordinator to provide information to a Balancing Authority or Transmission Operator, the drafting team found that there was not a redundancy.⁸⁸

The drafting team assessed Reliability Standard IRO-017-1, Outage Coordination. The drafting team noted the SER Phase 2 recommendation to leave as-is, and found that the requirement is not specifically identified as being related to the four reliability tasks identified in IRO-010 and TOP-003.⁸⁹

The drafting team reviewed Reliability Standard TOP-001-6, Transmission Operations, Requirements R9 and R15. The drafting team noted that Requirement R9 identifies a bright line criterion of 30 minutes or more that could be lost if not specifically called out or listed in IRO-010 and TOP-003, and could also potentially affect processes outside of the four reliability tasks.⁹⁰ The drafting team considered Requirement R15, finding that it is critical and necessary for situational

⁸⁶ *Id.* at 4.

⁸⁷ *Id.* at 4-5.

⁸⁸ *Id.* at 5.

⁸⁹ *Id.* at 6.

⁹⁰ *Id.*

awareness for verifying the implementation of an Operating Plan and or Operating Instruction was successful in mitigating a System Operating Limit exceedance. The drafting team determined that this requirement was specific and necessary enough to be specifically called out in IRO-010 if relocated. It further noted that the context of the requirement would be lost if relocated as Requirements R13 and R14 highlight the sequence of events.⁹¹

The drafting team assessed Reliability Standard VAR-002-4.1, Generator Operation for Maintaining Network Voltage Schedules. VAR-002-4.1 Requirements R3 and R4 both provide critical information to a Transmission Operator and Reliability Coordinator with a bright line timeline of 30 minutes. The drafting team found that relocation would lose the bright line 30-minute criteria which aligns with the 30-minute Real-time Assessment requirement for Reliability Coordinators and Transmission Operators.⁹²

The drafting team assessed BAL-005-1; EOP-005-3; FAC-014-3; IRO-008-3; IRO-017-1; TOP-001-6; and VAR-002-4.1 based upon the specific guidance set forth in the SAR. As it was a purpose of this project to evaluate removing other data exchange requirements dispersed in other standards, the drafting team considered and evaluated each of those requirements to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003.⁹³ Based upon their focused review, the drafting team concluded there was a greater potential reliability risk incurred by removing a perceived redundant requirement or by recommending changes to requirements in other Reliability Standards.⁹⁴ Based upon these conclusions, the drafting team focused on limiting administrative burdens by clarifying and consolidating

⁹¹ *Id.* at 7.

⁹² *Id.*

⁹³ *Id.* at 2.

⁹⁴ *Id.*

requirements and improving approaches within IRO-010 and TOP-003. The drafting team did not ballot any proposed revisions to additional standards.

E. Enforceability

The proposed Reliability Standards contain Violation Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”) for each of the requirements. The VRFs and VSLs provide guidance on the way that NERC will enforce the requirements of the proposed Reliability Standards. The VRFs and VSLs are substantively unchanged from currently effective versions of the Reliability Standards, reflecting only those conforming revisions necessary to effectuate the proposed requirement revisions. As such, they continue to comport with NERC and Commission guidelines related to their assignment.

In addition, the proposed Reliability Standards also include measures that support the requirements by clearly identifying what is required and how the requirement will be enforced. The measures help ensure that the requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party. The measures are substantively unchanged from currently enforceable versions of the Reliability Standards, reflecting only those revisions necessary to effectuate the proposed requirement revisions.

V. EFFECTIVE DATE

NERC respectfully requests that the Commission approve the implementation plan attached to this petition as **Exhibit B**. The proposed implementation plan provides that the proposed Modifications to IRO-010 and TOP-003 would become effective on the first day of the first calendar quarter that is eighteen (18) months after the effective date of the applicable governmental authority’s order approving the standard, or as otherwise provided for by the applicable governmental authority. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is

eighteen (18) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction. The currently effective versions of the standards would be retired immediately prior to the effective date of the revised Reliability Standards in the particular jurisdiction in which the revised standards are becoming effective. This implementation timeline reflects consideration that responsible entities will need time to develop revised data and information specifications under Reliability Standards IRO-010-5 and TOP-003-6.1, including: (i) developing new protocols for submission periodicity, performance criteria, and provisions to update information as needed; (ii) developing provisions for using intermediary entities to provide data; and (iii) codifying in the data and information specification the mutually agreed upon formats, process for resolving conflicts, and security protocols to use for data and information exchange. This implementation plan also reflects consideration of the time that responsible entities will need to distribute the revised data and information specifications to the reporting entities, and that the reporting entities will need to comply with the revised data and information specifications.

VI. CONCLUSION

For the reasons set forth above, NERC respectfully requests that the Commission approve:

- Proposed Reliability Standards IRO-010-5, and TOP-003-6.1, and the associated elements, as shown in **Exhibit A**;
- the retirement of currently effective Reliability Standards IRO-010-4, and TOP-003-5; and
- The implementation plan included in **Exhibit B**.

Respectfully submitted,

/s/ Sarah P. Crawford

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September 21, 2023

Exhibit A

The Proposed Reliability Standards

Exhibit A-1

Proposed Reliability Standard IRO-010-5
Clean

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the final draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 – August 6, 2021 |
| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|-----------------------|
| 45-day formal comment period with additional ballot | May 5 – June 10, 2023 |
| 10-day final ballot | July 21 – 31, 2023 |
| Board adoption | August 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data and Information Specification and Collection
2. **Number:** IRO-010-5
3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring each Reliability Coordinator has the data and information it needs to plan, monitor and assess the operation of its Reliability Coordinator Area.
4. **Applicability:**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2021-06.

B. Requirements

- R1.** The Reliability Coordinator shall maintain documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- 1.1.** A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** Method(s) for the entity identified in Part 1.1 to provide data and information that includes, but is not limited to.
 - 1.5.1** Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3** Provisions to update or correct data and information, as applicable or necessary.
 - 1.5.4** A mutually agreeable format.
 - 1.5.5** A mutually agreeable method(s) for securely transferring data and information.

- M1.** The Reliability Coordinator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** The Reliability Coordinator shall distribute its data and information specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- M2.** The Reliability Coordinator shall make available evidence that it has distributed its specification(s) to entities that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.
- R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R2 shall satisfy the obligations of the documented specifications. (*Violation Risk Factor: Medium*) (*Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations*)
- M3.** The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

- 1.1. Compliance Enforcement Authority:** “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.
- 1.2. Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

- 1.3. Compliance Monitoring and Enforcement Program:**
As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-----|---|--|---|--|
| | | | Lower | Moderate | High | Severe |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|---|---|--|---|
| | | | Lower | Moderate | High | Severe |
| R2 | Operations Planning | Low | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R3 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet one of the parts in Requirement Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet two of the parts in Requirement R1Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet any of the parts in Requirement R1 Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 did not satisfy the obligations of the documented specifications . |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|--|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
| 1a | August 5, 2009 | Added Appendix 1: Interpretation of R1.2 and R3 as approved by Board of Trustees | Addition |
| 1a | March 17, 2011 | Order issued by FERC approving IRO- 010-1a (approval effective 5/23/11) | |
| 1a | November 19, 2013 | Updated VRFs based on June 24, 2013 approval | |
| 2 | April 2014 | Revisions pursuant to Project 2014-03 | |
| 2 | November 13, 2014 | Adopted by NERC Board of Trustees | Revisions under Project 2014-03 |
| 2 | November 19, 2015 | FERC approved IRO-010-2. Docket No. RM15-16-000 | |
| 3 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 3 | October 30, 2020 | FERC approved IRO-010-3. Docket No. RD20-4-000 | |
| 4 | March 22, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 Cold Weather |
| 4 | June 11, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 |
| 4 | August 24, 2021 | FERC approved IRO-010-4. Docket No. RD21-5-000 | |
| 4 | August 27, 2021 | Effective Date | April 1, 2023 |
| 5 | TBD | Adopted by NERC Board of Trustees | Revision under project 2021-06 |

Exhibit A-1

Proposed Reliability Standard IRO-010-5
Redline to Last Approved

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the final draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 – August 6, 2021 |
| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|-----------------------|
| 45-day formal comment period with additional ballot | May 5 – June 10, 2023 |
| 10-day final ballot | July 21 – 31, 2023 |
| Board adoption | August 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data and Information Specification and Collection
 2. **Number:** IRO-010-45
 3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring ~~the~~each Reliability Coordinator has the data and information it needs to plan, monitor and assess the operation of its Reliability Coordinator Area.
 4. **Applicability:**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
 5. **Effective Date:** See Implementation Plan for Project 20219-06.
-

B. Requirements

- R1.** The Reliability Coordinator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- 1.1.** A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data, and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints

1.3.2. Generating unit(s) minimum:

1.3.2.1. design temperature; or

1.3.2.2. historical operating temperature; or

1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

~~**1.4.** A periodicity for providing data.~~

~~**1.4.** The deadline by which Identification of a mutually agreeable process for resolving conflicts.~~

~~**1.5.** Method(s) for the respondent is entity identified in Part 1.1 to provide data and information that includes, but is not limited to.~~

~~**1.5.1** Specific deadlines or periodicity in which data and information is to be provided;~~

~~**1.4.1.1.5.2** Performance criteria for the indicated data-availability and accuracy of data and information, as applicable;~~

~~**1.5.3** Provisions to update or correct data and information, as applicable or necessary.~~

~~**1.5.4** A mutually agreeable format.~~

~~**1.5.5** A mutually agreeable method(s) for securely transferring data and information.~~

- M1.** ~~—~~ The Reliability Coordinator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** The Reliability Coordinator shall distribute its data and information specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- M2.** ~~—~~ The Reliability Coordinator shall make available evidence that it has distributed its ~~data~~ specification(s) to entities that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.
- R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) in Requirement R2 shall satisfy the obligations of the documented specifications ~~using:~~ (*Violation Risk Factor: Medium*) (*Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations*)
- ~~3.1. A mutually agreeable format~~
 - ~~3.1. A mutually agreeable process for resolving data conflicts~~
 - ~~3.1. A mutually agreeable security protocol~~
- M3.** ~~—~~ The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

- 1.1. Compliance Enforcement Authority:** “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.
- 1.2. Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its ~~Compliance Enforcement Authority~~ CEA to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its ~~data~~ specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

1.3. Compliance Monitoring and Enforcement Program:

As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-----|--|---|--|--|
| | | | Lower | Moderate | High | Severe |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include one or two or fewer of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|--|--|---|--|
| | | | Lower | Moderate | High | Severe |
| R2 | Operations Planning | Low | The Reliability Coordinator did not distribute its data specification(s) as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its data specification(s) as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator’s Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its data specification(s) as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its data specification(s) as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R3 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a data specification(s) in Requirement R2 satisfied the obligations of the documented specifications for data but failed to <u>meet follow</u> one of the <u>parts criteria shown</u> in <u>Parts 3.1 – 3.3 Requirement</u> . | The responsible entity receiving a data specification(s) in Requirement R2 satisfied the obligations of the documented specifications for data but failed to <u>meet follow</u> two of the <u>criteria shown parts</u> in <u>Requirement R1 Part</u> . | The responsible entity receiving a data specification(s) in Requirement R2 satisfied the obligations of the documented specifications for data but failed to <u>meet follow</u> any of the <u>criteria shown parts</u> in <u>Requirement R1 Part</u> . | The responsible entity receiving a data specification(s) in Requirement R2 did not satisfy the obligations of the documented specifications for data . |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--------------|-----|---------------------------|---------------------------|---------------------------|--------|
| | | | Lower | Moderate | High | Severe |
| | | | <u>Part 1.5.</u> | <u>1.5.Parts 3.1-3.3.</u> | <u>1.5.Parts 3.1-3.3.</u> | |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|--|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
| 1a | August 5, 2009 | Added Appendix 1: Interpretation of R1.2 and R3 as approved by Board of Trustees | Addition |
| 1a | March 17, 2011 | Order issued by FERC approving IRO- 010-1a (approval effective 5/23/11) | |
| 1a | November 19, 2013 | Updated VRFs based on June 24, 2013 approval | |
| 2 | April 2014 | Revisions pursuant to Project 2014-03 | |
| 2 | November 13, 2014 | Adopted by NERC Board of Trustees | Revisions under Project 2014-03 |
| 2 | November 19, 2015 | FERC approved IRO-010-2. Docket No. RM15-16-000 | |
| 3 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 3 | October 30, 2020 | FERC approved IRO-010-3. Docket No. RD20-4-000 | |
| 4 | March 22, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 Cold Weather |
| 4 | June 11, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 |
| 4 | August 24, 2021 | FERC approved IRO-010-4. Docket No. RD21-5-000 | |
| 4 | August 27, 2021 | Effective Date | April 1, 2023 |
| 5 | TBD | Adopted by NERC Board of Trustees | Revision under project 2021-06 |

Exhibit A-2

Proposed Reliability Standard TOP-003-6.1 (Errata)
Clean

A. Introduction

1. **Title:** Transmission Operator and Balancing Authority Data and Information Specification and Collection
2. **Number:** TOP-003-6.1
3. **Purpose:** To ensure that each Transmission Operator and Balancing Authority has the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.
4. **Applicability:**
 - 4.1 Functional Entities:
 - 4.1.1 Transmission Operator
 - 4.1.2 Balancing Authority
 - 4.1.3 Generator Owner
 - 4.1.4 Generator Operator
 - 4.1.5 Transmission Owner
 - 4.1.6 Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2021-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** Method(s) for the entity identified in Part 1.1 to provide the data and information that includes at a minimum the following.
 - 1.5.1.** Specified deadlines or periodicity which data and information is to be provided;
 - 1.5.2.** Performance criteria for the availability and accuracy of data and information as applicable;
 - 1.5.3.** Provisions to update or correct data and information, as applicable or necessary;
 - 1.5.4.** A mutually agreeable format;
 - 1.5.5.** Mutually agreeable method(s) for securely transferring data and information.

- M1.** Each Transmission Operator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** Each Balancing Authority shall maintain documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
 - 2.1.** A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.
 - 2.2.** Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
 - 2.3.** Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
 - 2.3.1.** Operating limitations based on:
 - 2.3.1.1.** capability and availability;
 - 2.3.1.2.** fuel supply and inventory concerns;
 - 2.3.1.3.** fuel switching capabilities; and
 - 2.3.1.4.** environmental constraints.
 - 2.3.2.** Generating unit(s) minimum:
 - 2.3.2.1.** design temperature; or
 - 2.3.2.2.** historical operating temperature; or
 - 2.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 2.4.** Identification of a mutually agreeable process in resolving conflicts
 - 2.5.** Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.
 - 2.5.1.** Specific deadlines or periodicity in which data and information is to be provided;
 - 2.5.2.** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 2.5.3.** Provisions to update or correct data and information, as applicable or necessary.
 - 2.5.4.** A mutually agreeable format.
 - 2.5.5.** A mutually agreeable method(s) for securely transferring data and information.

- M2.** Each Balancing Authority shall make available its dated, current, in force documented specification(s) for data and information.
- R3.** Each Transmission Operator shall distribute its data and information specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M3.** Each Transmission Operator shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

- R4.** Each Balancing Authority shall distribute its data and information specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M4.** Each Balancing Authority shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.
- R5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data and information specification(s) in Requirement R3 or R4 shall satisfy the obligations of the documented specifications. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*
- M5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specification. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its specification(s) to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its specification(s) to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with

Requirement R5 and Measurement M5.

1.3. Compliance Monitoring and Enforcement Program: As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|---------------------|-------|---|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification(s) for the data and information on necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|--|---|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. OR, The Balancing Authority did not have a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its Specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its Specification(s) to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real- | The Transmission Operator did not distribute its Specification(s) to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational | The Transmission Operator did not distribute its Specification(s) to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|---|---|--|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | time monitoring, and Real-time Assessments. | Planning Analyses, Real-time monitoring, and Real-time Assessments. | |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its Specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its Specification(s) to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its Specification(s) to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its Specification(s) to four or more entities, or more than 15% of the entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet one of the parts in Requirement R1 Part 1.5- or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet two of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet three or more of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 did not satisfy the obligations of the documented specifications . |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|---|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP- 003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | October 30, 2020 | FERC approved TOP-003-4. Docket No. RD20-4-000 | |
| 5 | May 2021 | Changes pursuant to Project 2019-06 | Revised |
| 5 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |
| 5 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order 176 | |
| 6 | TBD | Adopted by NERC Board of Trustees | Revisions under project 2021-06 |
| 6.1 | Errata | Approved by the Standards Committee | |

Exhibit A-2

Proposed Reliability Standard TOP-003-6.1 (Errata)
Redline to Last Approved

A. Introduction

1. **Title:** ~~Operational Reliability Data~~ Transmission Operator and Balancing Authority Data and Information Specification and Collection
2. **Number:** TOP-003-~~56.1~~
3. **Purpose:** To ensure that ~~the~~ each Transmission Operator and Balancing Authority has the Transmission Operator and Balancing Authority have data needed and information it needs to fulfill their operational and planning responsibilities plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.
4. **Applicability:**
 - 4.1 Functional Entities:
 - ~~4.1~~ 4.1.1 Transmission Operator
 - ~~4.2~~ 4.1.2 Balancing Authority
 - ~~4.3~~ 4.1.3 Generator Owner
 - 4.4 4.1.4 Generator Operator
 - ~~4.5~~ 4.1.5 Transmission Owner
 - ~~4.6~~ 4.1.6 Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 20~~19~~-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data, and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or

1.3.2.2. historical operating temperature; or

1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

~~1.4. A periodicity for providing data~~ Identification of a mutually agreeable process for resolving conflicts.

~~1.5. The deadline by which the respondent is~~ Method(s) for the entity identified in Part 1.1 to provide the indicated data and information that includes at a minimum the following.

~~1.3.~~

~~1.3.4.1.5.1. Specified deadlines or periodicity for providing data. The deadline by which the respondent~~ data and information is to provide the indicated data to be provided;

~~1.5.2.~~ Performance criteria for the availability and accuracy of data and information as applicable;

~~1.5.3.~~ Provisions to update or correct data and information, as applicable or necessary;

~~1.5.4.~~ A mutually agreeable format;

~~1.5.5.~~ Mutually agreeable method(s) for securely transferring data and information.

M1.- Each Transmission Operator shall make available its dated, current, in force documented specification(s) for data and information.

R2. Each Balancing Authority shall maintain a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

2.1. A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.

2.2. Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.

2.3. Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:

2.3.1. Operating limitations based on:

2.3.1.1. capability and availability;

2.3.1.2. fuel supply and inventory concerns;

2.3.1.3. fuel switching capabilities; and

2.3.1.4. environmental constraints.

2.3.2. Generating unit(s) minimum:

2.3.2.1. design temperature; or

2.3.2.2. historical operating temperature; or

2.3.2.3. current cold weather performance temperature determined by an engineering analysis.

~~2.4. A periodicity for providing data.~~ Identification of a mutually agreeable process in resolving conflicts

~~2.5. The deadline by which the respondent is~~ Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.

~~2.3.~~

~~2.3.4.2.5.1. Specific deadlines or periodicity for providing data. The deadline by which the respondent data and information is to provide the indicated data.~~ be provided;

2.5.2. Performance criteria for the availability and accuracy of data and information, as applicable;

2.5.3. Provisions to update or correct data and information, as applicable or necessary.

2.5.4. A mutually agreeable format.

2.5.5. A mutually agreeable method(s) for securely transferring data and information.

M2. ~~Each Balancing Authority shall make available its dated, current, in force documented specification(s) for data~~ and information.

R3. Each Transmission Operator shall distribute its data and information specification(s) to entities that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

M3.- Each Transmission Operator shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

R4. Each Balancing Authority shall distribute its data and information specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. [*Violation Risk Factor: Lower*] [*Time Horizon: Operations Planning*]

M4.- Each Balancing Authority shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.

R5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data and information specification(s) in Requirement R3 or R4 shall satisfy the obligations of the documented specifications ~~using:~~ [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations*]

~~5.1. A mutually agreeable format~~

~~5.1. A mutually agreeable process for resolving data conflicts~~

~~5.1. A mutually agreeable security protocol~~

M5.- Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specifications. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the ~~Compliance Enforcement Authority~~CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its ~~Compliance Enforcement Authority~~CEA to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its ~~data~~-specification(s) to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its ~~data~~-specification(s) to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~

specification(s) in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R5 and Measurement M5.

- 1.3.** Compliance Monitoring and Enforcement Program: As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|---------------------|-------|--|---|--|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include two or fewer one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification(s) for the data <u>and information</u> on necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|--|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | Real- time monitoring. | functions and Real- time monitoring. | Real- time monitoring. | Real- time monitoring. OR, The Balancing Authority did not have a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real- time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its data <u>Specification(s)</u> to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>Specification(s)</u> to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>Specification(s)</u> to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>Specification(s)</u> to four or more entities, or more than 15% of the entities that have data <u>and information</u> required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its data <u>Specification(s)</u> to one entity, or 5% or less of the entities, whichever is greater, that have data | The Balancing Authority did not distribute its data <u>Specification(s)</u> to two entities, or more than 5% and less than or equal to 10% of the entities, | The Balancing Authority did not distribute its data <u>Specification(s)</u> to three entities, or more than 10% and less than or equal to 15% of the entities, | The Balancing Authority did not distribute its data <u>Specification(s)</u> to four or more entities, or more than 15% of the entities that have data <u>and</u> |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|--|---|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | <u>and information</u> required by the Balancing Authority's analysis functions and Real-time monitoring. | whichever is greater, that have data <u>and information</u> required by the Balancing Authority's analysis functions and Real-time monitoring. | whichever is greater, that have data <u>and information</u> required by the Balancing Authority's analysis functions and Real-time monitoring. | <u>information</u> required by the Balancing Authority's analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but <u>failed did not to</u> meet one of the parts criteria shown in Requirement R 15 (Parts 15.51- or 5.3) <u>Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but <u>did not failed</u> to meet two of the parts criteria shown in Requirement R 15 (Parts 15.51-5.3) <u>or Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but <u>did not failed</u> to meet three or more of the parts criteria shown in Requirement R 15 (Parts 15.15-5.3) <u>or Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 did not satisfy the obligations of the documented specifications for data . |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------------------|------------------------|---|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP- 003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | October 30, 2020 | FERC approved TOP-003-4. Docket No. RD20-4-000 | |
| 5 | May 2021 | Changes pursuant to Project 2019-06 | Revised |
| 5 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |
| 5 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order 176 | |
| 6 | TBD | Adopted by NERC Board of Trustees | Revisions under project 2021-06 |
| 6.1 | Errata | Approved by the Standards Committee | |

Exhibit B

Implementation Plan

Implementation Plan

Reliability Standards IRO-010-5 and TOP-003-6 Project 2021-06 Modifications to IRO-010 and TOP-003

Applicable Standard(s)

- Reliability Standard IRO-010-5 – Reliability Coordinator Data and Information Specification and Collection
- Reliability Standard TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection

Requested Retirements

- Reliability Standard IRO-010-4 – Reliability Coordinator Data Specification and Collection
- Reliability Standard TOP-003-5 – Operational Reliability Data

Applicable Entities

- See subject standards.

Background

The primary purpose of this project is to simplify administrative burdens and mitigate potential zero defects expectations associated with the current IRO-010-4 and TOP-003-5 standards, while ensuring that Registered Entities with operational responsibilities continue to request and receive the data necessary to support Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

General Considerations

This implementation plan reflects consideration that responsible entities will need time to develop revised data and information specifications under Reliability Standards IRO-010-5 and TOP-003-6, including: (i) developing new protocols for submission periodicity, performance criteria, and provisions to update information as needed; (ii) developing provisions for using intermediary entities to provide data; and (iii) codifying in the data and information specification the mutually agreed upon formats, process for resolving conflicts, and security protocols to use for data and information exchange. This implementation plan also reflects consideration of the time that responsible entities will need to distribute the revised data and information specifications to the reporting entities, and that the reporting entities will need to comply with the revised data and information specifications.

Effective Date

Reliability Standards IRO-010-5 and TOP-003-6

Where approval by an applicable governmental authority is required, the standards shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the effective date of the applicable governmental authority's order approving the standard, or as otherwise provided for by the applicable governmental authority.

Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction.

Retirement Date

Reliability Standards IRO-010-4 and TOP-003-5

Reliability Standards IRO-010-4 and TOP-003-5 shall be retired immediately prior to the effective date of Reliability Standards IRO-010-5 and TOP-003-6 in the particular jurisdiction in which the revised standards are becoming effective.

Exhibit C

Technical Rationale

Exhibit C-1

Technical Rationale
Proposed Reliability Standard IRO-010-5

Technical Rationale for Reliability Standard IRO-010-5

July 2023

IRO-010-5 – Reliability Coordinator Data and Information Specification and Collection

Rationale:

The primary purpose of this project is to reduce unnecessary administrative overhead and reduce potential zero defect expectations associated with the current IRO-010-4 and TOP-003-5 standards. Also ensuring that Registered Entities request and receive the data and information necessary to support the core reliability tasks required to perform Operational Planning Analysis, Real-time Assessments, and Real-time monitoring, and Balancing Authority analysis functions.

The core reliability tasks for Reliability Coordinators identified in IRO-010 are identified as Operational Planning Analysis, Real-time Assessments, and Real-time monitoring.

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-4 and TOP-003-5. The SDT also reviewed the results of the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in (standards listed in the SAR's Detailed Description), the SDT determined there is insufficient justification(s) for the retirement of these requirements and are not proposing changes to the reviewed standards. For further information on the justification(s) for not proposing additional retirements or consolidation of existing requirements into IRO-010-4 or TOP-003-5 see the white paper titled **White Paper for 2021-06 Modifications to IRO-010 and TOP-003** with the project document.

The data specification requirements in IRO-010-5 and TOP-003-6 are substantively similar, if not functionally identical therefore the SDT has revised both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements.

The SDT has drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability.

Proposed revisions include Title, Purpose, and Requirements sections.

Rationale for Title

The proposed Title change from “Reliability Coordinator Data Specification and Collection” to “Reliability Coordinator Data and Information Specification and Collection” acknowledges that the specifications are for the collection of both Data and Information.

Rationale for Purpose

The proposed changes to IRO-010-5 purpose is to align with the purpose of TOP-003. Throughout the standard, the SDT used the terms “data” and “information” to clarify that specifications include both “data and information.” The intent is to include data and information necessary for Reliability Coordinators to perform their core reliability tasks. The revision clarifies that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.

In addition to monitoring and assessing stated in the previous version of the standard, both data and information are necessary for satisfying all of the identified core reliability tasks. The tasks include planning activities, therefore the purpose has been clarified by including planning, monitoring, and assessing operations.

Rationale for Requirement R1

R1 is revised to clarify that specifications include both data and information that a Reliability Coordinator requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R1.1

R1 is revised to include not only the list of data and Information that the requestor needs for the core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R1.4

R1.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather multiple requirements.

R1.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Reliability Coordinator and the respondent. Placement of this sub part under R1, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor’s authority to request data it needs. Respondents would be expected to engage the requestor about the respondent’s concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute

resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R1.5

R1.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R3.1 and placed in R1.5.4, and the identification of security protocols have been removed from R3.3 and placed in R.1.5.5. Moving format and security protocols into R1 is appropriate so that the data specification requirements are contained in one requirement, rather multiple requirements.

- R1.5.1 is revised to include deadlines and periodicity (as previously included in R1.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R1.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R1.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R1.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R1.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R1.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R2

R2 is revised to add the term “and Information” for consistency.

Rationale for Requirement R3

R3 is revised to require the Respondents to satisfy the documented specification based on the criterion established in R1.

| Version 4 Requirement | Revision | Version 5 |
|-----------------------|-------------|-----------|
| R1.4 | Revised | R1.5.1 |
| | | |
| None | Newly added | R1.5 |
| | | |
| R3.1 | Moved | R1.6 |
| | | |

Exhibit C-2

Technical Rationale
Proposed Reliability Standard TOP-003-6.1

Technical Rationale for Reliability Standard

TOP-003-6

July 2023

TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection

Rationale:

The primary purpose of this project is to reduce unnecessary administrative overhead and reduce potential zero defects expectations associated with the current IRO-010-4 and TOP-003-5 standards. Also, ensuring that Registered Entities request and receive the data and information necessary to support the four reliability tasks required to perform Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6. The SDT also reviewed the results of the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in (standards listed in the SAR's Detailed Description), the SDT determined there is insufficient justification(s) for the retirement of these requirements and are not proposing changes to the reviewed standards. For further information on the justification(s) for not proposing additional retirements or consolidation of existing requirements into IRO-010-4 or TOP-003-5 see the white paper titled **White Paper for 2021-06 Modifications to TOP-003 and IRO-010** with the project documents.

The data specification requirements in IRO-010-5 and TOP-003-6 are substantively similar, if not functionally identical therefore the SDT has revised both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements.

The SDT has drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability.

Proposed revisions include Title, Purpose, and Requirements sections.

Rationale for Title

The proposed Title change from "Operational Reliability Data" to "Transmission Operator and Balancing Authority Data and Information Specification and Collection" aligns with the Title section of IRO-010-5. This revision refers to the function of the standard whereas the previous title suggests a broader purpose than the four identified core reliability tasks.

Rationale for Purpose

The proposed changes to Purpose in TOP-003 align with the purpose of IRO-010-5. The two standards are companions, whereas the former applies to RC data specifications, this standard applies to TOP and BA specifications. Throughout the standard, the SDT used the terms “data” and “information” to clarify that specifications include both “data and information.” The intent is to include data and information necessary for Transmission Operators and Balancing Authorities to perform their core reliability tasks. The revision clarifies that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.

In addition to operational planning stated in the previous version of the standard, both data and information are necessary for satisfying the four identified core reliability tasks. The four tasks include monitoring and assessing activities, therefore the purpose has been clarified by including planning, monitoring, and assessing operations.

Rationale for Requirement R1

R1 is revised to clarify that specifications include both data and information that a Transmission Operator requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R1.1

R1 is revised to include not only the list of data and Information that the requestor needs for the four core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R1.4

R1.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather multiple requirements.

R1.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Transmission Operator and the respondent. Placement of this sub part under R1, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor’s authority to request data it needs. Respondents would be expected to engage the requestor about the respondent’s concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R1.5

R1.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R5.1 and placed in R1.5.4, and the identification of security protocols have been removed from R5.3 and placed in R1.5.5. Moving format and security protocols into R1 is appropriate so that the data specification requirements are contained in one requirement, rather multiple requirements.

- R1.5.1 is revised to include deadlines and periodicity (as previously included in R1.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R1.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R1.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R1.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R1.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R1.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R2

R2 is revised to clarify that specifications include both data and information that a Balancing Authority requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R2.1

R2 is revised to include not only the list of data and Information that the requestor needs for the core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request

Rationale for Subpart R2.4

R2.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather than multiple requirements.

R2.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Balancing Authority and the respondent. Placement of this sub part under R2, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as a sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor's authority to request data it needs. Respondents would be expected to engage the requestor about the respondent's concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R2.5

R2.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R5.1 and placed in R2.5.4, and the identification of security protocols have been removed from R5.3 and placed in R2.5.5. Moving format and security protocols into R2 is appropriate so that the data specification requirements are contained in one requirement, rather than multiple requirements.

- R2.5.1 is revised to include deadlines and periodicity (as previously included in R2.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R2.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R2.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R2.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R2.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a

protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R2.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R3

R3 is revised to add the term “and Information” for consistency.

Rationale for Requirement R4

R4 is revised to add the term “and Information” for consistency.

Rationale for Requirement R5

R5 is revised to require the Respondents to satisfy the documented specification based on the criterion established in R1 for requests originating from Transmission Operator specifications.

R5 is revised to require the Respondents to satisfy the documented specification based on criterion established in R2 for requests originating from Balancing Authority specifications.

Exhibit D

Order No. 672 Criteria

EXHIBIT D

Order No. 672 Criteria

In Order No. 672,¹ the Commission identified a number of criteria it will use to analyze Reliability Standards proposed for approval to ensure they are just, reasonable, not unduly discriminatory or preferential, and in the public interest. The discussion below identifies these factors and explains how the proposed Reliability Standards have met or exceeded the criteria.

1. Proposed Reliability Standards must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve that goal.²

The proposed Reliability Standards (proposed Reliability Standards IRO-010-5 and TOP-003-6.1) would advance the reliability of the Bulk-Power System by clarifying, consolidating, and improving the data and information collection processes for Reliability Coordinators (IRO-010-5), Transmission Operators (TOP-003-6.1), and Balancing Authorities (TOP-003-6.1). Specifically, the proposed revisions would: (i) clarify that specifications include both data and information; (ii) require the identification of the applicable entity that is required to respond to the request for the specification; (iii) include a data conflict resolution provision within the data

¹ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, 114 FERC ¶ 61,104, order on reh'g, Order No. 672-A, 114 FERC ¶ 61,328 (2006) [hereinafter Order No. 672].

² *See* Order No. 672, 114 FERC ¶ 61,104 at P 321 (“The proposed Reliability Standard must address a reliability concern that falls within the requirements of section 215 of the FPA. That is, it must provide for the reliable operation of Bulk-Power System facilities. It may not extend beyond reliable operation of such facilities or apply to other facilities. Such facilities include all those necessary for operating an interconnected electric energy transmission network, or any portion of that network, including control systems. The proposed Reliability Standard may apply to any design of planned additions or modifications of such facilities that is necessary to provide for reliable operation. It may also apply to Cybersecurity protection.”).

See id. P 324 (“The proposed Reliability Standard must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve this goal. Although any person may propose a topic for a Reliability Standard to the ERO, in the ERO’s process, the specific proposed Reliability Standard should be developed initially by persons within the electric power industry and community with a high level of technical expertise and be based on sound technical and engineering criteria. It should be based on actual data and lessons learned from past operating incidents, where appropriate. The process for ERO approval of a proposed Reliability Standard should be fair and open to all interested persons.”).

specification requirement; (iv) clarify that specifications should include protocols to address periodicity, performance criterion, and update and correction mechanisms; and (v) consolidate the format and security protocols within the data specification requirements. The proposed revisions are intended to advance the reliability of the Bulk-Power System (“BPS”)³, by ensuring that Registered Entities with operational responsibilities are able to request and receive the data and information necessary to support Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions in an optimal manner.

2. Proposed Reliability Standards must be applicable only to users, owners, and operators of the bulk power system, and must be clear and unambiguous as to what is required and who is required to comply.⁴

The proposed Reliability Standards are clear and unambiguous as to what is required and who is required to comply, in accordance with Order No. 672. The revised requirements in proposed Reliability Standard IRO-010-5 would apply to Reliability Coordinators (Requirement R1). The revised requirements in proposed Reliability Standard TOP-003-6.1 would apply to Transmission Operators (Requirement R1) and Balancing Authorities (Requirement R2). The applicability of the revised requirements in proposed Reliability Standards IRO-010-5 and TOP-003-6.1 would remain unchanged. The proposed Reliability Standards clearly articulate the actions that applicable entities must take to comply with the standards.

³ Unless otherwise indicated, all capitalized terms used in this petition shall have the meaning set forth in the *Glossary of Terms used in NERC Reliability Standards* (“NERC Glossary”), https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf.

⁴ See Order No. 672, 114 FERC ¶ 61,104 at P 322 (“The proposed Reliability Standard may impose a requirement on any user, owner, or operator of such facilities, but not on others.”).

See *id.* P 325 (“The proposed Reliability Standard should be clear and unambiguous regarding what is required and who is required to comply. Users, owners, and operators of the Bulk-Power System must know what they are required to do to maintain reliability.”).

3. A proposed Reliability Standard must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.⁵

The Violation Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”) for the proposed Reliability Standards comport with NERC and Commission guidelines related to their assignment, as discussed further in Exhibit E. The assignment of the severity level for each VSL is consistent with the corresponding requirement, and the VSLs should ensure uniformity and consistency in the determination of penalties. The VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations. For these reasons, the proposed Reliability Standards include clear and understandable consequences in accordance with Order No. 672.

4. A proposed Reliability Standard must identify clear and objective criteria or measures for compliance, so that it can be enforced in a consistent and non-preferential manner.⁶

The proposed Reliability Standards contain measures that support each requirement by clearly identifying what is required and how the requirement will be enforced. These measures help provide clarity regarding how the requirements would be enforced and help ensure that the requirements would be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party.

⁵ See *id.* P 326 (“The possible consequences, including range of possible penalties, for violating a proposed Reliability Standard should be clear and understandable by those who must comply.”).

⁶ See *id.* P 327 (“There should be a clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard. It should contain or be accompanied by an objective measure of compliance so that it can be enforced and so that enforcement can be applied in a consistent and non-preferential manner.”).

5. Proposed Reliability Standards should achieve a reliability goal effectively and efficiently, but do not necessarily have to reflect “best practices” without regard to implementation cost or historical regional infrastructure design.⁷

The proposed Reliability Standards achieve their respective reliability goals effectively and efficiently in accordance with Order No. 672. The proposed Reliability Standards would achieve the reliability goal of providing needed clarity regarding the application of each standard’s requirements and improving the exchange of data and information needed for reliability.

6. Proposed Reliability Standards cannot be “lowest common denominator,” i.e., cannot reflect a compromise that does not adequately protect Bulk-Power System reliability. Proposed Reliability Standards can consider costs to implement for smaller entities, but not at consequences of less than excellence in operating system reliability.⁸

The proposed Reliability Standards do not reflect a “lowest common denominator” approach. The proposed Reliability Standards contain a number of revisions that would clarify each standard, aid in its administration, and reduce ambiguities and unnecessary burdens for Reliability Coordinators, Transmission Operators, and Balancing Authorities.

⁷ See *id.* P 328 (“The proposed Reliability Standard does not necessarily have to reflect the optimal method, or ‘best practice,’ for achieving its reliability goal without regard to implementation cost or historical regional infrastructure design. It should however achieve its reliability goal effectively and efficiently.”).

⁸ See *id.* P 329 (“The proposed Reliability Standard must not simply reflect a compromise in the ERO’s Reliability Standard development process based on the least effective North American practice—the so-called ‘lowest common denominator’—if such practice does not adequately protect Bulk-Power System reliability. Although the Commission will give due weight to the technical expertise of the ERO, we will not hesitate to remand a proposed Reliability Standard if we are convinced it is not adequate to protect reliability.”).

See *id.* P 330 (“A proposed Reliability Standard may take into account the size of the entity that must comply with the Reliability Standard and the cost to those entities of implementing the proposed Reliability Standard. However, the ERO should not propose a ‘lowest common denominator’ Reliability Standard that would achieve less than excellence in operating system reliability solely to protect against reasonable expenses for supporting this vital national infrastructure. For example, a small owner or operator of the Bulk-Power System must bear the cost of complying with each Reliability Standard that applies to it.”).

7. **Proposed Reliability Standards must be designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one geographic area or regional model. It should take into account regional variations in the organization and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.⁹**

The proposed Reliability Standards would continue to apply consistently throughout North America and do not favor one geographic area or regional model. The proposed Reliability Standards would provide sufficient flexibility to accommodate regional/geographic variations, including climate, generation type, market issues, state rules, and other considerations.

8. **Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid beyond any restriction necessary for reliability.¹⁰**

The proposed Reliability Standards would have no undue negative effect on competition and would not unreasonably restrict the available transmission capacity or limit the use of the BPS in a preferential manner. The proposed standards would require the same performance by each of the applicable entities.

9. **The implementation time for the proposed Reliability Standard is reasonable.¹¹**

The proposed effective date for the proposed Reliability Standards are just and reasonable and appropriately balances the urgency in the need to implement each standard against the

⁹ See *id.* P 331 (“A proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard. The proposed Reliability Standard should not be based on a single geographic or regional model but should take into account geographic variations in grid characteristics, terrain, weather, and other such factors; it should also take into account regional variations in the organizational and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.”).

¹⁰ See *id.* P 332 (“As directed by section 215 of the FPA, the Commission itself will give special attention to the effect of a proposed Reliability Standard on competition. The ERO should attempt to develop a proposed Reliability Standard that has no undue negative effect on competition. Among other possible considerations, a proposed Reliability Standard should not unreasonably restrict available transmission capability on the Bulk-Power System beyond any restriction necessary for reliability and should not limit use of the Bulk-Power System in an unduly preferential manner. It should not create an undue advantage for one competitor over another.”).

¹¹ See *id.* P 333 (“In considering whether a proposed Reliability Standard is just and reasonable, the Commission will consider also the timetable for implementation of the new requirements, including how the proposal

reasonableness of the time allowed for those who must comply to develop necessary procedures or other relevant capability. The proposed implementation plan provides that the proposed Reliability Standards would become effective on the first day of the first calendar quarter that is eighteen (18) months after the effective date of the applicable governmental authority's order approving the standard, or as otherwise provided for by the applicable governmental authority. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction. The currently effective versions of the standards would be retired immediately prior to the effective date of the revised Reliability Standards in the particular jurisdiction in which the revised standards are becoming effective. This implementation timeline reflects consideration that responsible entities will need time to develop revised data and information specifications under Reliability Standards IRO-010-5 and TOP-003-6.1, including: (i) developing new protocols for submission periodicity, performance criteria, and provisions to update information as needed; (ii) developing provisions for using intermediary entities to provide data; and (iii) codifying in the data and information specification the mutually agreed upon formats, process for resolving conflicts, and security protocols to use for data and information exchange. This implementation plan also reflects consideration of the time that responsible entities will need to distribute the revised data and information specifications to the reporting entities, and that the reporting entities will need to comply with the revised data and information specifications.

The proposed implementation plan is attached as **Exhibit B** to this petition.

balances any urgency in the need to implement it against the reasonableness of the time allowed for those who must comply to develop the necessary procedures, software, facilities, staffing or other relevant capability.”).

10. The Reliability Standard was developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process.¹²

The proposed Reliability Standards were developed in accordance with NERC's Commission-approved, ANSI-accredited processes for developing and approving Reliability Standards. **Exhibit F** includes a summary of the Reliability Standards development proceedings, and details the processes followed to develop the proposed Reliability Standards. These processes included, among other things, comment periods, pre-ballot review periods, and balloting periods. Additionally, meetings of the standard drafting team were properly noticed and open to the public.

11. NERC must explain any balancing of vital public interests in the development of proposed Reliability Standards.¹³

NERC has identified no competing public interests regarding the request for approval of this proposed Reliability Standards. No comments were received that indicated that the proposed Reliability Standards conflict with other vital public interests.

12. Proposed Reliability Standards must consider any other appropriate factors.¹⁴

No other negative factors relevant to whether the proposed Reliability Standards are just and reasonable were identified.

¹² *See id.* P 334 (“Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO’s Reliability Standard development process if it is conducted in good faith in accordance with the procedures approved by the Commission.”).

¹³ *See id.* P 335 (“Finally, we understand that at times development of a proposed Reliability Standard may require that a particular reliability goal must be balanced against other vital public interests, such as environmental, social and other goals. We expect the ERO to explain any such balancing in its application for approval of a proposed Reliability Standard.”).

¹⁴ *See id.* P 323 (“In considering whether a proposed Reliability Standard is just and reasonable, we will consider the following general factors, as well as other factors that are appropriate for the particular Reliability Standard proposed.”).

Exhibit E

Analysis of Violation Risk Factors and Violation Severity Levels

Violation Risk Factor and Violation Severity Level Justifications

2021-06 Modifications to IRO-010 and TOP-003

This document provides the standard drafting team's (SDT's) justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in [Project Number and Name or Standard Number]. Each requirement is assigned a VRF and a VSL. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the Electric Reliability Organizations (ERO) Sanction Guidelines. The SDT applied the following NERC criteria and FERC Guidelines when developing the VRFs and VSLs for the requirements.

NERC Criteria for Violation Risk Factors

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to Bulk Electric System instability, separation, or a cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to Bulk Electric System instability, separation, or a cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of a medium risk requirement is unlikely to lead to Bulk Electric System instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to Bulk Electric System instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System.

FERC Guidelines for Violation Risk Factors

Guideline (1) – Consistency with the Conclusions of the Final Blackout Report

FERC seeks to ensure that VRFs assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System. In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) – Consistency within a Reliability Standard

FERC expects a rational connection between the sub-Requirement VRF assignments and the main Requirement VRF assignment.

Guideline (3) – Consistency among Reliability Standards

FERC expects the assignment of VRFs corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) – Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular VRF level conforms to NERC’s definition of that risk level.

Guideline (5) – Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

NERC Criteria for Violation Severity Levels

VSLs define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

VSLs should be based on NERC’s overarching criteria shown in the table below:

| Lower VSL | Moderate VSL | High VSL | Severe VSL |
|--|--|--|--|
| The performance or product measured almost meets the full intent of the requirement. | The performance or product measured meets the majority of the intent of the requirement. | The performance or product measured does not meet the majority of the intent of the requirement, but does meet some of the intent. | The performance or product measured does not substantively meet the intent of the requirement. |

FERC Order of Violation Severity Levels

The FERC VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

Guideline (1) – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline (2) – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

Guideline (3) – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline (4) – Violation Severity Level Assignment Should Be Based on a Single Violation, Not on a Cumulative Number of Violations

Unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

IRO-010-5

VRF Justification for IRO-010-5, Requirement R1

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for IRO-010-5, Requirement R1

Please refer to the VSL table located below.

VRF Justification for IRO-010-5, Requirement R2

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to R2 were administrative in nature therefore the VRF remained a low.

VSL Justification for IRO-010-5, Requirement R2

Please refer to the VSL table located below.

VRF Justification for IRO-010-5, Requirement R3

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to Requirement R3 directly effect the electrical state or capability of the Bulk Electric system therefore the VRF remained a medium.

VSL Justification for IRO-010-5, Requirement R3

Please refer to the VSL table located below.

VSL Justifications for IRO-010-5, Requirement 1

| Lower | Moderate | High | Severe |
|---|---|--|---|
| <p>The Reliability Coordinator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments</p> | <p>The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> |

VSL Justifications for IRO-010-5, Requirement 1

| | |
|--|---|
| <p>FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p> | <p>The requirement was modified by adding addition sub requirements to requirement R1. The purposed VSL was modified to reflect the addition sub requirement. It does not have an unintended consequence of lowering the level of compliance.</p> |
| <p>FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of</p> | <p>The requirement is for the responsible entity to maintain a document speciation for the data and information. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language.</p> |

VSL Justifications for IRO-010-5, Requirement 1

| | |
|---|--|
| <p>Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for IRO-010-5, Requirement 2 | | | |
|---|---|--|---|
| Lower | Moderate | High | Severe |
| The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| VSL Justifications for IRO-010-5, Requirement 2 | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by add language for consistency purposes to requirement R2. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for IRO-010-5, Requirement 2

| | |
|--|--|
| <p>Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for IRO-010-5, Requirement 3 | | | |
|--|--|--|---|
| Lower | Moderate | High | Severe |
| The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet one of the parts in Requirement R1 Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet two of the parts in Requirement R1 Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet any of the parts in Requirement R1 Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 did not satisfy the obligations of the documented specifications. |

| VSL Justifications for IRO-010-5, Requirement 3 | |
|--|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by deleting language for consistency purposes to requirement R3. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain Ambiguous Language | The requirement is for the responsible entity receiving a specification in Requirement R3 shall satisfy the documented specifications. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |
| FERC VSL G3 | The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent |

VSL Justifications for IRO-010-5, Requirement 3

| | |
|---|---|
| <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

TOP-003-6

VRF Justification for TOP-003-6, Requirement R1

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R1

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R2

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R2 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R2

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R3

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R3

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R4

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R4

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R5

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to Requirement R3 directly effect the electrical state or capability of the Bulk Electric system therefore the VRF remained a medium.

VSL Justification for TOP-003-6, Requirement R5

Please refer to the VSL table located below.

| VSL Justifications for TOP-003-6, Requirement 1 | | | |
|--|---|--|---|
| Lower | Moderate | High | Severe |
| <p>The Transmission Operator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> <p>OR,</p> <p>The Transmission Operator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> |

| VSL Justifications for TOP-003-6, Requirement 1 | |
|---|---|
| <p>FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p> | <p>The requirement was modified by adding addition sub requirements to requirement R1. The purposed VSL was modified to reflect the addition sub requirement. It does not have an unintended consequence of lowering the level of compliance.</p> |

VSL Justifications for TOP-003-6, Requirement 1

| | |
|---|--|
| <p>FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | <p>The requirement is for the responsible entity to maintain a document specification for the data and information. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language.</p> |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for TOP-003-6, Requirement 2 | | | |
|--|---|--|--|
| Lower | Moderate | High | Severe |
| The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. OR, The Balancing Authority did not have a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. |

| VSL Justifications for TOP-003-6 Requirement 2 | |
|---|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding addition language to requirement R2. The purposed VSL was modified to reflect the addition language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation | The requirement is for the responsible entity to maintain a document speciation for the data and information. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6 Requirement 2

| | |
|--|--|
| <p>Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for TOP-003-6, Requirement 3

| Lower | Moderate | High | Severe |
|--|--|---|---|
| The Transmission Operator did not distribute its specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification(s) to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification(s) to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification(s) to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

VSL Justifications for TOP-003-6, Requirement 3

| | |
|--|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by add language for consistency purposes to requirement R3. The purposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 3

| | |
|--|--|
| <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for TOP-003-6, Requirement 4

| Lower | Moderate | High | Severe |
|---|---|--|--|
| The Balancing Authority did not distribute its specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification(s) to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification(s) to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification(s) to four or more entities, or more than 15% of the entities that have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. |

VSL Justifications for TOP-003-6, Requirement 4

| | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding language for consistency purposes to requirement R4. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 4

| | |
|--|---|
| Ambiguous Language | |
| FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement | The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement. |
| FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations | Each VSL is based on a single violation and not cumulative violations. |

VSL Justifications for TOP-003-6, Requirement 5

| Lower | Moderate | High | Severe |
|---|---|---|---|
| The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet one of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet two of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet three or more of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 did not satisfy the obligations of the documented specifications. |

VSL Justifications for TOP-003-6, Requirement 5

| | |
|--|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by deleting language for consistency purposes to requirement R5. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain Ambiguous Language | The requirement is for the responsible entity receiving a specification in Requirement R5 shall satisfy the documented specifications. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 5

| | |
|---|--|
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

Exhibit F

Summary of Development and Complete Record of Development

Summary of Development History

The following is a summary of the development record for proposed Reliability Standards IRO-010-5 and TOP-003-6.1.

I. Overview of the Standard Drafting Team

When evaluating a proposed Reliability Standard, the Commission is expected to give “due weight” to the technical expertise of the ERO.¹ The technical expertise of the ERO is derived from the standard drafting team (“SDT”) selected to lead each project in accordance with Section 4.3 of the NERC Standard Processes Manual.² For this project, the SDT consisted of industry experts, all with a diverse set of experiences. A roster of the Project 2021-06 SDT members is included in **Exhibit G**.

II. Standard Development History

A. Standard Authorization Request Development

On January 20, 2021, the Standards Committee authorized posting a Standards Authorization Request (“SAR”) submitted by the Standards Efficiency Review (“SER”) Phase 2 team to enhance the effective and efficient administration of operational data exchange, for a 30 day formal comment period from July 8, 2021 through August 6, 2021 and authorized the solicitation of SDT members.³ The Standards Committee authorized soliciting additional nominations for the SDT for a 10 day nomination period from August 9, 2021 through August 16, 2021.⁴

¹ Section 215(d)(2) of the Federal Power Act; 16 U.S.C. § 824(d)(2).

² The NERC *Standard Processes Manual* is available at https://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/SPM_Clean_Mar2019.pdf.

³ NERC, *Meeting Minutes – Standards Committee Meeting* (January 20, 2021). https://www.nerc.com/comm/SC/Agenda%20Highlights%20and%20Minutes/SC_January_Minutes_Approved_February_17_2021.pdf.

⁴ See Exhibit F, Complete Record of Development, at item 7.

Based on comments received, the SAR was posted for an additional informal comment period from January 11, 2022 through February 9, 2022.⁵ The Standards Committee accepted the SAR on April 20, 2022.⁶

B. First Posting – Comment Period, Initial Ballot, and Non-binding Poll

On October 19, 2022, the Standards Committee authorized initial posting of proposed Reliability Standards IRO-010-5 and TOP-003-6, the associated Implementation Plan and other associated documents for a 45-day formal comment period from October 25, 2022 through December 15, 2022, with a parallel initial ballot and non-binding poll on the Violation Risk Factors (“VSFs”) and Violation Severity Levels (“VSLs”) held during the last 10 days of the comment period from December 6, 2022 through December 15, 2022.⁷ The initial ballot and non-binding poll results for the proposed Reliability Standards are as follows:

- Proposed Reliability Standard IRO-010-5 received 52.32 percent approval, reaching quorum at 88.05 percent of the ballot pool. The non-binding poll for the associated VRFs and VSLs received 52.38 percent supportive opinions, reaching quorum at 86.07 percent of the ballot pool.⁸
- Proposed Reliability Standard TOP-003-6 received 51.26 percent approval, reaching quorum at 88.05 percent of the ballot pool. The non-binding poll for the associated VRFs and VSLs received 52.66 percent supportive opinions, reaching quorum at 85.92 percent of the ballot pool.⁹

⁵ *Id.* at item 11.

⁶ NERC, *Meeting Minutes – Standards Committee Meeting* (April 20, 2022). <https://www.nerc.com/comm/SC/Agenda%20Highlights%20and%20Minutes/SC%20April%20Meeting%20Minutes%20-%20Approved%20May%2018,%202022.pdf>.

⁷ Complete Record of Development at items 25, 28.

⁸ *Id.* at items 30, 33.

⁹ *Id.* at items 31, 34.

- The Implementation Plan received 61.14 percent approval, reaching quorum at 88.62 percent of the ballot pool.¹⁰

There were 65 sets of responses, including comments from approximately 176 different individuals and approximately 117 companies, representing all 10 industry segments.¹¹

C. Second Posting - Comment Period, Initial Ballot, and Non-binding Poll

Proposed Reliability Standards IRO-010-5 and TOP-003-6, the associated Implementation Plan and other associated documents were posted for a 48-day formal comment period from May 5, 2023 through June 21, 2023, with a parallel additional ballot and non-binding poll held during the last 13 days of the comment period from June 9, 2023 through June 21, 2023.¹² The additional ballot and non-binding poll results for the proposed Reliability Standard are as follows:

- Proposed Reliability Standard IRO-010-5 received 74.89 percent approval, reaching quorum at 82.88 percent of the ballot pool. The non-binding poll for the associated VRFs and VSLs received 73.08 percent supportive opinions, reaching quorum at 80.29 percent of the ballot pool.¹³
- Proposed Reliability Standard TOP-003-6 received 74.43 percent approval, reaching quorum at 83.56 percent of the ballot pool. The non-binding poll for the associated VRFs and VSLs received 71.74 percent supportive opinions, reaching quorum at 80.8 percent of the ballot pool.¹⁴

¹⁰ *Id.* at item 32.

¹¹ *Id.* at item 26.

¹² *Id.* at items 45, 49. The comment period and ballot were extended to June 21, 2023 to reach quorum.

¹³ *Id.* at items 50, 53.

¹⁴ *Id.* at items 51, 54.

- The Implementation Plan received 78.38 percent approval, reaching quorum at 83.39 percent of the ballot pool.¹⁵

There were 64 sets of responses, including comments from approximately 179 different individuals and approximately 119 companies, representing all 10 industry segments.¹⁶

D. Final Ballot

Proposed Reliability Standards IRO-010-5 and TOP-003-6 were posted for an 11-day final ballot period from July 21, 2023 through July 31, 2023.¹⁷ The ballot for the proposed Reliability Standards and associated documents are as follows:

- Proposed Reliability Standard IRO-010-5 reached quorum at 84.59 percent of the ballot pool, receiving affirmative support from 76.36 percent of the voters.¹⁸
- Proposed Reliability Standard TOP-003-6 reached quorum at 85.27 percent of the ballot pool, receiving affirmative support from 75.41 percent of the voters.¹⁹
- The Implementation Plan reached quorum at 85.12 percent of the ballot pool, receiving affirmative support from 79.05 percent of the voters.²⁰

E. Board of Trustees Adoption

The NERC Board of Trustees adopted proposed Reliability Standards IRO-010-5 and TOP-003-6 on August 17, 2023.²¹

¹⁵ *Id.* at item 52.

¹⁶ *Id.* at item 46.

¹⁷ *Id.* at item 65.

¹⁸ *Id.* at item 66.

¹⁹ *Id.* at item 67.

²⁰ *Id.* at item 68.

²¹ NERC, *Board of Trustees Agenda Package Aug. 17, 2023*, Agenda Item 6b6. (Project 2021-06 Modifications to IRO-010-5 and TOP-003-6), https://www.nerc.com/gov/bot/Agenda%20highlights%20and%20Mintues%202013/Board_Meeting_August_17_2023_Agenda_Package.pdf.

F. August 2023 Errata

On August 23, 2023, the Standards Committee approved correcting two errata: under NERC's naming convention, the errata standard was numbered TOP-003-6.1.²²

²² See Agenda of the NERC Standards Committee August 23, 2023 meeting at: <https://extranet.nerc.net/stdscommittee/Shared%20Documents/08%20August%2023,%202023/Agenda%20-%20August%202023.docx>.

Complete Record of Development

Project 2021-06 Modifications to IRO-010 and TOP-003

Related Files

Status

Final ballots concluded **8 p.m. Eastern, Monday, July 31, 2023** for the following:

- *IRO-010-5 – Reliability Coordinator Data Specification and Collection
- *TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- *Implementation Plan

The voting results can be accessed via the links below. The standards will be submitted to the Board of Trustees for adoption and then filed with the appropriate regulatory authorities.

Background

The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IRO-010-2 and TOP-003-3 standards and limit unnecessary data requirements that do not contribute to BES reliability and resiliency. As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, including excessive data retention. If instead a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

The secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-2 and TOP-003-3 the ability to request and receive any information it needs from other Registered Entities to perform those tasks.

Standard(s) Affected: IRO-010-2 and TOP-003-3

Purpose/Industry Need

The proposed project will enhance the effective and efficient administration of operational data exchange for the purpose of focusing operating personnel on safe, secure and reliable operations.

| Draft | Actions | Dates | Results | Consideration of Comments |
|--|---|---|--|---------------------------------------|
| <p>TOP-003-6.1 (69) Clean (70) Redline</p> | <p>Errata Change: On August 23, 2023, the Standards Committee approved changes to remove the word "using" from Requirement R5 and correct the grammar of the word "methods" in Requirement R2 Part 2.5.5.</p> | | | |
| <p>Final Draft</p> <p>IRO-010-5 (55) Clean (56) Redline to Last Posted (57) Redline to Last Approved</p> <p>TOP-003-6 (58) Clean (59) Redline to Last Posted (60) Redline to Last Approved</p> <p>(61) Implementation Plan</p> <p>Supporting Materials</p> <p>Technical Rationale (62) IRO-010-5 (63) TOP-003-6</p> <p>(64) VRF/VSL Justifications</p> | <p>Final Ballots</p> <p>(65) Info</p> <p>Vote</p> | <p>07/21/23 - 07/31/23</p> | <p>Ballot Results</p> <p>(66) IRO-010-5</p> <p>(67) TOP-003-6</p> <p>(68) Implementation Plan</p> | |
| <p>Draft 2</p> <p>IRO-010-5 (35) Clean (36) Redline</p> <p>TOP-003-6 (37) Clean (38) Redline</p> <p>(39) Implementation Plan Supporting Materials</p> <p>(40) Unofficial Comment Form (Word) Technical Rationale (41) IRO-010-5 (42) TOP-003-6</p> <p>(43) VRF/VSL Justifications</p> | <p>Additional Ballots and Non-binding Polls</p> <p>(48) Ballot Open Reminder</p> <p>(49) Info</p> <p>Vote</p> | <p>06/09/23 - 06/21/23 Extended one day to reach quorum</p> | <p>Ballot Results</p> <p>(50) IRO-010-5</p> <p>(51) TOP-003-6</p> <p>(52) Implementation Plan</p> <p>Non-binding Polls</p> <p>(53) IRO-010-5</p> <p>(54) TOP-003-6</p> | |
| | <p>Comment Period</p> <p>(45) Info</p> <p>Submit Comments</p> | <p>05/05/23 - 06/21/23 Extended</p> | <p>(46) Comments Received</p> | <p>(47) Consideration of Comments</p> |

| | | | | |
|--|--|---------------------------------------|---|---------------------------------------|
| <p>Draft 1</p> <p>IRO-010-5 (16) Clean (17) Redline</p> <p>TOP-003-6 (18) Clean (19) Redline</p> <p>(20) Implementation Plan</p> <p>Supporting Materials</p> <p>(21) Unofficial Comment Form (Word)</p> <p>Technical Rationale (22) IRO-010-5</p> <p>(23) TOP-003-6</p> <p>(24) VRF/VSL Justifications</p> | <p>Initial Ballots and Non-binding Polls</p> <p>(28) Updated Info</p> <p>(29) Info</p> <p>Vote</p> | <p>12/06/22 - 12/15/22</p> | <p>Ballot Results</p> <p>(30) IRO-010-5</p> <p>(31) TOP-003-6</p> <p>(32) Implementation Plan</p> <p>Non-binding Poll Results</p> <p>(33) IRO-010-5</p> <p>(34) TOP-003-6</p> | |
| | <p>Join Ballot Pools</p> | <p>10/25/22 - 11/30/22</p> | | |
| | <p>Comment Period</p> <p>(25) Info</p> <p>Submit Comments</p> | <p>10/25/22 - 12/15/22</p> | <p>(26) Comments Received</p> | <p>(27) Consideration of Comments</p> |
| <p>Standard Authorization Request</p> <p>(14) Clean (15) Redline</p> | <p>The Standards Committee accepted the SAR on April 20, 2022</p> | | | |
| <p>Standard Authorization Request - Second Draft</p> <p>(8) Clean (9) Redline</p> <p>Supporting Materials</p> <p>(10) Unofficial Comment Form (Word)</p> | <p>Comment Period</p> <p>(11) Info</p> <p>Submit Comments</p> | <p>01/11/22 - 02/09/22</p> | <p>(12) Comments Received</p> | <p>(13) Consideration of Comments</p> |
| <p>Drafting Team Nominations</p> <p>Supporting Materials</p> <p>(6) Unofficial Nomination Form</p> | <p>Nomination Period</p> <p>(7) Info (Updated)</p> <p>Submit Nominations</p> | <p>07/08/21 - 08/16/21 (Extended)</p> | | |
| <p>(Word)</p> <p>(1) Standard Authorization Request</p> <p>Supporting Materials</p> <p>(2) Unofficial Comment Form (Word)</p> | <p>Comment Period</p> <p>(3) Info</p> <p>Submit Comments</p> | <p>07/08/21 - 08/06/21</p> | <p>(4) Comments Received</p> | <p>(5) Consideration of Comments</p> |

Standard Authorization Request (SAR)

Complete and submit this form, with attachment(s) to the [NERC Help Desk](#). Upon entering the Captcha, please type in your contact information, and attach the SAR to your ticket. Once submitted, you will receive a confirmation number which you can use to track your request.

The North American Electric Reliability Corporation (NERC) welcomes suggestions to improve the reliability of the bulk power system through improved Reliability Standards.

| Requested information | | | |
|---|---|--------|------------------------------|
| SAR Title: | Operational Data Exchange Simplification | | |
| Date Submitted: | June 23, 2020 | | |
| SAR Requester | | | |
| Name: | Standards Efficiency Review Phase 2 Team (John Allen) | | |
| Organization: | City Utilities of Springfield | | |
| Telephone: | 417-831-8972 | Email: | John.Allen@cityutilities.net |
| SAR Type (Check as many as apply) | | | |
| <input type="checkbox"/> New Standard | <input type="checkbox"/> Imminent Action/ Confidential Issue (SPM Section 10) | | |
| <input checked="" type="checkbox"/> Revision to Existing Standard | <input type="checkbox"/> Variance development or revision | | |
| <input checked="" type="checkbox"/> Add, Modify or Retire a Glossary Term | <input checked="" type="checkbox"/> Other (Please specify) | | |
| <input checked="" type="checkbox"/> Withdraw/retire an Existing Standard | | | |
| Justification for this proposed standard development project (Check all that apply to help NERC prioritize development) | | | |
| <input type="checkbox"/> Regulatory Initiation | <input type="checkbox"/> NERC Standing Committee Identified | | |
| <input type="checkbox"/> Emerging Risk (Reliability Issues Steering Committee) Identified | <input type="checkbox"/> Enhanced Periodic Review Initiated | | |
| <input type="checkbox"/> Reliability Standard Development Plan | <input checked="" type="checkbox"/> Industry Stakeholder Identified | | |
| Industry Need (What Bulk Electric System (BES) reliability benefit does the proposed project provide?): | | | |
| The proposed project will enhance the effective and efficient administration of operational data exchange for the purpose of focusing operating personnel on safe, secure and reliable operations. | | | |
| Purpose or Goal (How does this proposed project provide the reliability-related benefit described above?): | | | |
| The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IRO-010-2 and TOP-003-3 standards and limit unnecessary data requirements that do not contribute to BES reliability and resiliency. As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, including excessive data retention. If instead a risk-based approach was developed and performance was | | | |

Requested information

triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

Therefore, the industry would benefit from continuing the efforts of Project 2014-03 and further revising IRO-010-2 and TOP-003-3 to enhance the “data specification” approach to ensuring Registered Entities with operational responsibilities request and receive any data necessary to support the four tasks identified in IRO-010-2 and TOP-003-3 and described in the Detailed Description section below, while protecting public disclosure of commercially sensitive information. To preserve the “data specification” concept, flexibility for differences in operational environments and emerging technology must be maintained. Therefore, creating a minimum list of items to include in a data specification is not desired. However, more clarity regarding the scope of the four tasks identified in IRO-010-2 and TOP-003-3 would be beneficial and is desired. The scope of the data specification would then just reflect the information necessary to cover the scope of the applicable tasks identified in IRO-010-2 or TOP-003-3 for the individual Registered Entity. The SER Phase 2 team received some feedback from industry participants who believe the scope of a data specification would only contain routine real time operating data typically provided systematically from field devices via SCADA/ICCP. Therefore, it is also necessary to clarify for industry if it should contain other data/information and methods of transfer such as phone, instant messaging, internet-based systems, etc.

A secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-2 and TOP-003-3 the ability to request and receive any information it needs from other Registered Entities to perform those tasks.

Project Scope (Define the parameters of the proposed project):

The scope of the proposed project is to simplify the administrative burden with IRO-010-2, TOP-003-3 by developing risk-based compliance expectations and clarifying the four tasks identified in IRO-010-2 and TOP-003-3. The proposed project will need to utilize any available industry resource necessary to maintain flexibility for various operational environments and technology. The project will require revisions to IRO-010-2, TOP-003-3 and associated definitions (especially Real-time monitoring and Balancing Authority analysis functions) and may also require development of Implementation Guidance or other ERO guidance to simplify the administrative burden. The proposed project may also require revisions to other standards as necessary to clarify expectations and remove redundant obligations. The scope of the project should also include coordination with existing projects that have operational data exchange within their scope including projects 2015-09 and 2019-06.

Requested information

Detailed Description (Describe the proposed deliverable(s) with sufficient detail for a drafting team to execute the project. If you propose a new or substantially revised Reliability Standard or definition, provide: (1) a technical justification¹ which includes a discussion of the reliability-related benefits of developing a new or revised Reliability Standard or definition, and (2) a technical foundation document (e.g., research paper) to guide development of the Standard or definition).

The project will, at a minimum, require revisions to IRO-010-2, TOP-003-3 and associated definitions in the NERC Glossary (especially Real-time monitoring and Balancing Authority analysis functions) to clarify expectations for the “data specification” and associated tasks identified in IRO-010-2 and TOP-003-3. The revisions should allow each Registered Entity with operational responsibilities to perform the tasks identified in IRO-010-2 and TOP-003-3 the ability to request and receive any information it needs to perform those tasks, while protecting public disclosure of commercially sensitive information. The four tasks identified in IRO-010-2 and TOP-003-3 and associated standards are listed below.

- Operational Planning Analysis (IRO-008-2 and TOP-002-4)
- Real-time Assessments (IRO-008-2 and TOP-001-4)
- Real-time monitoring (IRO-002-5 and TOP-001-4)
- Balancing Authority analysis functions (BAL-001-2, BAL-002-3, BAL-003-1.1 and BAL-005-1)

This may necessitate revisions to the standards included above and any other standard or definition identified by the drafting team during the project as necessary to achieve the purpose of this project. The drafting team should also coordinate with pre-qualified organizations to develop Implementation Guidance and/or NERC staff to develop other ERO guidance to simplify the administrative burden.

Once those activities are clarified, the drafting team should also evaluate and, if necessary, remove potentially redundant operational data exchange requirements dispersed in other standards including the following:

- BAL-005-1 R2
- EOP-005-3 R13
- EOP-005-3 R14.2
- FAC-014-2 R5
- FAC-014-2 R6.1.
- IRO-008-2 R5
- IRO-008-2 R6
- IRO-017-1 R3
- TOP-001-4 R9
- TOP-001-4 R15
- VAR-002-4.1 R3
- VAR-002-4.1 R4

¹ The NERC Rules of Procedure require a technical justification for new or substantially revised Reliability Standards. Please attach pertinent information to this form before submittal to NERC.

| Requested information |
|---|
| <p>The project should also evaluate any other standard identified by the drafting team during the project as necessary to achieve the purpose of this project. The drafting team should seek to identify opportunities to remove redundant requirements and if necessary, retire requirements that are not needed for reliability. The evaluation at a minimum should consider the following questions:</p> <ul style="list-style-type: none"> • Is the purpose of the activity currently within the scope of one or more of the tasks and consequently IRO-010-2 and TOP-003-3? If so, then remove as redundant. • If minor modifications were made to IRO-010-2, TOP-003-3 and/or associated definitions (especially Real-time monitoring and Balancing Authority analysis functions), then would the activity be within the scope of those standards? If so, then revise and remove as redundant. • Does the receiving Registered Entity have an obligation to use the information? If so, then identify the existing requirement or create a new requirement for them to use it. If not, then retire outright as unnecessary for reliability of the BES. <p>The drafting team should reference precedence from past projects to support this effort, including background materials developed during Project 2014-03 that describe the “data specification” concept including the petition to the FERC and the Project 2014-03 Mapping Document.</p> |
| <p>Cost Impact Assessment, if known (Provide a paragraph describing the potential cost impacts associated with the proposed project):</p> |
| <p>unknown</p> |
| <p>Please describe any unique characteristics of the BES facilities that may be impacted by this proposed standard development project (e.g., Dispersed Generation Resources):</p> |
| <p>N/A</p> |
| <p>To assist the NERC Standards Committee in appointing a drafting team with the appropriate members, please indicate to which Functional Entities the proposed standard(s) should apply (e.g., Transmission Operator, Reliability Coordinator, etc. See the most recent version of the NERC Functional Model for definitions):</p> |
| <p>All NERC Functional Entities are potentially impacted by the scope of this SAR. The recommendations are both technical and administrative in nature but meant to address inefficiencies within requirements for data collection. Therefore, the drafting team should consist of members who are familiar with both aspects.</p> |
| <p>Do you know of any consensus building activities² in connection with this SAR? If so, please provide any recommendations or findings resulting from the consensus building activity.</p> |
| <p>The SER Phase 2 team hosted an industry webinar on February 22, 2019 presenting six efficiency concepts, including consolidating and simplifying information and data requirements. The presentation was followed up by an industry survey to assess support for the concepts. This concept received the second highest support from industry. In addition, an informal survey was conducted on the content of this SAR to assess industry support. The feedback from industry and SER Phase 2 team responses are located on the Standards Efficiency Review page.</p> |

² Consensus building activities are occasionally conducted by NERC and/or project review teams. They typically are conducted to obtain industry inputs prior to proposing any standard development project to revise, or develop a standard or definition.

| Requested information |
|---|
| Are there any related standards or SARs that should be assessed for impact as a result of this proposed project? If so, which standard(s) or project number(s)? |
| Yes, Projects 2015-09 and 2019-06. |
| Are there alternatives (e.g., guidelines, white paper, alerts, etc.) that have been considered or could meet the objectives? If so, please list the alternatives. |
| Yes, Implementation Guidance and/or other ERO guidance could assist with simplifying the administrative burden for the interim period while this project is being administered. |

| Reliability Principles | |
|---|---|
| Does this proposed standard development project support at least one of the following Reliability Principles (Reliability Interface Principles)? Please check all those that apply. | |
| <input type="checkbox"/> | 1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards. |
| <input type="checkbox"/> | 2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand. |
| <input checked="" type="checkbox"/> | 3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably. |
| <input type="checkbox"/> | 4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented. |
| <input type="checkbox"/> | 5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems. |
| <input type="checkbox"/> | 6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions. |
| <input type="checkbox"/> | 7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis. |
| <input type="checkbox"/> | 8. Bulk power systems shall be protected from malicious physical or cyber attacks. |

| Market Interface Principles | |
|---|-------------------|
| Does the proposed standard development project comply with all of the following Market Interface Principles ? | Enter (yes/no) |
| 1. A reliability standard shall not give any market participant an unfair competitive advantage. | Yes |
| 2. A reliability standard shall neither mandate nor prohibit any specific market structure. | Yes |
| 3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. | Yes |

Market Interface Principles

| | |
|--|-----|
| 4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. | Yes |
|--|-----|

Identified Existing or Potential Regional or Interconnection Variances

| Region(s)/ Interconnection | Explanation |
|-------------------------------|-------------|
| <i>e.g.</i> , NPCC | |

For Use by NERC Only

SAR Status Tracking (Check off as appropriate).

| | |
|---|--|
| <input type="checkbox"/> Draft SAR reviewed by NERC Staff | <input type="checkbox"/> Final SAR endorsed by the SC |
| <input type="checkbox"/> Draft SAR presented to SC for acceptance | <input type="checkbox"/> SAR assigned a Standards Project by NERC |
| <input type="checkbox"/> DRAFT SAR approved for posting by the SC | <input type="checkbox"/> SAR denied or proposed as Guidance document |

Version History

| Version | Date | Owner | Change Tracking |
|---------|-------------------|-----------------------------|--|
| 1 | June 3, 2013 | | Revised |
| 1 | August 29, 2014 | Standards Information Staff | Updated template |
| 2 | January 18, 2017 | Standards Information Staff | Revised |
| 2 | June 28, 2017 | Standards Information Staff | Updated template |
| 3 | February 22, 2019 | Standards Information Staff | Added instructions to submit via Help Desk |

Unofficial Comment Form

Project 2021-06 Modifications to IRO-010 and TOP-003 Standard Authorization Request

Do not use this form for submitting comments. Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments on **2021-06 Project 2021-06 Modifications to IRO-010 and TOP-003 Standard Authorization Request (SAR)**. Comments must be submitted by **8 p.m. Eastern, Friday, August 6, 2021**.

Additional information is available on the [project page](#). If you have questions, contact Standards Developer, [Josh Blume](#) (email), or at 404-446-2593.

Background Information

The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IRO-010-2 and TOP-003-3 standards and limit unnecessary data requirements that do not contribute to BES reliability and resiliency. As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, including excessive data retention. If instead a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

The secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-2 and TOP-003-3 the ability to request and receive any information it needs from other Registered Entities to perform those tasks.

Questions

1. Do you agree with the proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.

Yes

No

Comments:

2. Provide any additional comments for the drafting team to consider, if desired.

Comments:

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003 Standard Authorization Request

Informal Comment Period Open through August 6, 2021

[Now Available](#)

A 30-day informal comment period for the **Project 2021-06 Modifications to IRO-010 and TOP-003 Standard Authorization Request**, is open through **8 p.m. Eastern, Friday, August 6, 2021**.

Commenting

Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments. An unofficial Word version of the comment form is posted on the [project page](#).

- *Contact NERC IT support directly at <https://support.nerc.net/> (Monday – Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.*
- *Passwords expire every **6 months** and must be reset.*
- *The SBS **is not** supported for use on mobile devices.*
- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

The drafting team will review all responses received during the comment period and determine the next steps of the project.

For more information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003" in the Description Box.

North American Electric Reliability Corporation
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404-446-2560 | www.nerc.com

Comment Report

Project Name: 2021-06 Modifications to IRO-010 and TOP-003 | Standard Authorization Request
Comment Period Start Date: 7/8/2021
Comment Period End Date: 8/6/2021
Associated Ballots:

There were 32 sets of responses, including comments from approximately 111 different people from approximately 94 companies representing 10 of the Industry Segments as shown in the table on the following pages.

Questions

- 1. Do you agree with the proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.**
- 2. Provide any additional comments for the drafting team to consider, if desired.**

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-----------------------|------------------|------------|---|----------------------------------|-------------------|---|-------------------------|---------------------|
| ACES Power Marketing | Jodirah Green | 1,3,4,5,6 | MRO,NA - Not Applicable,RF,SERC,Texas RE,WECC | ACES Standard Collaborations | Bob Solomon | Hoosier Energy Rural Electric Cooperative, Inc. | 1 | SERC |
| | | | | | Kevin Lyons | Central Iowa Power Cooperative | 1 | MRO |
| | | | | | Bill Hutchison | Southern Illinois Power Cooperative | 1 | SERC |
| | | | | | Jennifer Bray | Arizona Electric Power Cooperative, Inc. | 1 | WECC |
| | | | | | Ryan Strom | Buckeye Power, Inc. | 5 | RF |
| | | | | | Susan Sosbe | Wabash Valley Power Association | 3 | RF |
| | | | | | Scott Brame | North Carolina Electric Membership Corporation | 3,4,5 | SERC |
| | | | | | Kylee Kropp | Sunflower Electric Power Cooperation | 1 | MRO |
| Entergy | Julie Hall | 6 | | Entergy | Oliver Burke | Entergy - Entergy Services, Inc. | 1 | SERC |
| | | | | | Jamie Prater | Entergy | 5 | SERC |
| ISO New England, Inc. | Kathleen Goodman | 2 | NA - Not Applicable,NPCC | Standards Review Committee (SRC) | Helen Lainis | IESO | 2 | NPCC |
| | | | | | Greg Campoli | NYISO | 2 | NPCC |
| | | | | | Kathleen Goodman | ISO-NE | 2 | NPCC |
| | | | | | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Mike Del Viscio | PJM | 2 | RF |

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|-----|-----------------|-------------|-----|----------|-------------------|--|---------|------|
| | | | | | Ali Miremadi | CAISO | 2 | WECC |
| | | | | | Charles Yeung | SPP | 2 | MRO |
| MRO | Kendra Buesgens | 1,2,3,4,5,6 | MRO | MRO NSRF | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Christopher Bills | City of Independence Power & Light | 4 | MRO |
| | | | | | Fred Meyer | Algonquin Power Co. | 1 | MRO |
| | | | | | Jamie Monette | Allete - Minnesota Power, Inc. | 1 | MRO |
| | | | | | Jodi Jensen | Western Area Power Administration - Upper Great Plains East (WAPA) | 1,6 | MRO |
| | | | | | John Chang | Manitoba Hydro | 1,3,6 | MRO |
| | | | | | Larry Heckert | Alliant Energy Corporation Services, Inc. | 4 | MRO |
| | | | | | Marc Gomez | Southwestern Power Administration | 1 | MRO |
| | | | | | Matthew Harward | Southwest Power Pool, Inc. | 2 | MRO |
| | | | | | LaTroy Brumfield | American Transmission Company, LLC | 1 | MRO |
| | | | | | Bryan Sherrow | Kansas City Board Of Public Utilities | 1 | MRO |
| | | | | | Terry Harbour | MidAmerican Energy | 1,3 | MRO |
| | | | | | Jamison Cawley | Nebraska Public Power | 1,3,5 | MRO |
| | | | | | Seth Shoemaker | Muscatine Power & Water | 1,3,5,6 | MRO |
| | | | | | Michael Brytowski | Great River Energy | 1,3,5,6 | MRO |

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|--|----------------|-----------|--------------------------------|------------------------|---------------------|--|---------|------|
| | | | | | Jeremy Voll | Basin Electric Power Cooperative | 1,3,5 | MRO |
| | | | | | Joe DePoorter | Madison Gas and Electric | 4 | MRO |
| | | | | | David Heins | Omaha Public Power District | 1,3,5,6 | MRO |
| | | | | | Bill Shultz | Southern Company Generation | 5 | MRO |
| Duke Energy | Kim Thomas | 1,3,5,6 | FRCC,RF,SERC,Texas RE | Duke Energy | Laura Lee | Duke Energy | 1 | SERC |
| | | | | | Dale Goodwine | Duke Energy | 5 | SERC |
| | | | | | Greg Cecil | Duke Energy | 6 | RF |
| FirstEnergy - FirstEnergy Corporation | Mark Garza | 1,3,4,5,6 | | FE Voter | Julie Severino | FirstEnergy - FirstEnergy Corporation | 1 | RF |
| | | | | | Aaron Ghodooshim | FirstEnergy - FirstEnergy Corporation | 3 | RF |
| | | | | | Robert Loy | FirstEnergy - FirstEnergy Solutions | 5 | RF |
| | | | | | Ann Carey | FirstEnergy - FirstEnergy Solutions | 6 | RF |
| | | | | | Mark Garza | FirstEnergy-FirstEnergy | 4 | RF |
| Alameda Municipal Power | Mary Cooper | 3 | MRO,NPCC,SERC,WECC | Cooper Compliance Corp | Fred Meyer | California Pacific Electric Company | 3 | WECC |
| | | | | | Ron Drobeck | SOLV | 5 | WECC |
| | | | | | Richard Dragonajtys | Merced Irrigation District | 1,3,5 | WECC |
| Southern Company - Southern Company Services, Inc. | Pamela Frazier | 1,3,5,7 | MRO,NPCC,RF,SERC,Texas RE,WECC | Southern Company | Matt Carden | Southern Company - Southern Company Services, Inc. | 1 | SERC |
| | | | | | Joel Dembowski | Southern Company - Alabama | 3 | SERC |

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| | | | | | | Power Company | | |
| | | | | | Ron Carlsen | Southern Company - Southern Company Generation | 6 | SERC |
| | | | | | James Howell | Southern Company - Southern Company Generation | 5 | SERC |
| Northeast Power Coordinating Council | Ruida Shu | 1,2,3,4,5,6,7,8,9,10 | NPCC | NPCC Regional Standards Committee no NGrid | Guy V. Zito | Northeast Power Coordinating Council | 10 | NPCC |
| | | | | | Randy MacDonald | New Brunswick Power | 2 | NPCC |
| | | | | | Glen Smith | Entergy Services | 4 | NPCC |
| | | | | | Alan Adamson | New York State Reliability Council | 7 | NPCC |
| | | | | | David Burke | Orange & Rockland Utilities | 3 | NPCC |
| | | | | | Helen Lainis | IESO | 2 | NPCC |
| | | | | | David Kiguel | Independent | 7 | NPCC |
| | | | | | Nick Kowalczyk | Orange and Rockland | 1 | NPCC |
| | | | | | Joel Charlebois | AESI - Acumen Engineered Solutions International Inc. | 5 | NPCC |
| | | | | | Mike Cooke | Ontario Power Generation, Inc. | 4 | NPCC |
| | | | | | Salvatore Spagnolo | New York Power Authority | 1 | NPCC |

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| Shivaz Chopra | New York Power Authority | 5 | NPCC |
| Deidre Altobell | Con Ed - Consolidated Edison | 4 | NPCC |
| Dermot Smyth | Con Ed - Consolidated Edison Co. of New York | 1 | NPCC |
| Peter Yost | Con Ed - Consolidated Edison Co. of New York | 3 | NPCC |
| Cristhian Godoy | Con Ed - Consolidated Edison Co. of New York | 6 | NPCC |
| Nurul Abser | NB Power Corporation | 1 | NPCC |
| Randy MacDonald | NB Power Corporation | 2 | NPCC |
| Michael Ridolfino | Central Hudson Gas and Electric | 1 | NPCC |
| Vijay Puran | NYS PS | 6 | NPCC |
| ALAN ADAMSON | New York State Reliability Council | 10 | NPCC |
| Sean Cavote | PSEG - Public Service Electric and Gas Co. | 1 | NPCC |
| Brian Robinson | Utility Services | 5 | NPCC |
| Quintin Lee | Eversource Energy | 1 | NPCC |
| Jim Grant | NYISO | 2 | NPCC |
| John Pearson | ISONE | 2 | NPCC |
| Nicolas Turcotte | Hydro-Qu?bec TransEnergie | 1 | NPCC |
| Chantal Mazza | Hydro-Quebec | 2 | NPCC |

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|--|--|--|--|--|-----------------|-------------------------------------|---|------|
| | | | | | Michele Tondalo | United Illuminating Co. | 1 | NPCC |
| | | | | | Paul Malozewski | Hydro One Networks, Inc. | 3 | NPCC |
| | | | | | Sean Bodkin | Dominion - Dominion Resources, Inc. | 6 | NPCC |

1. Do you agree with the proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

No

Document Name

Comment

Texas RE agrees there could be efficiencies gained by clarifying certain actions in the standards. Texas RE is concerned, however, that the SAR drafting team's approach is simply assuming these requirements will be handled by the data specification requirements. There are no obligations for what exactly needs to be in the data specification requirements. The Project 2014-03 drafting team stated several times that FERC has made it clear that the assumption cannot be made on something based on other requirements that dictate certain actions. This SAR appears to be assuming that actions will be taken on data based on a data specification in which there are no requirements. Texas RE has several additional concerns, including the statement regarding a zero-defect expectation, proposing risk-based data specification requirements, the four reliability-related tasks, and the requirements proposed for possible retirement.

Zero-defect Expectation

The statement in the Purpose or Goal section "*As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. These issues result in a significant amount of unnecessary administrative burden for the Registered Entity to demonstrate compliance, including excessive data retention*" is not accurate. The entity receiving the data specification is only required to satisfy the obligations of the data specification, and not achieve "perfect performance."

The entity drafting the data specification can build in thresholds for imperfect performance within the data specification itself. By way of example, the telemetry data specifications for the RC in Texas RE's footprint permits entities to have 92% of telemetry deemed important by the RC achieve a quarterly reliability of 90%. For all telemetry, the availability threshold drops to 80%. In addition, the IRO-010 Standard specifically contemplates the creation of data conflict and reconciliation processes within the data specification itself. Again, in Texas RE's footprint, the applicable data specification provides entities does not establish a "zero-defect expectation," but requires that if an entity cannot resolve a telemetry data issue within two business days, it must provide an estimated time of resolution.

Risk-based data specification

Texas RE is unclear on how a risk-based approach would achieve the purpose of the standards in an effective and efficient manner. Texas RE is concerned that problems may not be identified if performance oversight is only triggered by significant events or unresolved data conflicts. In order for the system to be operated in a reliable manner, constant and consistent data must be provided. While Texas RE generally supports risk-based compliance approaches, Texas RE believes that such approaches are best determined within the framework of the specific data specification itself rather than prescribed through the IRO-010 data specification standard itself.

Reliability-related Tasks

Texas RE does not agree that there are only the four reliability-related tasks specified in the SAR. “Core BES reliability-related tasks” are defined in the SAR by only four tasks, all of them operational, and contained only in the eight Standards specified. Other reliability-related tasks do exist but do not fit in the four categories described in the SAR.

For example, modeling data dictates OPA, RTA, and Real-time monitoring results but is not listed. Based on the language provided, the SAR drafting team envisions that OPA, RTA, or Real-time monitoring will be performed and therefore the entity is “compliant” without ever having any obligation to ensure it receives quality inputs to provide quality output, which would help ensure reliability. This could lead to inconsistencies and diminished accountability for inadequate data specifications, especially for those that lack information necessary to support reliable operations.

The core reliability-related tasks do not include data provisions (EOP-005, IRO-017) because they would not be associated with the OPA or RTA within the IRO-010 and TOP-003 data specifications. As this data would impact reliability studies that occur after the Long-term Planning Horizon, but significantly before the next-day studies, it appears there is a gap in the Standards.

Texas RE does not agree that RTA and OPA need further clarification. Industry should be aware of what is needed regarding these tasks since there are NERC defined terms and ERO endorsed Implementation Guidance on RTA. A definition for Real-time monitoring could help in providing clarity on expectations.

Texas RE requests the SAR drafting team provide examples of data specifications that are not part of the core reliability-related tasks.

Requirements proposed for possible retirement:

Texas RE is concerned that the requirements being proposed for retirement have to do with conditions that are not part of the OPA and RTA as the data specifications requirements are intended.

For example, notification of changes to the capabilities of a Blackstart Resource affecting the ability to meet the Transmission Operator’s restoration plan may require a TOP to modify its restoration plan. This evaluation and modification would not be within the scope of the OPA or RTA, unless the SDT plans to include these tasks as part of its clarification the core BES reliability-related tasks.

Additionally, IRO-017-1 R3 requires provision of the Planning Assessment to the RC so the TP and PC can jointly develop solutions with its respective RC for identified issues or conflicts with planned outages in its Planning Assessment. As outages are scheduled and coordinated months if not years in advance, relying on entities to identify and resolve these issues or conflicts through the OPA and RTA is not practical.

Another example is that voltage control is not part of one of the core reliability-related tasks, which could lead to voltage collapse if it is not consider in the data specification.

Lastly, Texas RE is concerned that entities may not include specific data points that are being proposed for removal in its data specification. This will lead to inconsistencies in implementation and could lower the bar for reliability if entities do not consider certain data points. The SAR drafting team

should not assume that all entities will have the same reliability tasks and all entities will consider the same data specifications. Making the requirements general in nature lowers the compliance requirements and increases the risk that data management will not be done in an effective manner to support reliable operations.

Likes 0

Dislikes 0

Response

Anthony Jablonski - ReliabilityFirst - 10

Answer

No

Document Name

Comment

1. RF believes the SAR does not clearly establish problems with the existing standards.
2. RF feels an effective SAR would need to more clearly identify specific requested changes to the standards.
3. RF does not agree there is a need to revise the standard; rather, RF believes collaboration between entities provides an effective means of addressing concerns with data specifications.
4. See additional general comments from RF in response to Question 2.

Likes 0

Dislikes 0

Response

Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2

Answer

No

Document Name

Comment

ERCOT does not agree with the proposed scope of the SAR, but does generally agree that it is appropriate to review Reliability Standards in order to reduce administrative burdens and eliminate redundancies, as long as revisions do not adversely impact reliability. For this SAR, ERCOT agrees that it is appropriate to review the zero-defect expectation, but with caution. Specifically, ERCOT believes bright line criteria should still set a high standard, but be focused on reliability needs. For example, telemetry availability may be percentage based (e.g., 98 to 99% on a rolling average considering forced or other unplanned outages). A strong performance metric incents the selection of more reliable technologies. ERCOT also agrees that it is appropriate to evaluate the potential removal of other data exchange requirements that are redundant. Finally, ERCOT agrees that the Reliability Standards should ensure Responsible Entities (RC, BA, TOP) have the ability to request and receive any information necessary to perform their responsibilities.

ERCOT disagrees that IRO-010 and TOP-003 should restrict the content and scope of the data specification. As stated in the standards, the data specification should include any data that the entity finds necessary to perform its analyses, which is done in these standards through the data specification. Changing the scope of the data specification does not solve the zero-defect concern. In addition, ERCOT does not believe it is appropriate to revise definitions in order to correspond to a particular requirement. Revising definitions, including those for “real-time monitoring” and “Balancing Authority analysis functions” as highlighted in the SAR, could result in unintended consequences beyond IRO-010 and TOP-003. ERCOT also disagrees that the drafting team should consider a requirement(s) to ensure entities use the data in the specification because of the administrative burden associated with doing so. Accordingly, ERCOT suggests removing the proposed revision of definitions from the SAR and deleting the second and third bullet points identified as questions to evaluate redundant requirements. Specifically, ERCOT suggests the following language be deleted from the SAR:

“If minor modifications were made to IRO-010-2, TOP-003-3 and/or associated definitions (especially Real-time monitoring and Balancing Authority analysis functions), then would the activity be within the scope of those standards? If so, then revise and remove as redundant.”

”Does the receiving Registered Entity have an obligation to use the information? If so, then identify the existing requirement or create a new requirement for them to use it. If not, then retire outright as unnecessary for reliability of the BES.”

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| Likes | 0 |
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| Dislikes | 0 |
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| Response |
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| Marcus Bortman - APS - Arizona Public Service Co. - 1,3,5,6 |
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| Answer | Yes |
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| Document Name | |
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| Comment |
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AZPS does not have any comments or suggestions for the project scope currently

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| Likes | 0 |
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| Dislikes | 0 |
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| Response |
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| Leonard Kula - Independent Electricity System Operator - 2 |
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| Answer | Yes |
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| Document Name | |
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| Comment |
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N/A.

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| Likes | 0 |
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| Dislikes | 0 |
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Response

Thomas Foltz - AEP - 3,5,6

Answer Yes

Document Name

Comment

AEP agrees with the purpose and perceived need as expressed in the proposed SAR, and sees value in pursuing it. The clarity that the SAR seeks is definitely needed and would be very beneficial. Having said that, the means by which that clarity is obtained, as well as the content of that clarity, are both important issues that industry will need to work on effectively in order to achieve a successful outcome and meaningful change to these standards. In addition, AEP encourages the members of the future Standards Drafting Team to ensure that their eventual revisions are not written in such a way that they are unduly burdensome, especially for larger entities having voluminous data points.

In order for the TOP to perform the necessary real time assessments for the entire BES, they may require data points at lower voltages which are not needed by the RC and thus not provided. The RTO, serving as the RC, should continue to define what data points they need for their own obligations (as per IRO-010), however AEP recommends that changes be made to TOP-003 to allow the TOP to define what data they need from the RC, including data that might not be required or needed by the RC for their own purposes. Examples of such data include DER data, detailed renewable energy models, and neighboring TOP sub-transmission data that the RTO may not include in their models. TOPs may identify these data needs through studies conducted to determine the impact of external data on the TOP's footprint for RTA/OPA purposes. All of this type of external DP/GOP/TOP data should be provided by the RTO. As currently written, the RC has no existing obligations within TOP-003 to do so. As such, obligations for the RC to provide this data would need to be developed and incorporated into TOP-003. With the RTO providing the TOP the necessary data to meet TOP-003 data specifications for Real-time monitoring and RTA/OPA, the revised standards should provide clarity to each applicable entity (RTO/TOP) on which entities need to receive a data specification document from the applicable entity.

Data specification documents are shared between TOPs/GOPs/DPs/etc., even though a majority, if not all, of the data is received via the RTO. To reduce the administrative burden, the data specification documents should only be communicated to the RTOs and any entities serving as the RC who are directly supplying the TOP data. AEP believes direct data connections (i.e. not through the RTO) should be avoided if at all possible, as managing these types of special links are extremely difficult and complicate data sharing between entities. In addition, such bi-lateral data links to individual companies may be more susceptible to data reliability issues and could have potential compliance ramifications, with TOP-001 as just one example. Additional clarity also needs to be addressed in the standards regarding the details required in the specification documents. Some entities keep the data specification documents at a very high level (which is preferred) while other entities specify individual data point names and detailed requirements in their data specification documents (not preferred).

AEP recommends the SDT also consider the development of a NERC Glossary Term for real-time monitoring, as we believe the clarity it would bring would be very beneficial if referenced within TOP-003 and IRO-010.

AEP believes the suggestions above would be beneficial and prevent divergence in Real-time Assessment analysis from inconsistency in the models themselves, clarifying exactly where the data is coming from, and by reducing administrative burden.

Likes 1 Joe Tarantino, N/A, Tarantino Joe

Dislikes 0

Response

Scott McGough - Georgia System Operations Corporation - 3,4

Answer Yes

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| Document Name | |
| Comment | |
| GSOC appreciates the effort to develop a definition for Real-time monitoring. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Jamie Monette - Allele - Minnesota Power, Inc. - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| . | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The NSRF supports the SAR's risk-based approach for data collections. The NSRF also supports the second purpose of pulling in other exchange requirements within different Standards. This will give all applicable Entities a single place to review (and provide) required data. | |
| Likes 1 | Joe Tarantino, N/A, Tarantino Joe |
| Dislikes 0 | |
| Response | |
| | |
| Carl Pineault - Hydro-Quebec Production - 1,5 | |
| Answer | Yes |
| Document Name | HQP comments TOP-IRO.docx |
| Comment | |

See attached comments to substantiate our support on the proposed scope.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,7 - WECC,Texas RE,NPCC,SERC,RF, Group Name Southern Company

Answer Yes

Document Name

Comment

Southern Company fully supports the secondary purpose described in the SAR to identify and remove redundant requirements and if necessary, retire requirements that are not needed for reliability.

The first purpose of the SAR, as written, is not clear. Both IRO-010-3 and TOP-003-4 currently indicate that their purpose is to allow the parties seeking data (the RC, BA, and TOP) to create the data specs they need to fulfill their responsibilities. It is not clear, through the words in the SAR, that the revision purpose, as stated, is needed.

“The revisions should allow each Registered Entity with operational responsibilities to perform the tasks identified in IRO-010-2 and TOP-003-3 the ability to request and receive any information it needs to perform those tasks, while protecting public disclosure of commercially sensitive information.”

It is not clear what is new. If standard revision changes are needed, the reason for a change needs to be more clearly stated, because the parties who can issue data specifications already have the flexibility to ask for exactly what they need to fulfill their responsibilities.

Likes 0

Dislikes 0

Response

Jamie Johnson - California ISO - 2

Answer Yes

Document Name

Comment

CAISO agrees with the comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee (SRC). In addition, CAISO requests the SAR drafting team consider the following:

- RCs have no direct interrelationships with DPs, PCs, TOs, TPs, TSPs, GOs/GOPs per the current NERC Reliability Functional Model. Therefore, any changes to the standards related to data exchange should follow the Functional Model obligations. Currently RCs have direct relationship with BAs and TOPs.

- Adding the following standards to this project related to data exchange: CIP-002, CIP-012, EOP-006, EOP-010, EOP-011, FAC-008, IRO-002, MOD-001, PRC-002, PRC-012, PRC-023, and TPL-001

Likes 0

Dislikes 0

Response

Daniel Gacek - Exelon - 1,3,5,6

Answer

Yes

Document Name

Comment

Exelon agrees with the proposed scope of this SAR and concurs with the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

Alan Kloster - Great Plains Energy - Kansas City Power and Light Co. - 1,3,5,6 - MRO

Answer

Yes

Document Name

Comment

Evergy agrees with the proposed scope of this SAR. Evergy supports and incorporates by reference Edison Electric Institute's (EEI) response to Question 1.

Likes 0

Dislikes 0

Response

Jack Cashin - American Public Power Association - 4

Answer

Yes

Document Name

Comment

The American Public Power Association (APPA), the Large Public Power Council (LPPC), and Transmission Access Policy Study Group (TAPS) strongly support the scope and purpose of this SAR and the development of a risk-based approach to entity compliance. The Associations believe the SAR meets two of the (Board approved 11/20) 2021 ERO Work Plan Priorities of, "Expand Risk-Based Focus in Standards, Compliance Monitoring, and Enforcement; and, Capture Effectiveness, Efficiency, and Continuous Improvement Opportunities." The SAR scope seeks to make the standards more risk-based and in turn minimize administrative burden. Moreover, the scope seeks to make the standards more effective and efficient, while ensuring that other existing standards with operational data exchange either improve reporting, or eliminate duplication.

APPA, LPPC and TAPS acknowledge that the ERO has discretion to take a risk-based approach to compliance monitoring, registered entities must comply with all applicable standard requirements. Public power utilities are typically on the receiving end of data specifications and currently experience uncertainty on the effort needed to demonstrate compliance with the current zero-defect requirements. Under the effective data specification standards, entities that receive data specifications could be expected to demonstrate perfect performance with respect to every item in each data specification. Such an expectation is counter to a risk-based approach. Therefore, under the current standards complying entities expend excessive resources on data requirements rather than on reliability improvements. The scope of the proposed SAR seeks to simplify the administrative burden in the Project standards. By refining definitions associated with the standards and coordinating with existing data standards the SAR scope should serve to make the body of standards more efficient and effective.

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| Likes 1 | Joe Tarantino, N/A, Tarantino Joe |
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| Dislikes 0 | |
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Response

David Jendras - Ameren - Ameren Services - 1,3,6

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| Answer | Yes |
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| Document Name | |
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Comment

Ameren agrees with and supports EEI comments.

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| Likes 0 | |
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| Dislikes 0 | |
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Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

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| Answer | Yes |
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| Document Name | |
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Comment

EEI supports the efforts of the SER Phase 2 Team and this SAR, which addresses consolidating and simplifying information and data exchange requirements. EEI also agrees with APPA, TAPS and LPPC that this project aligns with two of the five ERO Work Plan Priorities (i.e., 1. Expand Risk-Based Focus in Standards and 2. Capture Effectiveness, Efficiency and Continuous Improvement Opportunities). (Ref. 2021 ERO Work Plan, dated

11/5/2020/NERC Board Approved). EEI is also supportive of expanding this project as identified in this SAR to remove potentially redundant operational data exchange requirements included in other standards identified within the detailed SAR Scope.

Additionally, EEI recommends updating the SAR to reflect the current version of both IRO-010 and TOP-003 Reliability Standards.

Likes 0

Dislikes 0

Response

Matthew Harward - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC

Answer

Yes

Document Name

Comment

SPP supports the comments submitted by the NSRF. In addition, SPP suggests that the SAR drafting team consider including the following issues which are aligned with the SAR's purpose:

- Mutually-agreeable timing requirements associated with responding to data specifications;
- A methodology to negotiate data exchanges where one entity questions whether the requested data is necessary for reliability (e.g., dispute resolution);
- Provisions to address confidentiality concerns; and
- Data requirements should be pertinent to reliability analysis.

Likes 0

Dislikes 0

Response

Mary Cooper - Alameda Municipal Power - 3 - WECC, Group Name Cooper Compliance Corp

Answer

Yes

Document Name

Comment

We would like to expand the scope to include a requirement that the appropriate functional entity who is responsible for delivering the data is specified. For example, the entity should identify if they are expecting the data to be provided by the GO or TO versus the GOP or TOP.

Likes 0

Dislikes 0

Response

David Kwan - Ontario Power Generation Inc. - 5 - NPCC

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| OPG concurs with NPCC's RSC comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Bobbi Welch - Midcontinent ISO, Inc. - 2 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| MISO supports comments submitted by the ISO/RTO Council (IRC) Standards Review Committee (SRC). | |
| In addition, MISO recommends the project scope be expanded to include a dispute resolution process. This would allow entities to address the zero-defect concern and provide a way for entities to come to a mutually agreeable solution prior to escalating it to the regulator for resolution. | |
| MISO also supports constricting the scope of IRO-010 and TOP-003 to data required for reliability needs as a reasonable approach; however, we do not support a narrowing of scope that would limit the applicability of IRO-010 and TOP-003 to include SCADA data sent via ICCP only, as we use the data specification to collect modeling and outage data as well. | |
| Finally, MISO would prefer to tie the scope to reliability needs as opposed to specific standards as there may be data we require for reliability purposes that are not specifically tied to one of the standards listed in the SAR. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Amber Parker - Unisource - Tucson Electric Power Co. - NA - Not Applicable - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

Response

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Maryanne Darling-Reich - Black Hills Corporation - 1,3,5,6 - MRO,WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Glenn Barry - Los Angeles Department of Water and Power - 1,3,5,6

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee no NGrid

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

2. Provide any additional comments for the drafting team to consider, if desired.

Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2

Answer

Document Name

Comment

ERCOT notes that the Reliability Standards resulting from Projects 2015-09 and 2019-06 have been approved by the NERC Board of Trustees and should therefore not be identified as projects to coordinate with. ERCOT suggests removal of the references to these projects.

ERCOT suggests the drafting team consider whether the data specification required by IRO-010 and TOP-003 should also include data necessary for outage coordination (IRO-017). In addition, ERCOT suggests the standard drafting team be mindful that compliance obligations should not interfere with entities providing telemetry that enhances real time monitoring capabilities (e.g. PMU, adding additional SCADA measurements), given more challenging technologies are being integrated on the electric system, even if a requesting entity has State Estimation capabilities (every 1 to 5 min).

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee no NGrid

Answer

Document Name

Comment

Please consider updating the SAR with the current standard version numbers.

Likes 0

Dislikes 0

Response

David Kwan - Ontario Power Generation Inc. - 5 - NPCC

Answer

Document Name

Comment

OPG concurs with NPCC's RSC comments.

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations

Answer

Document Name

Comment

Thank you for the opportunity to provide comments.

Likes 0

Dislikes 0

Response

Jack Cashin - American Public Power Association - 4

Answer

Document Name

Comment

APPA, LPPC and TAPS strongly support the proposed “top-down” approach to clarify the tasks in the standards. Public Power believes the current IRO-010 and TOP-003 standards provide a one-stop source for entities to get the data they need for Operational Planning Analysis, Real-time Assessments, Real-time Monitoring, and Balancing Authority Analysis—the BES reliability-related tasks that drive IRO-010 and TOP-003 data specifications.

The approach has been supported by NERC. As NERC said in its petition for approval for IRO-010-1a, which used the same top-down approach as IRO-010-2 and TOP-003-3: “[t]he requirements in the standard specify a formal request as the method for the Reliability Coordinator to explicitly identify the data and information it needs for reliability; and require the entities with the data to provide it as requested. This method is sound because the Reliability Coordinator is the only entity that knows what data it needs to properly perform its reliability tasks, and the most efficient format for accepting this data. Docket No. RM10-15, at 35 (Dec. 31, 2009) (emphasis added).” Much more recently, NERC stated in its April 6, 2020 comments on FERC’s NOPR regarding the Phase 1 SER retirements (RM19-16 and RM19-17, at 9 (emphasis added)): Reliability Standards MOD-032-1, IRO-010-2, and TOP-003-3 provide the entities responsible for the reliable modeling, planning, and operation of the BPS with the authority to obtain the information they need from Generator Owners and Transmission Owners to complete their reliability tasks, which may include next most limiting equipment information. Now that these broader data specification standards are in place, NERC has identified no reliability need to maintain additional requirements expressly requiring the provision of this data in the FAC-008 standard. APPA, LPPC and TAPS agree with NERC that the standards it cites give RCs, TOPs, and BAs the authority to get the information they need to carry out their reliability tasks. That is equally the case whether the information at issue is identification of next most limiting equipment, weather-related operational constraints, or real-time operating data. The associations are concerned that much of the history behind the data specification concept is being forgotten; and as a result, drafting teams are reverting to specifying the information that must be provided on a continent-wide basis. This overly-prescriptive approach would result in reliability standards being revised constantly to chase moving targets with every new technology or risk that emerges. These standards can be precise with respect to the information to be requested, or they can be accurate; they cannot be both, and accuracy has to be the priority. The data specification should be flexible enough to evolve with risks and technologies, as well as being flexible enough to apply in the varying operational environments across the continent. Consequently, the associations believe that clarification of the scope of the four BES reliability-related tasks identified in the SAR would allow the data specification to simply reflect what each RC, BA or TOP needs to perform those tasks based on its particular operational

environment, and that doing so should alleviate the concerns behind recent attempts to add a detrimental amount of specificity to the standards. Based on confusion among stakeholders, it appears that clarification of acceptable types of data (i.e., whatever the requesting entity needs) and formats/methods of transfer (i.e., anything—SCADA/ICCP, telephone, email, etc.—so long as it is mutually agreeable) is also necessary.

Likes 1 Joe Tarantino, N/A, Tarantino Joe

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,7 - WECC,Texas RE,NPCC,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

IRO-010-2 is inactive, Version -3 is the active version. The SAR names version -2 as the one to be modified.

TOP-003-3 is inactive, Version -4 is the active version. The SAR names version -3 as the one to be modified.

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

The NSRF recommends that the SAR drafting team expand the scope to capture the following data specification issues (if not already in the proposed scope).

1. The NSRF (and all Entities) know that some data requests are predicated on electronic data (ICCP) submittals that may be required to be sent every couple seconds. This can lead to an auditing nightmare to prove continuous compliance for the Entity and the Auditor. TOP-001-5, R9 gives a 30 minute or more window for the BA and TOP to inform the RC when telemetering has been affected between Entities. This does not remove the burden of proving all ICCP scans were delivered and received by two Entities.

2. There should be a common way to request and provide data specifications. An Entity providing data has no way of knowing who to send the data to at the receiving Entity. And will not have proof that the data was submitted as prescribed by the Standard. The NSRF does not know if this belongs in a Standard or a Data Submittal Guideline, which would be for the Standard Drafting Team to investigate. One way this could be alleviated is for all data specifications to be sent to the Primary Compliance Contact, Alternate Compliance Contact or Authorizing Officer.

Likes 0

Dislikes 0

Response

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer

Document Name

Comment

Minnesota Power supports the purpose of this project, especially the secondary purpose of consolidating data requirements from other standards into these two. Minnesota Power also agrees with the NSRF comment regarding establishing a common method for the collection and distribution of data specifications

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

| Response | |
|--|--|
| | |
| Thomas Foltz - AEP - 3,5,6 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>While not explicitly within the scope of this SAR, AEP believes there are reliability benefits in pursuing a data sharing network. This will benefit all entities, including smaller entities, in performing real time assessments as the grid continues to evolve and mature. In addition, having such a data sharing network would also significantly reduce the administrative burden associated with the sharing and obtaining of data.</p> | |
| Likes 0 | |
| Dislikes 0 | |

| Response | |
|---|--|
| | |
| Anthony Jablonski - ReliabilityFirst - 10 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>1) RF does not agree with language, “As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. Additionally, it is not clear what should be included in a data specification.” RF believes the SDT did not want to prescribe a data specification and wisely left it up to the RC, BA and TOP to decide on what information was needed to perform the various operational assessments.</p> <p>2) RF believes that if an entity that has an issue with the data specification or it is not clear to them should work with that respective entity to fully understand their obligation(s).</p> <p>{3) RF believes it is not a burden for an entity to show compliance as they can provide logs or show the compliance monitoring team through a walkthrough or have an attestation from the RC, BA or TOP stating they have received everything they requested.</p> | |
| Likes 0 | |
| Dislikes 0 | |

| Response | |
|---|--|
| | |
| Leonard Kula - Independent Electricity System Operator - 2 | |
| Answer | |
| Document Name | |
| Comment | |

N/A.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 1,3,5,6

Answer

Document Name

Comment

AZPS does not have any additional comments for the drafting team to consider currently.

Likes 0

Dislikes 0

Response

Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy

Answer

Document Name

Comment

No additional comments at this time.

Likes 0

Dislikes 0

Response

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer

Document Name

Comment

No additional comments.

Likes 0

Dislikes 0

Response

Consideration of Comments

Project Name: 2021-06 Modifications to IRO-010 and TOP-003 | Standard Authorization Request

Comment Period Start Date: 7/8/2021

Comment Period End Date: 8/6/2021

There were 32 sets of responses, including comments from approximately 111 different people from approximately 94 companies representing 10 of the Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the [project page](#).

If you feel that your comment has been overlooked, let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, contact Vice President of Engineering and Standards [Howard Gugel](#) (via email) or at (404) 446-9693.

Questions

1. [Do you agree with the proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.](#)
2. [Provide any additional comments for the drafting team to consider, if desired.](#)

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|----------------------|---------------|------------|---|------------------------------|-------------------|---|-------------------------|---------------------|
| ACES Power Marketing | Jodirah Green | 1,3,4,5,6 | MRO,NA - Not Applicable,RF,SERC,Texas RE,WECC | ACES Standard Collaborations | Bob Solomon | Hoosier Energy Rural Electric Cooperative, Inc. | 1 | SERC |
| | | | | | Kevin Lyons | Central Iowa Power Cooperative | 1 | MRO |
| | | | | | Bill Hutchison | Southern Illinois Power Cooperative | 1 | SERC |
| | | | | | Jennifer Bray | Arizona Electric Power Cooperative, Inc. | 1 | WECC |
| | | | | | Ryan Strom | Buckeye Power, Inc. | 5 | RF |
| | | | | | Susan Sosbe | Wabash Valley Power Association | 3 | RF |
| | | | | | Scott Brame | North Carolina Electric Membership Corporation | 3,4,5 | SERC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-----------------------|------------------|-------------|--------------------------|----------------------------------|-------------------|--------------------------------------|-------------------------|---------------------|
| | | | | | Kylee Kropp | Sunflower Electric Power Corporation | 1 | MRO |
| Entergy | Julie Hall | 6 | | Entergy | Oliver Burke | Entergy - Entergy Services, Inc. | 1 | SERC |
| | | | | | Jamie Prater | Entergy | 5 | SERC |
| ISO New England, Inc. | Kathleen Goodman | 2 | NA - Not Applicable,NPCC | Standards Review Committee (SRC) | Helen Lainis | IESO | 2 | NPCC |
| | | | | | Greg Campoli | NYISO | 2 | NPCC |
| | | | | | Kathleen Goodman | ISO-NE | 2 | NPCC |
| | | | | | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Mike Del Viscio | PJM | 2 | RF |
| | | | | | Ali Miremadi | CAISO | 2 | WECC |
| | | | | | Charles Yeung | SPP | 2 | MRO |
| MRO | Kendra Buesgens | 1,2,3,4,5,6 | MRO | MRO NSRF | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Christopher Bills | City of Independence Power & Light | 4 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|--|-------------------------|---------------------|
| | | | | | Fred Meyer | Algonquin Power Co. | 1 | MRO |
| | | | | | Jamie Monette | Allete - Minnesota Power, Inc. | 1 | MRO |
| | | | | | Jodi Jensen | Western Area Power Administration - Upper Great Plains East (WAPA) | 1,6 | MRO |
| | | | | | John Chang | Manitoba Hydro | 1,3,6 | MRO |
| | | | | | Larry Heckert | Alliant Energy Corporation Services, Inc. | 4 | MRO |
| | | | | | Marc Gomez | Southwestern Power Administration | 1 | MRO |
| | | | | | Matthew Harward | Southwest Power Pool, Inc. | 2 | MRO |
| | | | | | LaTroy Brumfield | American Transmission Company, LLC | 1 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|-----------------------|-------------|-------------------|---------------------------------------|-------------------------|---------------------|
| | | | | | Bryan Sherrow | Kansas City Board Of Public Utilities | 1 | MRO |
| | | | | | Terry Harbour | MidAmerican Energy | 1,3 | MRO |
| | | | | | Jamison Cawley | Nebraska Public Power | 1,3,5 | MRO |
| | | | | | Seth Shoemaker | Muscatine Power & Water | 1,3,5,6 | MRO |
| | | | | | Michael Brytowski | Great River Energy | 1,3,5,6 | MRO |
| | | | | | Jeremy Voll | Basin Electric Power Cooperative | 1,3,5 | MRO |
| | | | | | Joe DePoorter | Madison Gas and Electric | 4 | MRO |
| | | | | | David Heins | Omaha Public Power District | 1,3,5,6 | MRO |
| | | | | | Bill Shultz | Southern Company Generation | 5 | MRO |
| Duke Energy | | 1,3,5,6 | FRCC,RF,SERC,Texas RE | Duke Energy | Laura Lee | Duke Energy | 1 | SERC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|---------------------------------------|-------------|------------|--------------------|------------------------|---------------------|---------------------------------------|-------------------------|---------------------|
| | Kim Thomas | | | | Dale Goodwine | Duke Energy | 5 | SERC |
| | | | | | Greg Cecil | Duke Energy | 6 | RF |
| FirstEnergy - FirstEnergy Corporation | Mark Garza | 1,3,4,5,6 | | FE Voter | Julie Severino | FirstEnergy - FirstEnergy Corporation | 1 | RF |
| | | | | | Aaron Ghodooshim | FirstEnergy - FirstEnergy Corporation | 3 | RF |
| | | | | | Robert Loy | FirstEnergy - FirstEnergy Solutions | 5 | RF |
| | | | | | Ann Carey | FirstEnergy - FirstEnergy Solutions | 6 | RF |
| | | | | | Mark Garza | FirstEnergy-FirstEnergy | 4 | RF |
| Alameda Municipal Power | Mary Cooper | 3 | MRO,NPCC,SERC,WECC | Cooper Compliance Corp | Fred Meyer | California Pacific Electric Company | 3 | WECC |
| | | | | | Ron Drobeck | SOLV | 5 | WECC |
| | | | | | Richard Dragonajtys | Merced Irrigation District | 1,3,5 | WECC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--|----------------|----------------------|--------------------------------|-------------------------|-------------------|--|-------------------------|---------------------|
| Southern Company - Southern Company Services, Inc. | Pamela Frazier | 1,3,5,7 | MRO,NPCC,RF,SERC,Texas RE,WECC | Southern Company | Matt Carden | Southern Company - Southern Company Services, Inc. | 1 | SERC |
| | | | | | Joel Dembowski | Southern Company - Alabama Power Company | 3 | SERC |
| | | | | | Ron Carlsen | Southern Company - Southern Company Generation | 6 | SERC |
| | | | | | James Howell | Southern Company - Southern Company Generation | 5 | SERC |
| Northeast Power Coordinating Council | Ruida Shu | 1,2,3,4,5,6,7,8,9,10 | NPCC | NPCC Regional Standards | Guy V. Zito | Northeast Power Coordinating Council | 10 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|--------------------|-------------------|---|-------------------------|---------------------|
| | | | | Committee no NGrid | Randy MacDonald | New Brunswick Power | 2 | NPCC |
| | | | | | Glen Smith | Entergy Services | 4 | NPCC |
| | | | | | Alan Adamson | New York State Reliability Council | 7 | NPCC |
| | | | | | David Burke | Orange & Rockland Utilities | 3 | NPCC |
| | | | | | Helen Lainis | IESO | 2 | NPCC |
| | | | | | David Kiguel | Independent | 7 | NPCC |
| | | | | | Nick Kowalczyk | Orange and Rockland | 1 | NPCC |
| | | | | | Joel Charlebois | AESI - Acumen Engineered Solutions International Inc. | 5 | NPCC |
| | | | | | Mike Cooke | Ontario Power Generation, Inc. | 4 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|--------------------|--|-------------------------|---------------------|
| | | | | | Salvatore Spagnolo | New York Power Authority | 1 | NPCC |
| | | | | | Shivaz Chopra | New York Power Authority | 5 | NPCC |
| | | | | | Deidre Altobell | Con Ed - Consolidated Edison | 4 | NPCC |
| | | | | | Dermot Smyth | Con Ed - Consolidated Edison Co. of New York | 1 | NPCC |
| | | | | | Peter Yost | Con Ed - Consolidated Edison Co. of New York | 3 | NPCC |
| | | | | | Cristhian Godoy | Con Ed - Consolidated Edison Co. of New York | 6 | NPCC |
| | | | | | Nurul Abser | NB Power Corporation | 1 | NPCC |
| | | | | | Randy MacDonald | NB Power Corporation | 2 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|--|-------------------------|---------------------|
| | | | | | Michael Ridolfino | Central Hudson Gas and Electric | 1 | NPCC |
| | | | | | Vijay Puran | NYSPS | 6 | NPCC |
| | | | | | ALAN ADAMSON | New York State Reliability Council | 10 | NPCC |
| | | | | | Sean Cavote | PSEG - Public Service Electric and Gas Co. | 1 | NPCC |
| | | | | | Brian Robinson | Utility Services | 5 | NPCC |
| | | | | | Quintin Lee | Eversource Energy | 1 | NPCC |
| | | | | | Jim Grant | NYISO | 2 | NPCC |
| | | | | | John Pearson | ISONE | 2 | NPCC |
| | | | | | Nicolas Turcotte | Hydro-Quebec TransEnergie | 1 | NPCC |
| | | | | | Chantal Mazza | Hydro-Quebec | 2 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|-------------------------------------|-------------------------|---------------------|
| | | | | | Michele Tondalo | United Illuminating Co. | 1 | NPCC |
| | | | | | Paul Malozewski | Hydro One Networks, Inc. | 3 | NPCC |
| | | | | | Sean Bodkin | Dominion - Dominion Resources, Inc. | 6 | NPCC |

1. Do you agree with the proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer No

Document Name

Comment

Texas RE agrees there could be efficiencies gained by clarifying certain actions in the standards. Texas RE is concerned, however, that the SAR drafting team’s approach is simply assuming these requirements will be handled by the data specification requirements. There are no obligations for what exactly needs to be in the data specification requirements. The Project 2014-03 drafting team stated several times that FERC has made it clear that the assumption cannot be made on something based on other requirements that dictate certain actions. This SAR appears to be assuming that actions will be taken on data based on a data specification in which there are no requirements. Texas RE has several additional concerns, including the statement regarding a zero-defect expectation, proposing risk-based data specification requirements, the four reliability-related tasks, and the requirements proposed for possible retirement.

Zero-defect Expectation

The statement in the Purpose or Goal section *“As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. These issues result in a significant amount of unnecessary administrative burden for the Registered Entity to demonstrate compliance, including excessive data retention”* is not accurate. The entity receiving the data specification is only required to satisfy the obligations of the data specification, and not achieve “perfect performance.”

The entity drafting the data specification can build in thresholds for imperfect performance within the data specification itself. By way of example, the telemetry data specifications for the RC in Texas RE’s footprint permits entities to have 92% of telemetry deemed important by the RC achieve a quarterly reliability of 90%. For all telemetry, the availability threshold drops to 80%. In addition, the IRO-010 Standard specifically contemplates the creation of data conflict and reconciliation processes within the data specification itself. Again, in

Texas RE's footprint, the applicable data specification provides entities does not establish a "zero-defect expectation," but requires that if an entity cannot resolve a telemetry data issue within two business days, it must provide an estimated time of resolution.

Risk-based data specification

Texas RE is unclear on how a risk-based approach would achieve the purpose of the standards in an effective and efficient manner. Texas RE is concerned that problems may not be identified if performance oversight is only triggered by significant events or unresolved data conflicts. In order for the system to be operated in a reliable manner, constant and consistent data must be provided. While Texas RE generally supports risk-based compliance approaches, Texas RE believes that such approaches are best determined within the framework of the specific data specification itself rather than prescribed through the IRO-010 data specification standard itself.

Reliability-related Tasks

Texas RE does not agree that there are only the four reliability-related tasks specified in the SAR. "Core BES reliability-related tasks" are defined in the SAR by only four tasks, all of them operational, and contained only in the eight Standards specified. Other reliability-related tasks do exist but do not fit in the four categories described in the SAR.

For example, modeling data dictates OPA, RTA, and Real-time monitoring results but is not listed. Based on the language provided, the SAR drafting team envisions that OPA, RTA, or Real-time monitoring will be performed and therefore the entity is "compliant" without ever having any obligation to ensure it receives quality inputs to provide quality output, which would help ensure reliability. This could lead to inconsistencies and diminished accountability for inadequate data specifications, especially for those that lack information necessary to support reliable operations.

The core reliability-related tasks do not include data provisions (EOP-005, IRO-017) because they would not be associated with the OPA or RTA within the IRO-010 and TOP-003 data specifications. As this data would impact reliability studies that occur after the Long-term Planning Horizon, but significantly before the next-day studies, it appears there is a gap in the Standards.

Texas RE does not agree that RTA and OPA need further clarification. Industry should be aware of what is needed regarding these tasks since there are NERC defined terms and ERO endorsed Implementation Guidance on RTA. A definition for Real-time monitoring could help in providing clarity on expectations.

Texas RE requests the SAR drafting team provide examples of data specifications that are not part of the core reliability-related tasks.

Requirements proposed for possible retirement:

Texas RE is concerned that the requirements being proposed for retirement have to do with conditions that are not part of the OPA and RTA as the data specifications requirements are intended.

For example, notification of changes to the capabilities of a Blackstart Resource affecting the ability to meet the Transmission Operator’s restoration plan may require a TOP to modify its restoration plan. This evaluation and modification would not be within the scope of the OPA or RTA, unless the SDT plans to include these tasks as part of its clarification the core BES reliability-related tasks.

Additionally, IRO-017-1 R3 requires provision of the Planning Assessment to the RC so the TP and PC can jointly develop solutions with its respective RC for identified issues or conflicts with planned outages in its Planning Assessment. As outages are scheduled and coordinated months if not years in advance, relying on entities to identify and resolve these issues or conflicts through the OPA and RTA is not practical.

Another example is that voltage control is not part of one of the core reliability-related tasks, which could lead to voltage collapse if it is not consider in the data specification.

Lastly, Texas RE is concerned that entities may not include specific data points that are being proposed for removal in its data specification. This will lead to inconsistencies in implementation and could lower the bar for reliability if entities do not consider certain data points. The SAR drafting team should not assume that all entities will have the same reliability tasks and all entities will consider the same data specifications. Making the requirements general in nature lowers the compliance requirements and increases the risk that data management will not be done in an effective manner to support reliable operations.

| | |
|----------|---|
| Likes | 0 |
| Dislikes | 0 |

Response

Thank you for your comments. Based on some of your comments regarding intent, zero-defect expectations, and retirement of standards, the SAR drafting team has added language to the SAR to clarify the intent and explain in further detail why or why not such issues are included in the SAR. The SAR drafting team believes the four reliability tasks referenced in the SAR coincide with the IRO and TOP standards at issue; however, the current standards are written in a manner to provide for other types of information, as appropriate. Questions surrounding concerns or proposing risk-based specifications or modified definitions will be forwarded to the Standards Drafting

Team for consideration; however, the SAR Drafting Team has revised the SAR so that these issues are optional (i.e. ‘may require...’) so that the Standard Drafting Team can decide the appropriate course forward without being required to make modifications based on the scope.

Anthony Jablonski - ReliabilityFirst - 10

Answer No

Document Name

Comment

1. RF believes the SAR does not clearly establish problems with the existing standards.
2. RF feels an effective SAR would need to more clearly identify specific requested changes to the standards.
3. RF does not agree there is a need to revise the standard; rather, RF believes collaboration between entities provides an effective means of addressing concerns with data specifications.
4. See additional general comments from RF in response to Question 2.

Likes 0

Dislikes 0

Response

Thank you for your comments. Please see revised SAR for clarifications on intent and description of scope. The concern regarding the need to revise the standards was discussed by the SAR Drafting Team but has not been determined at this time because comments reflect overall industry support for the project. However, the concern will be passed to the Standard Drafting Team for consideration as they review the SAR’s scope in conjunction with the impacted standards.

Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2

Answer No

Document Name

Comment

ERCOT does not agree with the proposed scope of the SAR, but does generally agree that it is appropriate to review Reliability Standards in order to reduce administrative burdens and eliminate redundancies, as long as revisions do not adversely impact reliability. For this SAR, ERCOT agrees that it is appropriate to review the zero-defect expectation, but with caution. Specifically, ERCOT believes bright line criteria should still set a high standard, but be focused on reliability needs. For example, telemetry availability may be percentage based (e.g., 98 to 99% on a rolling average considering forced or other unplanned outages). A strong performance metric incents the selection of more reliable technologies. ERCOT also agrees that it is appropriate to evaluate the potential removal of other data exchange requirements that are redundant. Finally, ERCOT agrees that the Reliability Standards should ensure Responsible Entities (RC, BA, TOP) have the ability to request and receive any information necessary to perform their responsibilities.

ERCOT disagrees that IRO-010 and TOP-003 should restrict the content and scope of the data specification. As stated in the standards, the data specification should include any data that the entity finds necessary to perform its analyses, which is done in these standards through the data specification. Changing the scope of the data specification does not solve the zero-defect concern. In addition, ERCOT does not believe it is appropriate to revise definitions in order to correspond to a particular requirement. Revising definitions, including those for “real-time monitoring” and “Balancing Authority analysis functions” as highlighted in the SAR, could result in unintended consequences beyond IRO-010 and TOP-003. ERCOT also disagrees that the drafting team should consider a requirement(s) to ensure entities use the data in the specification because of the administrative burden associated with doing so. Accordingly, ERCOT suggests removing the proposed revision of definitions from the SAR and deleting the second and third bullet points identified as questions to evaluate redundant requirements. Specifically, ERCOT suggests the following language be deleted from the SAR:

“If minor modifications were made to IRO-010-2, TOP-003-3 and/or associated definitions (especially Real-time monitoring and Balancing Authority analysis functions), then would the activity be within the scope of those standards? If so, then revise and remove as redundant.”

“Does the receiving Registered Entity have an obligation to use the information? If so, then identify the existing requirement or create a new requirement for them to use it. If not, then retire outright as unnecessary for reliability of the BES.”

Likes 0

Dislikes 0

Response

The SAR Drafting Team thanks you for your comments. The revised SAR will allow the Standard Drafting Team to consider modifications to these standards to reduce administrative burdens associated with excessive data retention while allowing entities the flexibility to request the data necessary to maintain reliable operations. Also, the revised SAR continues to allow the Standard Drafting Team to consider modifications to the definitions of the four reliability tasks but removes the consideration of requiring entities to demonstrate the need for information requested in the data specification. While the SAR Drafting Team takes note of the concerns raised around definition changes, the SAR will still allow the Standard Drafting Team the flexibility to address needed modifications if it determines it is necessary to accomplish the objective of the SAR.

Marcus Bortman - APS - Arizona Public Service Co. - 1,3,5,6

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| AZPS does not have any comments or suggestions for the project scope currently | |
| Likes 0 | |
| Dislikes 0 | |

Response

Thank you for your support.

Leonard Kula - Independent Electricity System Operator - 2

| | |
|----------------------|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| N/A. | |
| Likes 0 | |

| | |
|--|-----|
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Thomas Foltz - AEP - 3,5,6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>AEP agrees with the purpose and perceived need as expressed in the proposed SAR, and sees value in pursuing it. The clarity that the SAR seeks is definitely needed and would be very beneficial. Having said that, the means by which that clarity is obtained, as well as the content of that clarity, are both important issues that industry will need to work on effectively in order to achieve a successful outcome and meaningful change to these standards. In addition, AEP encourages the members of the future Standards Drafting Team to ensure that their eventual revisions are not written in such a way that they are unduly burdensome, especially for larger entities having voluminous data points.</p> <p>In order for the TOP to perform the necessary real time assessments for the entire BES, they may require data points at lower voltages which are not needed by the RC and thus not provided. The RTO, serving as the RC, should continue to define what data points they need for their own obligations (as per IRO-010), however AEP recommends that changes be made to TOP-003 to allow the TOP to define what data they need from the RC, including data that might not be required or needed by the RC for their own purposes. Examples of such data include DER data, detailed renewable energy models, and neighboring TOP sub-transmission data that the RTO may not include in their models. TOPs may identify these data needs through studies conducted to determine the impact of external data on the TOP's footprint for RTA/OPA purposes. All of this type of external DP/GOP/TOP data should be provided by the RTO. As currently written, the RC has no existing obligations within TOP-003 to do so. As such, obligations for the RC to provide this data would need to be developed and incorporated into TOP-003. With the RTO providing the TOP the necessary data to meet TOP-003 data specifications for Real-time monitoring and RTA/OPA, the revised standards should provide clarity to each applicable entity (RTO/TOP) on which entities need to receive a data specification document from the applicable entity.</p> <p>Data specification documents are shared between TOPs/GOPs/DPs/etc., even though a majority, if not all, of the data is received via the</p> | |

RTO. To reduce the administrative burden, the data specification documents should only be communicated to the RTOs and any entities serving as the RC who are directly supplying the TOP data. AEP believes direct data connections (i.e. not through the RTO) should be avoided if at all possible, as managing these types of special links are extremely difficult and complicate data sharing between entities. In addition, such bi-lateral data links to individual companies may be more susceptible to data reliability issues and could have potential compliance ramifications, with TOP-001 as just one example. Additional clarity also needs to be addressed in the standards regarding the details required in the specification documents. Some entities keep the data specification documents at a very high level (which is preferred) while other entities specify individual data point names and detailed requirements in their data specification documents (not preferred).

AEP recommends the SDT also consider the development of a NERC Glossary Term for real-time monitoring, as we believe the clarity it would bring would be very beneficial if referenced within TOP-003 and IRO-010.

AEP believes the suggestions above would be beneficial and prevent divergence in Real-time Assessment analysis from inconsistency in the models themselves, clarifying exactly where the data is coming from, and by reducing administrative burden.

| | |
|------------|-----------------------------------|
| Likes 1 | Joe Tarantino, N/A, Tarantino Joe |
| Dislikes 0 | |

Response

The SAR Drafting Team thanks you for your comments. The revised SAR will allow the Standard Drafting Team to consider modifications to these standards to reduce the administrative burden and to facilitate data exchanges between entities through third-party intermediaries. The revised SAR continues to allow the Standard Drafting Team to consider modifications to the definitions of the four reliability tasks.

Scott McGough - Georgia System Operations Corporation - 3,4

| | |
|---------------|-----|
| Answer | Yes |
| Document Name | |
| Comment | |

GSOC appreciates the effort to develop a definition for Real-time monitoring.

Likes 0

Dislikes 0

Response

Thank you for the comment and support

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer

Yes

Document Name

Comment

.

Likes 0

Dislikes 0

Response

Thank you for your support.

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Yes

Document Name

Comment

The NSRF supports the SAR’s risk-based approach for data collections. The NSRF also supports the second purpose of pulling in other exchange requirements within different Standards. This will give all applicable Entities a single place to review (and provide) required data.

| | |
|---|---|
| Likes 1 | Joe Tarantino, N/A, Tarantino Joe |
| Dislikes 0 | |
| Response | |
| Thank you for the comment and support. | |
| Carl Pineault - Hydro-Qu?bec Production - 1,5 | |
| Answer | Yes |
| Document Name | HQP comments TOP-IRO.docx |
| Comment | |
| See attached comments to substantiate our support on the proposed scope. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments and perspective. The team has taken these into consideration, for the SAR and potential scope of a Standards revision. | |
| Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,7 - WECC,Texas RE,NPCC,SERC,RF, Group Name Southern Company | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Southern Company fully supports the secondary purpose described in the SAR to identify and remove redundant requirements and if necessary, retire requirements that are not needed for reliability. | |

The first purpose of the SAR, as written, is not clear. Both IRO-010-3 and TOP-003-4 currently indicate that their purpose is to allow the parties seeking data (the RC, BA, and TOP) to create the data specs they need to fulfill their responsibilities. It is not clear, through the words in the SAR, that the revision purpose, as stated, is needed.

“The revisions should allow each Registered Entity with operational responsibilities to perform the tasks identified in IRO-010-2 and TOP-003-3 the ability to request and receive any information it needs to perform those tasks, while protecting public disclosure of commercially sensitive information.”

It is not clear what is new. If standard revision changes are needed, the reason for a change needs to be more clearly stated, because the parties who can issue data specifications already have the flexibility to ask for exactly what they need to fulfill their responsibilities.

Likes 0

Dislikes 0

Response

The SAR Drafting Team thanks you for your comments. The revised SAR will allow the Standard Drafting Team to consider modifications to these standards to reduce administrative burdens associated with excessive data retention while allowing entities the flexibility to request the data necessary to maintain reliable operations. The revised SAR also allows the Standard Drafting Team to consider modifications to the requirements to address confidentiality concerns

Jamie Johnson - California ISO - 2

Answer Yes

Document Name

Comment

CAISO agrees with the comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee (SRC). In addition, CAISO requests the SAR drafting team consider the following:

- RCs have no direct interrelationships with DPs, PCs, TOs, TPs, TSPs, GOs/GOPs per the current NERC Reliability Functional Model. Therefore, any changes to the standards related to data exchange should follow the Functional Model obligations. Currently RCs have direct relationship with BAs and TOPs.

- Adding the following standards to this project related to data exchange: CIP-002, CIP-012, EOP-006, EOP-010, EOP-011, FAC-008, IRO-002, MOD-001, PRC-002, PRC-012, PRC-023, and TPL-001

Likes 0

Dislikes 0

Response

Thank you for your comments and perspective. We will be passing these comments on to the drafting team

Daniel Gacek - Exelon - 1,3,5,6

Answer

Yes

Document Name

Comment

Exelon agrees with the proposed scope of this SAR and concurs with the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

Thank you for the comment. Please see the response to EEI.

Alan Kloster - Great Plains Energy - Kansas City Power and Light Co. - 1,3,5,6 - MRO

Answer

Yes

Document Name

Comment

Eergy agrees with the proposed scope of this SAR. Eergy supports and incorporates by reference Edison Electric Institute's (EEI) response to Question 1.

| | |
|---|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. Please see the response to EEI. | |
| Jack Cashin - American Public Power Association - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>The American Public Power Association (APPA), the Large Public Power Council (LPPC), and Transmission Access Policy Study Group (TAPS) strongly support the scope and purpose of this SAR and the development of a risk-based approach to entity compliance. The Associations believe the SAR meets two of the (Board approved 11/20) 2021 ERO Work Plan Priorities of, “Expand Risk-Based Focus in Standards, Compliance Monitoring, and Enforcement; and, Capture Effectiveness, Efficiency, and Continuous Improvement Opportunities.” The SAR scope seeks to make the standards more risk-based and in turn minimize administrative burden. Moreover, the scope seeks to make the standards more effective and efficient, while ensuring that other existing standards with operational data exchange either improve reporting, or eliminate duplication.</p> <p>APPA, LPPC and TAPS acknowledge that the ERO has discretion to take a risk-based approach to compliance monitoring, registered entities must comply with all applicable standard requirements. Public power utilities are typically on the receiving end of data specifications and currently experience uncertainty on the effort needed to demonstrate compliance with the current zero-defect requirements. Under the effective data specification standards, entities that receive data specifications could be expected to demonstrate perfect performance with respect to every item in each data specification. Such an expectation is counter to a risk-based approach. Therefore, under the current standards complying entities expend excessive resources on data requirements rather than on reliability improvements. The scope of the proposed SAR seeks to simplify the administrative burden in the Project standards. By refining definitions associated with the standards and coordinating with existing data standards the SAR scope should serve to make the body of standards more efficient and effective.</p> | |
| Likes | 1 |
| Joe Tarantino, N/A, Tarantino Joe | |

| | |
|---|-----|
| Dislikes | 0 |
| Response | |
| Thank you for the comment and support. Your comments have been considered in the next redline of the SAR. | |
| David Jendras - Ameren - Ameren Services - 1,3,6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Ameren agrees with and supports EEI comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments. Please see the response to EEI. | |
| Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable | |
| Answer | Yes |
| Document Name | |
| Comment | |
| EEI supports the efforts of the SER Phase 2 Team and this SAR, which addresses consolidating and simplifying information and data exchange requirements. EEI also agrees with APPA, TAPS and LPPC that this project aligns with two of the five ERO Work Plan Priorities (i.e., 1. Expand Risk-Based Focus in Standards and 2. Capture Effectiveness, Efficiency and Continuous Improvement Opportunities). (Ref. 2021 ERO Work Plan, dated 11/5/2020/NERC Board Approved). EEI is also supportive of expanding this project as identified in this SAR to | |

remove potentially redundant operational data exchange requirements included in other standards identified within the detailed SAR Scope.

Additionally, EEI recommends updating the SAR to reflect the current version of both IRO-010 and TOP-003 Reliability Standards.

Likes 0

Dislikes 0

Response

Thank you for your comments and support. Please see the revised SAR which has been modified to reflect the current versions of the IRO and TOP standards.

Matthew Harward - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC

Answer

Yes

Document Name

Comment

SPP supports the comments submitted by the NSRF. In addition, SPP suggests that the SAR drafting team consider including the following issues which are aligned with the SAR's purpose:

- Mutually-agreeable timing requirements associated with responding to data specifications;
- A methodology to negotiate data exchanges where one entity questions whether the requested data is necessary for reliability (e.g., dispute resolution);
- Provisions to address confidentiality concerns; and
- Data requirements should be pertinent to reliability analysis.

Likes 0

Dislikes 0

Response

Thank you for the response, we will be taking your comments into consideration and will forward these comments to the SDT.

| | |
|--|-----|
| Mary Cooper - Alameda Municipal Power - 3 - WECC, Group Name Cooper Compliance Corp | |
| Answer | Yes |
| Document Name | |
| Comment | |
| We would like to expand the scope to include a requirement that the appropriate functional entity who is responsible for delivering the data is specified. For example, the entity should identify if they are expecting the data to be provided by the GO or TO versus the GOP or TOP. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments. The SAR Drafting Team decided not to expand the scope of revised SAR but revised the SAR to allow the Standard Drafting Team to consider modifications to these standards to facilitate data exchanges between entities through third-party intermediaries which may address the noted concern. | |
| David Kwan - Ontario Power Generation Inc. - 5 - NPCC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| OPG concurs with NPCC's RSC comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. Please see the response to NPCC RSC. | |

| | |
|---|-----|
| Bobbi Welch - Midcontinent ISO, Inc. - 2 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>MISO supports comments submitted by the ISO/RTO Council (IRC) Standards Review Committee (SRC).</p> <p>In addition, MISO recommends the project scope be expanded to include a dispute resolution process. This would allow entities to address the zero-defect concern and provide a way for entities to come to a mutually agreeable solution prior to escalating it to the regulator for resolution.</p> <p>MISO also supports constricting the scope of IRO-010 and TOP-003 to data required for reliability needs as a reasonable approach; however, we do not support a narrowing of scope that would limit the applicability of IRO-010 and TOP-003 to include SCADA data sent via ICCP only, as we use the data specification to collect modeling and outage data as well.</p> <p>Finally, MISO would prefer to tie the scope to reliability needs as opposed to specific standards as there may be data we require for reliability purposes that are not specifically tied to one of the standards listed in the SAR.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comment. Please see the revised SAR that has been modified to mitigate or include some of the concerns expressed by MISO (e.g., dispute resolution). The intent is to include a diversity of data exchange methodologies. Please see the response to the SRC.</p> | |
| Amber Parker - Unisource - Tucson Electric Power Co. - NA - Not Applicable - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |

| | |
|--|-----|
| Maryanne Darling-Reich - Black Hills Corporation - 1,3,5,6 - MRO,WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Glenn Barry - Los Angeles Department of Water and Power - 1,3,5,6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|--|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC) | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC | |

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee no NGrid | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|-----------------------------|--|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |

| | |
|---|--|
| 2. Provide any additional comments for the drafting team to consider, if desired. | |
| Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>ERCOT notes that the Reliability Standards resulting from Projects 2015-09 and 2019-06 have been approved by the NERC Board of Trustees and should therefore not be identified as projects to coordinate with. ERCOT suggests removal of the references to these projects.</p> <p>ERCOT suggests the drafting team consider whether the data specification required by IRO-010 and TOP-003 should also include data necessary for outage coordination (IRO-017). In addition, ERCOT suggests the standard drafting team be mindful that compliance obligations should not interfere with entities providing telemetry that enhances real time monitoring capabilities (e.g. PMU, adding additional SCADA measurements), given more challenging technologies are being integrated on the electric system, even if a requesting entity has State Estimation capabilities (every 1 to 5 min).</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>The SAR Drafting Team thanks you for your comments. The revised SAR has removed the references to Project 2015-09 and 2019-06. The comments regarding enhanced real-time monitoring capabilities will be forwarded on to the Standard Drafting Team for consideration.</p> | |
| Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee no NGrid | |
| Answer | |
| Document Name | |

Comment

Please consider updating the SAR with the current standard version numbers.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please see the updated SAR that has been modified with the current standard version numbers.

David Kwan - Ontario Power Generation Inc. - 5 - NPCC

Answer

Document Name

Comment

OPG concurs with NPCC's RSC comments.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations

Answer

Document Name

Comment

| | |
|--|---|
| Thank you for the opportunity to provide comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment and support. | |
| Jack Cashin - American Public Power Association - 4 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>APPA, LPPC and TAPS strongly support the proposed “top-down” approach to clarify the tasks in the standards. Public Power believes the current IRO-010 and TOP-003 standards provide a one-stop source for entities to get the data they need for Operational Planning Analysis, Real-time Assessments, Real-time Monitoring, and Balancing Authority Analysis—the BES reliability-related tasks that drive IRO-010 and TOP-003 data specifications.</p> <p>The approach has been supported by NERC. As NERC said in its petition for approval for IRO-010-1a, which used the same top-down approach as IRO-010-2 and TOP-003-3: “[t]he requirements in the standard specify a formal request as the method for the Reliability Coordinator to explicitly identify the data and information it needs for reliability; and require the entities with the data to provide it as requested. This method is sound because the Reliability Coordinator is the only entity that knows what data it needs to properly perform its reliability tasks, and the most efficient format for accepting this data. Docket No. RM10-15, at 35 (Dec. 31, 2009) (emphasis added).” Much more recently, NERC stated in its April 6, 2020 comments on FERC’s NOPR regarding the Phase 1 SER retirements (RM19-16 and RM19-17, at 9 (emphasis added)): Reliability Standards MOD-032-1, IRO-010-2, and TOP-003-3 provide the entities responsible for the reliable modeling, planning, and operation of the BPS with the authority to obtain the information they need from Generator Owners and Transmission Owners to complete their reliability tasks, which may include next most limiting equipment information. Now that these broader data specification standards are in place, NERC has identified no reliability need to maintain additional requirements expressly requiring the provision of this data in the FAC-008 standard. APPA, LPPC and TAPS agree with NERC that the standards it cites give RCs, TOPs, and BAs the authority to get the information they need to carry out their reliability tasks. That is equally the case whether</p> | |

the information at issue is identification of next most limiting equipment, weather-related operational constraints, or real-time operating data. The associations are concerned that much of the history behind the data specification concept is being forgotten; and as a result, drafting teams are reverting to specifying the information that must be provided on a continent-wide basis. This overly-prescriptive approach would result in reliability standards being revised constantly to chase moving targets with every new technology or risk that emerges. These standards can be precise with respect to the information to be requested, or they can be accurate; they cannot be both, and accuracy has to be the priority. The data specification should be flexible enough to evolve with risks and technologies, as well as being flexible enough to apply in the varying operational environments across the continent. Consequently, the associations believe that clarification of the scope of the four BES reliability-related tasks identified in the SAR would allow the data specification to simply reflect what each RC, BA or TOP needs to perform those tasks based on its particular operational environment, and that doing so should alleviate the concerns behind recent attempts to add a detrimental amount of specificity to the standards. Based on confusion among stakeholders, it appears that clarification of acceptable types of data (i.e., whatever the requesting entity needs) and formats/methods of transfer (i.e., anything—SCADA/ICCP, telephone, email, etc.—so long as it is mutually agreeable) is also necessary.

| | | |
|-------|---|-----------------------------------|
| Likes | 1 | Joe Tarantino, N/A, Tarantino Joe |
|-------|---|-----------------------------------|

| | | |
|----------|---|--|
| Dislikes | 0 | |
|----------|---|--|

Response

Thank you for the comment and support. Your comments have been considered in the next redline of the SAR.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,7 - WECC,Texas RE,NPCC,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

IRO-010-2 is inactive, Version -3 is the active version. The SAR names version -2 as the one to be modified.

TOP-003-3 is inactive, Version -4 is the active version. The SAR names version -3 as the one to be modified.

| | | |
|-------|---|--|
| Likes | 0 | |
|-------|---|--|

| | |
|---|--|
| Dislikes 0 | |
| Response | |
| The SAR Drafting Team thanks you for your comments. The revised SAR has updated the references to the standard versions. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | |
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | |
| Document Name | |
| Comment | |
| <p>The NSRF recommends that the SAR drafting team expand the scope to capture the following data specification issues (if not already in the proposed scope).</p> <ol style="list-style-type: none"> 1. The NSRF (and all Entities) know that some data requests are predicated on electronic data (ICCP) submittals that may be required to be sent every couple seconds. This can lead to an auditing nightmare to prove continuous compliance for the Entity and the Auditor. TOP-001-5, R9 gives a 30 minute or more window for the BA and TOP to inform the RC when telemetering has been affected between Entities. This does not remove the burden of proving all ICCP scans were delivered and received by two Entities. | |

2. There should be a common way to request and provide data specifications. An Entity providing data has no way of knowing who to send the data to at the receiving Entity. And will not have proof that the data was submitted as prescribed by the Standard. The NSRF does not know if this belongs in a Standard or a Data Submittal Guideline, which would be for the Standard Drafting Team to investigate. One way this could be alleviated is for all data specifications to be sent to the Primary Compliance Contact, Alternate Compliance Contact or Authorizing Officer.

Likes 0

Dislikes 0

Response

Thank you for your comments. Your suggestions will be forwarded to the Standards Drafting Team for consideration.

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer

Document Name

Comment

Minnesota Power supports the purpose of this project, especially the secondary purpose of consolidating data requirements from other standards into these two. Minnesota Power also agrees with the NSRF comment regarding establishing a common method for the collection and distribution of data specifications

Likes 0

Dislikes 0

Response

Thank you for your comments and support

Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter

Answer

Document Name

| Comment | |
|---|---|
| N/A | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Thomas Foltz - AEP - 3,5,6 | |
| Answer | |
| Document Name | |
| Comment | |
| While not explicitly within the scope of this SAR, AEP believes there are reliability benefits in pursuing a data sharing network. This will benefit all entities, including smaller entities, in performing real time assessments as the grid continues to evolve and mature. In addition, having such a data sharing network would also significantly reduce the administrative burden associated with the sharing and obtaining of data. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SAR Drafting Team thanks you for your comments. The comment regarding a data sharing network will be forwarded on to NERC for consideration. | |
| Anthony Jablonski - ReliabilityFirst - 10 | |
| Answer | |
| Document Name | |

Comment

- 1) RF does not agree with language, “As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. Additionally, it is not clear what should be included in a data specification.” RF believes the SDT did not want to prescribe a data specification and wisely left it up to the RC, BA and TOP to decide on what information was needed to perform the various operational assessments.
- 2) RF believes that if an entity that has an issue with the data specification or it is not clear to them should work with that respective entity to fully understand their obligation(s).
- {3) RF believes it is not a burden for an entity to show compliance as they can provide logs or show the compliance monitoring team through a walkthrough or have an attestation from the RC, BA or TOP stating they have received everything they requested.

Likes 0

Dislikes 0

Response

Thank you for your comment. The SAR Drafting appreciates your concerns with the language concerning zero-defect expectations and through discussions determined that some entities in other regions have experienced those potential issues. Please see the revised SAR for clarification of intent. Additionally, dispute resolution is being proposed as an additional scope which will allow entities to work out data exchange issues between them.

Leonard Kula - Independent Electricity System Operator - 2

Answer

Document Name

Comment

N/A.

Likes 0

Dislikes 0

| | |
|---|--|
| Response | |
| Thank you for your support. | |
| Marcus Bortman - APS - Arizona Public Service Co. - 1,3,5,6 | |
| Answer | |
| Document Name | |
| Comment | |
| AZPS does not have any additional comments for the drafting team to consider currently. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment and support. | |
| Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy | |
| Answer | |
| Document Name | |
| Comment | |
| No additional comments at this time. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |

| | |
|-----------------------------|--|
| Answer | |
| Document Name | |
| Comment | |
| No additional comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |

End of Report

Unofficial Nomination Form

Project 2021-06 Modifications to IRO-010 and TOP-003

Drafting Team

Do not use this form for submitting nominations. Use the [electronic form](#) to submit nominations for **Project 2021-06 Modifications to IRO-010 and TOP-003** drafting team members by **8 p.m. Eastern, Friday, August 6, 2021**. This unofficial version is provided to assist nominees in compiling the information necessary to submit the electronic form.

Additional information is available on the [project page](#). If you have questions, contact Standards Developer, [Josh Blume](#) (via email), or at 404-446-2593.

By submitting a nomination form, you are indicating your willingness and agreement to actively participate in face-to-face meetings and conference calls.

Previous drafting or review team experience is beneficial, but not required. A brief description of the desired qualifications, expected commitment, and other pertinent information is included below.

Background

The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IRO-010-2 and TOP-003-3 standards and limit unnecessary data requirements that do not contribute to BES reliability and resiliency. As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, including excessive data retention. If instead a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

The secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-2 and TOP-003-3 the ability to request and receive any information it needs from other Registered Entities to perform those tasks.

Standards affected: IRO-010-2, TOP-003-3

Drafting Team activities include participation in technical conferences, stakeholder communications and outreach events, periodic drafting team meetings and conference calls. Approximately one face-to-face meeting per quarter can be expected (on average three full working days each meeting) with conference calls scheduled as needed to meet the agreed-upon timeline the drafting team sets forth. NERC is seeking individuals who have subject matter expertise with methods of data entry and data exchange processes.

| | |
|--|--|
| Name: | |
| Organization: | |
| Address: | |
| Telephone: | |
| Email: | |
| Please briefly describe your experience and qualifications to serve on the requested SAR Drafting Team (Bio): | |
| <p>If you are currently a member of any NERC drafting team, please list each team here:</p> <input type="checkbox"/> Not currently on any active SAR or standard drafting team. <input type="checkbox"/> Currently a member of the following SAR or standard drafting team(s): | |
| <p>If you previously worked on any NERC drafting team please identify the team(s):</p> <input type="checkbox"/> No prior NERC SAR or standard drafting team. <input type="checkbox"/> Prior experience on the following team(s): | |

| Select each NERC Region in which you have experience relevant to the Project for which you are volunteering: | | |
|--|---|--|
| <input type="checkbox"/> MRO <input type="checkbox"/> NPCC <input type="checkbox"/> RF | <input type="checkbox"/> SERC <input type="checkbox"/> Texas RE <input type="checkbox"/> WECC | <input type="checkbox"/> NA – Not Applicable |

Select each Industry Segment that you represent:

| | |
|--------------------------|--|
| <input type="checkbox"/> | 1 — Transmission Owners |
| <input type="checkbox"/> | 2 — RTOs, ISOs |
| <input type="checkbox"/> | 3 — Load-serving Entities |
| <input type="checkbox"/> | 4 — Transmission-dependent Utilities |
| <input type="checkbox"/> | 5 — Electric Generators |
| <input type="checkbox"/> | 6 — Electricity Brokers, Aggregators, and Marketers |
| <input type="checkbox"/> | 7 — Large Electricity End Users |
| <input type="checkbox"/> | 8 — Small Electricity End Users |
| <input type="checkbox"/> | 9 — Federal, State, and Provincial Regulatory or other Government Entities |
| <input type="checkbox"/> | 10 — Regional Reliability Organizations and Regional Entities |
| <input type="checkbox"/> | NA — Not Applicable |

Select each Function¹ in which you have current or prior expertise:

| | |
|---|--|
| <input type="checkbox"/> Balancing Authority | <input type="checkbox"/> Transmission Operator |
| <input type="checkbox"/> Compliance Enforcement Authority | <input type="checkbox"/> Transmission Owner |
| <input type="checkbox"/> Distribution Provider | <input type="checkbox"/> Transmission Planner |
| <input type="checkbox"/> Generator Operator | <input type="checkbox"/> Transmission Service Provider |
| <input type="checkbox"/> Generator Owner | <input type="checkbox"/> Purchasing-selling Entity |
| <input type="checkbox"/> Interchange Authority | <input type="checkbox"/> Reliability Coordinator |
| <input type="checkbox"/> Load-serving Entity | <input type="checkbox"/> Reliability Assurer |
| <input type="checkbox"/> Market Operator | <input type="checkbox"/> Resource Planner |
| <input type="checkbox"/> Planning Coordinator | |

¹ These functions are defined in the NERC [Functional Model](#), which is available on the NERC web site.

Provide the names and contact information for two references who could attest to your technical qualifications and your ability to work well in a group:

| | | | |
|---------------|--|------------|--|
| Name: | | Telephone: | |
| Organization: | | Email: | |
| Name: | | Telephone: | |
| Organization: | | Email: | |

Provide the name and contact information of your immediate supervisor or a member of your management who can confirm your organization’s willingness to support your active participation.

| | | | |
|--------|--|------------|--|
| Name: | | Telephone: | |
| Title: | | Email: | |

UPDATED

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003

Nomination Period Extended, Now Open through August 16, 2021**Now Available**

Additional nominations are being sought for **Project 2021-06 Modifications to IRO-010 and TOP-003** drafting team members through **8 p.m. Eastern, Monday, August 16, 2021**.

Use the [electronic form](#) to submit a nomination and contact [Wendy Muller](#) regarding issues with the system. An unofficial Word version of the nomination form is posted on the [Standard Drafting Team Vacancies](#) page and the [project page](#).

Previous drafting or review team experience is beneficial, but not required. A brief description of the desired qualifications, expected commitment, and other pertinent information is included below.

The time commitment for this project is expected to be one meeting per quarter (on average two and a half full working days each meeting) with calls scheduled as needed to meet the agreed-upon timeline the review or drafting team sets forth. Team members may also have side projects, either individually or by subgroup, to present to the larger team for discussion and review. Lastly, an important component of the review and drafting team effort is outreach. Members of the team will be expected to conduct industry outreach during the development process to support a successful project outcome. NERC is seeking individuals who have subject matter expertise with methods of data entry and data exchange processes.

Next Steps

The Standards Committee is expected to appoint members to the drafting team in September 2021. Nominees will be notified shortly after they have been appointed.

For more information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003" in the Description Box.

North American Electric Reliability Corporation
3353 Peachtree Rd, NE
Suite 600, North Tower
Atlanta, GA 30326

404-446-2560 | www.nerc.com

Standard Authorization Request (SAR)

Complete and submit this form, with attachment(s) to the [NERC Help Desk](#). Upon entering the Captcha, please type in your contact information, and attach the SAR to your ticket. Once submitted, you will receive a confirmation number which you can use to track your request.

The North American Electric Reliability Corporation (NERC) welcomes suggestions to improve the reliability of the bulk power system through improved Reliability Standards.

| Requested information | | | |
|---|---|---|---|
| SAR Title: | Operational Data Exchange Simplification | | |
| Date Submitted: | June 23, 2020 | | |
| SAR Requester | | | |
| Name: | Standards Efficiency Review Phase 2 Team (Michael Cruz-Montes) | | |
| Organization: | CenterPoint Energy | | |
| Telephone: | 713-207-2132 | Email: | michael.cruz-montes@centerpointenergy.com |
| SAR Type (Check as many as apply) | | | |
| <input type="checkbox"/> New Standard | <input type="checkbox"/> Imminent Action/ Confidential Issue (SPM Section 10) | <input type="checkbox"/> Variance development or revision | <input checked="" type="checkbox"/> Other (Please specify) |
| <input checked="" type="checkbox"/> Revision to Existing Standard | | | |
| <input checked="" type="checkbox"/> Add, Modify or Retire a Glossary Term | | | |
| <input checked="" type="checkbox"/> Withdraw/retire an Existing Standard | | | |
| Justification for this proposed standard development project (Check all that apply to help NERC prioritize development) | | | |
| <input type="checkbox"/> Regulatory Initiation | <input type="checkbox"/> NERC Standing Committee Identified | <input type="checkbox"/> Enhanced Periodic Review Initiated | <input checked="" type="checkbox"/> Industry Stakeholder Identified |
| <input type="checkbox"/> Emerging Risk (Reliability Issues Steering Committee) Identified | | | |
| <input type="checkbox"/> Reliability Standard Development Plan | | | |
| Industry Need (What Bulk Electric System (BES) reliability benefit does the proposed project provide?): | | | |
| The proposed project will enhance the effective and efficient administration of operational data exchanges between Responsible Entities essential for safe, secure and reliable operations. | | | |
| Purpose or Goal (How does this proposed project provide the reliability-related benefit described above?): | | | |
| The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IR0-010-3 and TOP-003-4 standards and limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency. As written the standards may create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, including excessive data retention. If instead a risk-based approach was developed and performance | | | |

Requested information

was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

Therefore, the industry would benefit from continuing the efforts of Project 2014-03 and further revising IRO-010-3 and TOP-003-4 to enhance the “data specification” approach to reduce the administrative burdens of excessive data retention, while ensuring Registered Entities with operational responsibilities continue, as under the current standards, to request and receive the data necessary to support the four tasks identified in IRO-010-3 and TOP-003-4 (and described in the Detailed Description section below), while protecting public disclosure of commercially sensitive information and providing a dispute resolution process . To preserve the “data specification” concept, flexibility for differences in operational environments and emerging technology must be maintained. Therefore, creating a minimum list of items to include in a data specification is not desired. However, more clarity regarding the scope of the four tasks identified in IRO-010-3 and TOP-003-4 would be beneficial and is desired. The scope of the data specification would then just reflect the information necessary to cover the scope of the applicable tasks identified in IRO-010-3 or TOP-003-4 for the individual Registered Entity. The SER Phase 2 team received some feedback from industry participants who believe the scope of a data specification would only contain routine real time operating data typically provided systematically from field devices via SCADA/ICCP. Therefore, it is also necessary to clarify for industry if it should contain other data/information and methods of transfer such as phone, instant messaging, internet-based systems, etc.

A secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-3 and TOP-003-4 the ability to request and receive any information it needs from other Registered Entities to perform those tasks. The intent of the project is not to do away with specific requirements in other Reliability Standards under the assumption that the same data will be requested per a data exchange under IRO-010-3 and TOP-003-4; and the Standard Drafting Team should evaluate any potential reliability risk incurred by removing a perceived redundant requirement prior to recommending changes to requirements in other Reliability Standards.

Project Scope (Define the parameters of the proposed project):

The scope of the proposed project is to simplify the administrative burden with IRO-010-3, TOP-003-4 by developing risk-based compliance expectations and clarifying the four tasks identified in IRO-010-3 and TOP-003-4. The proposed project may require revisions to IRO-010-3, TOP-003-4 and associated definitions (especially Real-time monitoring and Balancing Authority analysis functions) as necessary to mitigate expectations of zero-defect compliance (e.g., setting thresholds to address telemetry availability), include provisions for dispute resolution, negotiating data exchanges where entities disagree on the necessity of data for reliability, and address confidentiality concerns. The proposed project will need to utilize any available industry resource necessary to maintain flexibility for various

Requested information

operational environments and technology (i.e., SCADA/ICCP, phone, instant messaging, internet-based systems, etc.). The project may also require development of Implementation Guidance or other ERO guidance to simplify the administrative burden.

The proposed project may also require revisions to other standards as necessary to remove redundant data specification obligations contained in other Reliability Standards that are associated with the four reliability tasks identified in the Detailed Description below. The scope of the project should also include coordination with existing projects that have operational data exchange within their scope.

If necessary, the proposed project may also require revisions to address data and information exchanges and obligations between provider and requester that are facilitated through a third-party intermediary.

Detailed Description (Describe the proposed deliverable(s) with sufficient detail for a drafting team to execute the project. If you propose a new or substantially revised Reliability Standard or definition, provide: (1) a technical justification¹ which includes a discussion of the reliability-related benefits of developing a new or revised Reliability Standard or definition, and (2) a technical foundation document (e.g., research paper) to guide development of the Standard or definition).

The project may require revisions to IRO-010-3, TOP-003-4 and associated definitions in the NERC Glossary (especially Real-time monitoring and Balancing Authority analysis functions) to clarify expectations for the “data specification” and associated tasks identified in IRO-010-3 and TOP-003-4. The revisions should continue to allow each Registered Entity with operational responsibilities to perform the tasks identified in IRO-010-3 and TOP-003-4 the ability to request and receive the information it needs to perform those tasks, while protecting public disclosure of commercially sensitive information and providing a dispute resolution process for conflicts between entities related to necessary data exchanges. The four tasks identified in IRO-010-3 and TOP-003-4 and associated standards are listed below.

- Operational Planning Analysis (IRO-008-2 and TOP-002-4)
- Real-time Assessments (IRO-008-2 and TOP-001-4)
- Real-time monitoring (IRO-002-5 and TOP-001-4)
- Balancing Authority analysis functions (BAL-001-2, BAL-002-3, BAL-003-1.1 and BAL-005-1)

This may necessitate revisions to the standards included above and any other standard or definition identified by the drafting team during the project as necessary to achieve the purpose of this project.

¹ The NERC Rules of Procedure require a technical justification for new or substantially revised Reliability Standards. Please attach pertinent information to this form before submittal to NERC.

Requested information

The drafting team should also develop Implementation Guidance and/or NERC staff to develop other ERO guidance to simplify the administrative burden as needed.

Once those activities are clarified, the drafting team should also evaluate and, if necessary, remove potentially redundant operational data exchange requirements dispersed in other standards including, but not limited to, the following:

- BAL-005-1 R2
- EOP-005-3 R13
- EOP-005-3 R14.2
- FAC-014-2 R5
- FAC-014-2 R6.1.
- IRO-008-2 R5
- IRO-008-2 R6
- IRO-017-1 R3
- TOP-001-5 R9
- TOP-001-5 R15
- VAR-002-4.1 R3
- VAR-002-4.1 R4

The project should also evaluate any other standard identified by the drafting team during the project as necessary to achieve the purpose of this project. The Standard Drafting Team should seek to identify opportunities to remove redundant requirements and, if necessary, retire requirements that are not needed for reliability; however, the Standard Drafting Team should not retire requirements that are not directly related to the four reliability tasks identified above. The evaluation at a minimum should consider the following questions:

- Is the purpose of the activity currently within the scope of one or more of the tasks and consequently IRO-010-3 and TOP-003-4? If so, then consider removing due to redundancy.
- If minor modifications were made to IRO-010-3, TOP-003-4 and/or associated definitions (especially Real-time monitoring and Balancing Authority analysis functions), then would the activity be within the scope of those standards? If so, then consider removing due to redundancy.

The drafting team should reference precedence from past projects to support this effort, including background materials developed during Project 2014-03 that describe the “data specification” concept including the petition to the FERC and the [Project 2014-03 Mapping Document](#).

Cost Impact Assessment, if known (Provide a paragraph describing the potential cost impacts associated with the proposed project):

unknown

Please describe any unique characteristics of the BES facilities that may be impacted by this proposed standard development project (*e.g.*, Dispersed Generation Resources):

| Requested information | |
|---|--|
| N/A | |
| To assist the NERC Standards Committee in appointing a drafting team with the appropriate members, please indicate to which Functional Entities the proposed standard(s) should apply (e.g., Transmission Operator, Reliability Coordinator, etc. See the most recent version of the NERC Functional Model for definitions): | |
| All NERC Functional Entities are potentially impacted by the scope of this SAR. The recommendations are both technical and administrative in nature but meant to address inefficiencies within requirements for data collection. Therefore, the drafting team should consist of members who are familiar with both aspects. | |
| Do you know of any consensus building activities ² in connection with this SAR? If so, please provide any recommendations or findings resulting from the consensus building activity. | |
| The SER Phase 2 team hosted an industry webinar on February 22, 2019 presenting six efficiency concepts, including consolidating and simplifying information and data requirements. The presentation was followed up by an industry survey to assess support for the concepts. This concept received the second highest support from industry. In addition, an informal survey was conducted on the content of this SAR to assess industry support. The feedback from industry and SER Phase 2 team responses are located on the Standards Efficiency Review page . | |
| Are there any related standards or SARs that should be assessed for impact as a result of this proposed project? If so, which standard(s) or project number(s)? | |
| The Standard Drafting team should coordinate with existing projects that have operational data exchange within their scope. | |
| Are there alternatives (e.g., guidelines, white paper, alerts, etc.) that have been considered or could meet the objectives? If so, please list the alternatives. | |
| Yes, Implementation Guidance and/or other ERO guidance could assist with simplifying the administrative burden for the interim period while this project is being administered. | |

| Reliability Principles | |
|---|---|
| Does this proposed standard development project support at least one of the following Reliability Principles (Reliability Interface Principles)? Please check all those that apply. | |
| <input type="checkbox"/> | 1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards. |
| <input type="checkbox"/> | 2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand. |
| <input checked="" type="checkbox"/> | 3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably. |

² Consensus building activities are occasionally conducted by NERC and/or project review teams. They typically are conducted to obtain industry inputs prior to proposing any standard development project to revise, or develop a standard or definition.

| Reliability Principles | |
|-------------------------------|--|
| <input type="checkbox"/> | 4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented. |
| <input type="checkbox"/> | 5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems. |
| <input type="checkbox"/> | 6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions. |
| <input type="checkbox"/> | 7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis. |
| <input type="checkbox"/> | 8. Bulk power systems shall be protected from malicious physical or cyber attacks. |

| Market Interface Principles | |
|--|----------------|
| Does the proposed standard development project comply with all of the following Market Interface Principles ? | Enter (yes/no) |
| 1. A reliability standard shall not give any market participant an unfair competitive advantage. | Yes |
| 2. A reliability standard shall neither mandate nor prohibit any specific market structure. | Yes |
| 3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. | Yes |
| 4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. | Yes |

| Identified Existing or Potential Regional or Interconnection Variances | |
|---|-------------|
| Region(s)/ Interconnection | Explanation |
| <i>e.g.</i> , NPCC | |

For Use by NERC Only

| SAR Status Tracking (Check off as appropriate). | |
|---|--|
| <input type="checkbox"/> Draft SAR reviewed by NERC Staff | <input type="checkbox"/> Final SAR endorsed by the SC |
| <input type="checkbox"/> Draft SAR presented to SC for acceptance | <input type="checkbox"/> SAR assigned a Standards Project by NERC |
| <input type="checkbox"/> DRAFT SAR approved for posting by the SC | <input type="checkbox"/> SAR denied or proposed as Guidance document |

Version History

| Version | Date | Owner | Change Tracking |
|---------|------|-------|-----------------|
| | | | |

| | | | |
|---|-------------------|-----------------------------|--|
| 1 | June 3, 2013 | | Revised |
| 1 | August 29, 2014 | Standards Information Staff | Updated template |
| 2 | January 18, 2017 | Standards Information Staff | Revised |
| 2 | June 28, 2017 | Standards Information Staff | Updated template |
| 3 | February 22, 2019 | Standards Information Staff | Added instructions to submit via Help Desk |

Standard Authorization Request (SAR)

Complete and submit this form, with attachment(s) to the [NERC Help Desk](#). Upon entering the Captcha, please type in your contact information, and attach the SAR to your ticket. Once submitted, you will receive a confirmation number which you can use to track your request.

The North American Electric Reliability Corporation (NERC) welcomes suggestions to improve the reliability of the bulk power system through improved Reliability Standards.

| Requested information | | | |
|--|---|---|---|
| SAR Title: | Operational Data Exchange Simplification | | |
| Date Submitted: | June 23, 2020 | | |
| SAR Requester | | | |
| Name: | Standards Efficiency Review Phase 2 Team (John Allen Michael Cruz-Montes) | | |
| Organization: | City Utilities of Springfield CenterPoint Energy | | |
| Telephone: | 417-831-8972 713-207-2132 | Email: | John.Allen@cityutilities.net michael.cruz-montes@centerpointenergy.com |
| SAR Type (Check as many as apply) | | | |
| <input type="checkbox"/> New Standard | <input type="checkbox"/> Imminent Action/ Confidential Issue (SPM Section 10) | <input type="checkbox"/> Variance development or revision | <input checked="" type="checkbox"/> Other (Please specify) |
| <input checked="" type="checkbox"/> Revision to Existing Standard | | | |
| <input checked="" type="checkbox"/> Add, Modify or Retire a Glossary Term | | | |
| <input checked="" type="checkbox"/> Withdraw/retire an Existing Standard | | | |
| Justification for this proposed standard development project (Check all that apply to help NERC prioritize development) | | | |
| <input type="checkbox"/> Regulatory Initiation | <input type="checkbox"/> NERC Standing Committee Identified | <input type="checkbox"/> Enhanced Periodic Review Initiated | <input checked="" type="checkbox"/> Industry Stakeholder Identified |
| <input type="checkbox"/> Emerging Risk (Reliability Issues Steering Committee) Identified | | | |
| <input type="checkbox"/> Reliability Standard Development Plan | | | |
| Industry Need (What Bulk Electric System (BES) reliability benefit does the proposed project provide?): | | | |
| The proposed project will enhance the effective and efficient administration of operational data exchange for the purpose of focusing operating personnel on exchanges between Responsible Entities <u>essential for</u> safe, secure and reliable operations. | | | |
| Purpose or Goal (How does this proposed project provide the reliability-related benefit described above?): | | | |
| The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IR0-010- 23 and TOP-003- 34 standards and limit unnecessary data <u>retention</u> requirements that do not contribute to BES reliability and resiliency. As written the standards <u>may</u> create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, | | | |

Requested information

including excessive data retention. If instead a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

Therefore, the industry would benefit from continuing the efforts of Project 2014-03 and further revising IRO-010-~~32~~ and TOP-003-~~43~~ to enhance the “data specification” approach to reduce the administrative burdens of excessive data retention, while ensuring Registered Entities with operational responsibilities continue, as under the current standards, to request and receive ~~any~~the data necessary to support the four tasks identified in IRO-010-~~32~~ and TOP-003-~~43~~ (and described in the Detailed Description section below), while protecting public disclosure of commercially sensitive information and providing a dispute resolution process. To preserve the “data specification” concept, flexibility for differences in operational environments and emerging technology must be maintained. Therefore, creating a minimum list of items to include in a data specification is not desired. However, more clarity regarding the scope of the four tasks identified in IRO-010-~~32~~ and TOP-003-~~34~~ would be beneficial and is desired. The scope of the data specification would then just reflect the information necessary to cover the scope of the applicable tasks identified in IRO-010-~~32~~ or TOP-003-~~43~~ for the individual Registered Entity. The SER Phase 2 team received some feedback from industry participants who believe the scope of a data specification would only contain routine real time operating data typically provided systematically from field devices via SCADA/ICCP. Therefore, it is also necessary to clarify for industry if it should contain other data/information and methods of transfer such as phone, instant messaging, internet-based systems, etc.

A secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-~~23~~ and TOP-003-~~34~~ the ability to request and receive any information it needs from other Registered Entities to perform those tasks. The intent of the project is not to do away with specific requirements in other Reliability Standards under the assumption that the same data will be requested per a data exchange under IRO-010-3 and TOP-003-4; and the Standard Drafting Team should evaluate any potential reliability risk incurred by removing a perceived redundant requirement prior to recommending changes to requirements in other Reliability Standards.

Project Scope (Define the parameters of the proposed project):

The scope of the proposed project is to simplify the administrative burden with IRO-010-~~32~~, TOP-003-~~43~~ by developing risk-based compliance expectations and clarifying the four tasks identified in IRO-010-~~32~~ and TOP-003-~~43~~. The proposed project may require revisions to IRO-010-~~23~~, TOP-003-~~34~~ and associated definitions (especially Real-time monitoring and Balancing Authority analysis functions) as necessary to mitigate expectations of zero-defect compliance (e.g., setting thresholds to address telemetry availability), include provisions for dispute resolution, negotiating data exchanges where entities disagree on the necessity of data for reliability, and address confidentiality concerns. The proposed

Requested information

project will need to utilize any available industry resource necessary to maintain flexibility for various operational environments and technology. ~~The project will require revisions to IRO-010-2, TOP-003-3 and associated definitions (especially Real-time monitoring and Balancing Authority analysis functions) and (i.e., SCADA/ICCP, phone, instant messaging, internet-based systems, etc.).~~ The project may also require development of Implementation Guidance or other ERO guidance to simplify the administrative burden.

The proposed project may also require revisions to other standards as necessary to clarify data use requirements or clarify expectations and remove redundant data specification obligations contained in other Reliability Standards that are associated with the four reliability tasks identified in the Detailed Description below. The scope of the project should also include coordination with existing projects that have operational data exchange within their scope ~~including projects 2015-09 and 2019-06~~.

If necessary, the proposed project may also require revisions to address data and information exchanges and obligations between provider and requester that are facilitated through a third-party intermediary.

~~The proposed project may also require revisions to address the need for entities that serve as data pass through entities to recognize their role in the data and information from the provider to the requester.~~

~~If necessary, the The proposed project may also require revisions to address data and information exchanges and obligations between provider and requester that are facilitated through a third-party intermediary.~~

Detailed Description (Describe the proposed deliverable(s) with sufficient detail for a drafting team to execute the project. If you propose a new or substantially revised Reliability Standard or definition, provide: (1) a technical justification¹ which includes a discussion of the reliability-related benefits of developing a new or revised Reliability Standard or definition, and (2) a technical foundation document (e.g., research paper) to guide development of the Standard or definition).

The project ~~will, at a minimum, may~~ require revisions to IRO-010-~~23~~, TOP-003-~~34~~ and associated definitions in the NERC Glossary (especially Real-time monitoring and Balancing Authority analysis functions) to clarify expectations for the “data specification” and associated tasks identified in IRO-010-~~23~~ and TOP-003-~~34~~. The revisions should continue to allow each Registered Entity with operational responsibilities to perform the tasks identified in IRO-010-~~23~~ and TOP-003-~~34~~ the ability to request and receive anythe information it needs to perform those tasks, while protecting public disclosure of commercially sensitive information: and providing a dispute resolution process for conflicts between

¹ The NERC Rules of Procedure require a technical justification for new or substantially revised Reliability Standards. Please attach pertinent information to this form before submittal to NERC.

Requested information

entities related to necessary data exchanges. The four tasks identified in IRO-010-~~23~~ and TOP-003-~~34~~ and associated standards are listed below.

- Operational Planning Analysis (IRO-008-2 and TOP-002-4)
- Real-time Assessments (IRO-008-2 and TOP-001-4)
- Real-time monitoring (IRO-002-5 and TOP-001-4)
- Balancing Authority analysis functions (BAL-001-2, BAL-002-3, BAL-003-1.1 and BAL-005-1)

This may necessitate revisions to the standards included above and any other standard or definition identified by the drafting team during the project as necessary to achieve the purpose of this project. The drafting team should also ~~coordinate with pre-qualified organizations to~~ [A1] develop Implementation Guidance and/or NERC staff to develop other ERO guidance to simplify the administrative burden as needed.

Once those activities are clarified, the drafting team should also evaluate and, if necessary, remove potentially redundant operational data exchange requirements dispersed in other standards including, but not limited to, the following:

- BAL-005-1 R2
- EOP-005-3 R13
- EOP-005-3 R14.2
- FAC-014-2 R5
- FAC-014-2 R6.1.
- IRO-008-2 R5
- IRO-008-2 R6
- IRO-017-1 R3
- TOP-001-~~54~~ R9
- TOP-001-~~54~~ R15
- VAR-002-4.1 R3
- VAR-002-4.1 R4

The project should also evaluate any other standard identified by the drafting team during the project as necessary to achieve the purpose of this project. The ~~drafting team~~ Standard Drafting Team should seek to identify opportunities to remove redundant requirements and, if necessary, retire requirements that are not needed for reliability; however, the Standard Drafting Team should not retire requirements that are not directly related to the four reliability tasks identified above. The evaluation at a minimum should consider the following questions:

- Is the purpose of the activity currently within the scope of one or more of the tasks and consequently IRO-010-~~32~~ and TOP-003-~~43~~? If so, then consider removing due to redundancy. If so, then remove as redundant.
- If minor modifications were made to IRO-010-~~32~~, TOP-003-~~43~~ and/or associated definitions (especially Real-time monitoring and Balancing Authority analysis functions), then would the

| Requested information |
|--|
| <p>activity be within the scope of those standards? If so, then <u>consider removing due to redundancy</u>revise and remove as redundant.</p> <ul style="list-style-type: none"> Does the receiving Registered Entity have an obligation to use the information? If not so, then consider or recommend modification to existing identify the existing requirement or create a the need for new requirements while ensuring RC, BA, or TOP can acquire any needed information to perform the four reliability tasks. for them to use it. If not, then retire outright as unnecessary for reliability of the BES. <p>The drafting team should reference precedence from past projects to support this effort, including background materials developed during Project 2014-03 that describe the “data specification” concept including the petition to the FERC and the Project 2014-03 Mapping Document.</p> |
| <p>Cost Impact Assessment, if known (Provide a paragraph describing the potential cost impacts associated with the proposed project):</p> |
| <p>unknown</p> |
| <p>Please describe any unique characteristics of the BES facilities that may be impacted by this proposed standard development project (e.g., Dispersed Generation Resources):</p> |
| <p>N/A</p> |
| <p>To assist the NERC Standards Committee in appointing a drafting team with the appropriate members, please indicate to which Functional Entities the proposed standard(s) should apply (e.g., Transmission Operator, Reliability Coordinator, etc. See the most recent version of the NERC Functional Model for definitions):</p> |
| <p>All NERC Functional Entities are potentially impacted by the scope of this SAR. The recommendations are both technical and administrative in nature but meant to address inefficiencies within requirements for data collection. Therefore, the drafting team should consist of members who are familiar with both aspects.</p> |
| <p>Do you know of any consensus building activities² in connection with this SAR? If so, please provide any recommendations or findings resulting from the consensus building activity.</p> |
| <p>The SER Phase 2 team hosted an industry webinar on February 22, 2019 presenting six efficiency concepts, including consolidating and simplifying information and data requirements. The presentation was followed up by an industry survey to assess support for the concepts. This concept received the second highest support from industry. In addition, an informal survey was conducted on the content of this SAR to assess industry support. The feedback from industry and SER Phase 2 team responses are located on the Standards Efficiency Review page.</p> |
| <p>Are there any related standards or SARs that should be assessed for impact as a result of this proposed project? If so, which standard(s) or project number(s)?</p> |
| <p>Yes, Projects 2015-09 and 2019-06.</p> |

² Consensus building activities are occasionally conducted by NERC and/or project review teams. They typically are conducted to obtain industry inputs prior to proposing any standard development project to revise, or develop a standard or definition.

| Requested information |
|---|
| <u>The Standard Drafting team should coordinate with existing projects that have operational data exchange within their scope.</u> |
| Are there alternatives (e.g., guidelines, white paper, alerts, etc.) that have been considered or could meet the objectives? If so, please list the alternatives. |
| Yes, Implementation Guidance and/or other ERO guidance could assist with simplifying the administrative burden for the interim period while this project is being administered. |

| Reliability Principles | |
|---|---|
| Does this proposed standard development project support at least one of the following Reliability Principles (Reliability Interface Principles)? Please check all those that apply. | |
| <input type="checkbox"/> | 1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards. |
| <input type="checkbox"/> | 2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand. |
| <input checked="" type="checkbox"/> | 3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably. |
| <input type="checkbox"/> | 4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented. |
| <input type="checkbox"/> | 5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems. |
| <input type="checkbox"/> | 6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions. |
| <input type="checkbox"/> | 7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis. |
| <input type="checkbox"/> | 8. Bulk power systems shall be protected from malicious physical or cyber attacks. |

| Market Interface Principles | |
|--|-------------------|
| Does the proposed standard development project comply with all of the following Market Interface Principles ? | Enter (yes/no) |
| 1. A reliability standard shall not give any market participant an unfair competitive advantage. | Yes |
| 2. A reliability standard shall neither mandate nor prohibit any specific market structure. | Yes |
| 3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. | Yes |
| 4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. | Yes |

Identified Existing or Potential Regional or Interconnection Variances

| Region(s)/ Interconnection | Explanation |
|-------------------------------|-------------|
| <i>e.g.</i> , NPCC | |

For Use by NERC Only

SAR Status Tracking (Check off as appropriate).

| | |
|---|--|
| <input type="checkbox"/> Draft SAR reviewed by NERC Staff | <input type="checkbox"/> Final SAR endorsed by the SC |
| <input type="checkbox"/> Draft SAR presented to SC for acceptance | <input type="checkbox"/> SAR assigned a Standards Project by NERC |
| <input type="checkbox"/> DRAFT SAR approved for posting by the SC | <input type="checkbox"/> SAR denied or proposed as Guidance document |

Version History

| Version | Date | Owner | Change Tracking |
|---------|-------------------|-----------------------------|--|
| 1 | June 3, 2013 | | Revised |
| 1 | August 29, 2014 | Standards Information Staff | Updated template |
| 2 | January 18, 2017 | Standards Information Staff | Revised |
| 2 | June 28, 2017 | Standards Information Staff | Updated template |
| 3 | February 22, 2019 | Standards Information Staff | Added instructions to submit via Help Desk |

Unofficial Comment Form

Project 2021-06 Modifications to IRO-010 and TOP-003 Standard Authorization Request

Do not use this form for submitting comments. Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments on **2021-06 Project 2021-06 Modifications to IRO-010 and TOP-003 Standard Authorization Request (SAR)**. Comments must be submitted by **8 p.m. Eastern, Wednesday, February 9, 2022**.

Additional information is available on the [project page](#). If you have questions, contact Standards Developer, [Josh Blume](#) (email), or at 404-446-2593.

Background Information

The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IRO-010-3 and TOP-003-4 standards and limit unnecessary data requirements that do not contribute to BES reliability and resiliency. As written the standards create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, including excessive data retention. If instead, a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

The secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-2 and TOP-003-3 the ability to request and receive any information it needs from other Registered Entities to perform those tasks.

Based on the review and discussions, the DT modified the SAR and re-posted a third draft for a 30-day informal comment period. The main substantive modifications to the SAR include, but are not limited to: 1) deleting a line giving the drafting team the ability to create requirements in this project; 2) focusing the SAR's scope on clarifying data transmission methods; 3) clarifying what standards are effected by the SAR, along with re numbering TOP-003 and IRO-010 to reflect the most current versions.

Questions

1. Do you agree with the redline modifications made to the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.

Yes

No

Comments:

2. Provide any additional comments for the drafting team to consider, if desired.

Comments:

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003 Revised Standard Authorization Request

Informal Comment Period Open through February 9, 2022

[Now Available](#)

A 30-day informal comment period for the revised **IRO-010 and TOP-003 Standard Authorization Request**, is open through **8 p.m. Eastern, Wednesday, February 9, 2022**.

Commenting

Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments. An unofficial Word version of the comment form is posted on the [project page](#).

- *Contact NERC IT support directly at <https://support.nerc.net/> (Monday – Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.*
- *Passwords expire every **6 months** and must be reset.*
- *The SBS is **not** supported for use on mobile devices.*
- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

The drafting team will review all responses received during the comment period and determine the next steps of the project.

For more information on the Standards Development Process, refer to the [Standard Processes Manual](#)

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003" in the Description Box.

North American Electric Reliability Corporation
3353 Peachtree Rd, NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

Comment Report

Project Name: 2021-06 Modifications to IRO-010 and TOP-003 | Standard Authorization Request (Second Posting)
Comment Period Start Date: 1/11/2022
Comment Period End Date: 2/9/2022
Associated Ballots:

There were 33 sets of responses, including comments from approximately 122 different people from approximately 91 companies representing 10 of the Industry Segments as shown in the table on the following pages.

Questions

- 1. Do you agree with the redline modifications made to the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.**
- 2. Provide any additional comments for the drafting team to consider, if desired.**

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|------------------------------|-----------------|------------|---|---|------------------------|---|-------------------------|---------------------|
| BC Hydro and Power Authority | Adrian Andreoiu | 1,3,5 | WECC | BC Hydro | Hootan Jarollahi | BC Hydro and Power Authority | 3 | WECC |
| | | | | | Helen Hamilton Harding | BC Hydro and Power Authority | 5 | WECC |
| | | | | | Adrian Andreoiu | BC Hydro and Power Authority | 1 | WECC |
| Midcontinent ISO, Inc. | Bobbi Welch | 2 | MRO,RF,SERC | ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 SAR | Ali Miremadi | CAISO | 2 | WECC |
| | | | | | Dana Showalter | ERCOT | 2 | Texas RE |
| | | | | | Helen Lainis | IESO | 2 | NPCC |
| | | | | | Kathleen Goodman | ISO-NE | 2 | NPCC |
| | | | | | Bobbi Welch | MISO | 2 | RF |
| | | | | | Greg Campoli | NYISO | 2 | NPCC |
| | | | | | Michael Del Viscio | PJM | 2 | RF |
| | | | | | Charles Yeung | Southwest Power Pool, Inc. (RTO) | 2 | MRO |
| ACES Power Marketing | Jodirah Green | 1,3,4,5,6 | MRO,NA - Not Applicable,RF,SERC,Texas RE,WECC | ACES Standard Collaborations | Bob Solomon | Hoosier Energy Rural Electric Cooperative, Inc. | 1 | SERC |
| | | | | | Kevin Lyons | Central Iowa Power Cooperative | 1 | MRO |
| | | | | | Bill Hutchison | Southern Illinois Power Cooperative | 1 | SERC |
| | | | | | Susan Sosbe | Wabash Valley Power Association | 3 | RF |
| | | | | | Jennifer Bray | Arizona Electric Power Cooperative, Inc. | 1 | WECC |

| | | | | | | | | |
|-------------------------------------|-----------------|-------------|-----|---------------------------|-------------------|---|-------|----------|
| | | | | | Scott Brame | NC Electric Membership Corporation | 3,4,5 | SERC |
| | | | | | Shari Heino | Brazos Electric Power Cooperative, Inc. | 5 | Texas RE |
| DTE Energy - Detroit Edison Company | Karie Barczak | 3,5 | | DTE Energy - DTE Electric | Adrian Raducea | DTE Energy - Detroit Edison Company | 5 | RF |
| | | | | | Patricia Ireland | DTE Energy - DTE Electric | 4 | RF |
| | | | | | Karie Barczak | DTE Energy - DTE Electric | 3 | RF |
| MRO | Kendra Buesgens | 1,2,3,4,5,6 | MRO | MRO NSRF | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Christopher Bills | City of Independence Power & Light | 3,5 | MRO |
| | | | | | Fred Meyer | Algonquin Power Co. | 3 | MRO |
| | | | | | Jamie Monette | Allete - Minnesota Power, Inc. | 1 | MRO |
| | | | | | Larry Heckert | Alliant Energy Corporation Services, Inc. | 4 | MRO |
| | | | | | Marc Gomez | Southwestern Power Administration | 1 | MRO |
| | | | | | Matthew Harward | Southwest Power Pool, Inc. | 2 | MRO |
| | | | | | LaTroy Brumfield | American Transmission Company, LLC | 1 | MRO |
| | | | | | Bryan Sherrow | Kansas City Board Of Public Utilities | 1 | MRO |
| | | | | | Terry Harbour | MidAmerican Energy | 1,3 | MRO |
| | | | | | Jamison Cawley | Nebraska Public Power | 1,3,5 | MRO |

| | | | | | | | | |
|--|----------------|-----------|--------------------------------|------------------|-------------------|--|---------|------|
| | | | | | Seth Shoemaker | Muscatine Power & Water | 1,3,5,6 | MRO |
| | | | | | Michael Brytowski | Great River Energy | 1,3,5,6 | MRO |
| | | | | | David Heins | Omaha Public Power District | 1,3,5,6 | MRO |
| | | | | | George Brown | Acciona Energy North America | 5 | MRO |
| Duke Energy | Kim Thomas | 1,3,5,6 | FRCC,RF,SERC,Texas RE | Duke Energy | Laura Lee | Duke Energy | 1 | SERC |
| | | | | | Dale Goodwine | Duke Energy | 5 | SERC |
| | | | | | Greg Cecil | Duke Energy | 6 | RF |
| FirstEnergy - FirstEnergy Corporation | Mark Garza | 1,3,4,5,6 | | FE Voter | Julie Severino | FirstEnergy - FirstEnergy Corporation | 1 | RF |
| | | | | | Aaron Ghodooshim | FirstEnergy - FirstEnergy Corporation | 3 | RF |
| | | | | | Robert Loy | FirstEnergy - FirstEnergy Solutions | 5 | RF |
| | | | | | Tricia Bynum | FirstEnergy - FirstEnergy Corporation | 6 | RF |
| | | | | | Mark Garza | FirstEnergy-FirstEnergy | 4 | RF |
| Southern Company - Southern Company Services, Inc. | Pamela Frazier | 1,3,5,6 | MRO,NPCC,RF,SERC,Texas RE,WECC | Southern Company | Matt Carden | Southern Company - Southern Company Services, Inc. | 1 | SERC |
| | | | | | Joel Dembowski | Southern Company - Alabama Power Company | 3 | SERC |
| | | | | | Ron Carlsen | Southern Company - Southern Company Generation | 6 | SERC |
| | | | | | James Howell | Southern Company - Southern | 5 | SERC |

| | | | | | | | | |
|--------------------------------------|-----------|----------------------|------|-----------------------------------|--------------------|---|----|------|
| | | | | | | Company Generation | | |
| Northeast Power Coordinating Council | Ruida Shu | 1,2,3,4,5,6,7,8,9,10 | NPCC | NPCC Regional Standards Committee | Gerry Dunbar | Northeast Power Coordinating Council | 10 | NPCC |
| | | | | | Randy MacDonald | New Brunswick Power | 2 | NPCC |
| | | | | | Glen Smith | Entergy Services | 4 | NPCC |
| | | | | | Alan Adamson | New York State Reliability Council | 7 | NPCC |
| | | | | | David Burke | Orange & Rockland Utilities | 3 | NPCC |
| | | | | | Helen Lainis | IESO | 2 | NPCC |
| | | | | | David Kiguel | Independent | 7 | NPCC |
| | | | | | Nick Kowalczyk | Orange and Rockland | 1 | NPCC |
| | | | | | Joel Charlebois | AESI - Acumen Engineered Solutions International Inc. | 5 | NPCC |
| | | | | | Mike Cooke | Ontario Power Generation, Inc. | 4 | NPCC |
| | | | | | Salvatore Spagnolo | New York Power Authority | 1 | NPCC |
| | | | | | Shivaz Chopra | New York Power Authority | 5 | NPCC |
| | | | | | Deidre Altobell | Con Ed - Consolidated Edison | 4 | NPCC |
| | | | | | Dermot Smyth | Con Ed - Consolidated Edison Co. of New York | 1 | NPCC |
| | | | | | Peter Yost | Con Ed - Consolidated | 3 | NPCC |

| | | | |
|-------------------|--|----|------|
| | Edison Co. of New York | | |
| Cristhian Godoy | Con Ed - Consolidated Edison Co. of New York | 6 | NPCC |
| Nurul Abser | NB Power Corporation | 1 | NPCC |
| Randy MacDonald | NB Power Corporation | 2 | NPCC |
| Michael Ridolfino | Central Hudson Gas and Electric | 1 | NPCC |
| Vijay Puran | NYSPPS | 6 | NPCC |
| ALAN ADAMSON | New York State Reliability Council | 10 | NPCC |
| Sean Cavote | PSEG - Public Service Electric and Gas Co. | 1 | NPCC |
| Brian Robinson | Utility Services | 5 | NPCC |
| Quintin Lee | Eversource Energy | 1 | NPCC |
| Jim Grant | NYISO | 2 | NPCC |
| John Pearson | ISONE | 2 | NPCC |
| Nicolas Turcotte | Hydro-Qu?bec TransEnergie | 1 | NPCC |
| Chantal Mazza | Hydro-Quebec | 2 | NPCC |
| Michele Tondalo | United Illuminating Co. | 1 | NPCC |
| Paul Malozewski | Hydro One Networks, Inc. | 3 | NPCC |
| Sean Bodkin | Dominion - Dominion Resources, Inc. | 6 | NPCC |
| John Hastings | National Grid | 3 | NPCC |

| | | | | | | | | |
|--|-----------------|----|-----------------|------------------------|-------------------|---------------------------|----|------|
| | | | | | Michael Jones | National Grid USA | 1 | NPCC |
| Southwest Power Pool, Inc. (RTO) | Shannon Mickens | 2 | MRO,SPP RE,WECC | SPP RTO | Shannon Mickens | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Matt Harward | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Charles Cates | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Mason Favazza | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Melissa Rinehart | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Zack Sharp | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Brent Springfield | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Jim Williams | Southwest Power Pool Inc. | 2 | MRO |
| Western Electricity Coordinating Council | Steven Rueckert | 10 | | WECC Entity Monitoring | Steve Rueckert | WECC | 10 | WECC |
| | | | | | Phil O'Donnell | WECC | 10 | WECC |

1. Do you agree with the redline modifications made to the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.

Lindsey Mannion - ReliabilityFirst - 10

Answer No

Document Name

Comment

While the redline modifications to the SAR do clarify that main intention of the proposed project is to address perceived excessive data retention requirements, the RF SAR review team still does not support implementation of the project. We therefore disagree with both the redline modifications and the previously posted SAR.

The SAR indicates that “as written the standards may create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period.” We note that the existing data retention period is 90 calendar days for both TOP-003-4 R5 and IRO-010-3 R3, and that under the present standards it would be unreasonable for any Compliance Enforcement Authority to expect retention of the full data set needed to meet the data specification for “an entire audit period.”

We also note that the applicable measures for these requirements list “attestations of receiving entities” as an example of evidence that an entity has satisfied a data specification, which provides entities the opportunity to demonstrate compliance without maintaining or providing records of the transmission of individual data points. The inclusion of third-party attestations in the measures of these requirements already allows entities to obtain the support of their TOP, BA, and/or RC to implement an exception-driven approach to demonstrating compliance.

For these reasons, we deem revisions to the existing requirements unnecessary.

Additionally, the SAR indicates that a secondary purpose is to evaluate other data exchange requirements for redundancy and possibly to remove redundant requirements (considering them rolled them into the TOP-003 and IRO-010 data specifications). We note that the existing VRF is Medium for IRO-010-3 R3 and TOP-003-4 R5, while some of the requirements referenced as potentially redundant under Detailed Description have an existing VRF of High. We caution against considering rolling in stand-alone High VRF requirements into a requirement with an existing VRF of Medium, else the Violation Risk Factor for satisfying the obligations of the TOP-003 and IRO-010 data specifications will need to be increased to High.

Likes 0

Dislikes 0

Response

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer No

Document Name

Comment

Reclamation observes that this project is based on proposed modifications to two standards that have not even become effective yet. Reclamation recommends the proposed modifications be incorporated into other proposed or pending standards development projects so as to reduce the amount of

churn among standard versions. For example, the efforts proposed in the SAR could be combined with project 2021-07, 2021-02, 2021-01, and/or 2020-06.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company does not agree. The proposal to attempt to specify or determine the necessity of data that can be requested for reliability for all entities and all regions will not resolve the compliance issues the SAR is intending to address.

Making this standard more prescriptive may create difficulties in the RC/TOP/BAs ability to quickly react to changing system conditions, which might require additional information from providers. This has the potential to create a reliability concern.

Likes 0

Dislikes 0

Response

Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 SAR

Answer No

Document Name

Comment

The ISO/RTO Council Standards Review Committee (IRC SRC) is concerned with the overlap between this SAR and the Cold Weather SAR, as both projects are seeking to modify IRO-010 and TOP-003 concurrently, which is a difficult process to manage. The IRC SRC encourages NERC to consider whether there may be other approaches to resolve the zero defect, confidentiality, and dispute resolution issues without changing the standards, obviating the need for this project. For example, establish technical rationale / compliance guidance for the zero defect and confidentiality issues or modify NERC Rules of Procedure to address the dispute resolution issue.

If this project continues forward, the IRC SRC notes that it supports the Standards Efficiency Review (SER) concepts and this project's goal to remove redundancy; but wants to ensure that the Responsible Entities (RC, BA, TOP) have the ability to request and receive any information the Responsible Entity deems necessary to perform its responsibilities. The IRC SRC asks that the drafting team be mindful that compliance obligations should not prohibit or restrict Responsible Entities from retaining or requiring additional telemetry that enhances real time monitoring capabilities (e.g., PMU, adding additional SCADA measurements), given new and more challenging technologies (e.g., inverter-based resources, distributed generation resources, co-located generation/load) are being integrated on the electric system. The IRC SRC would like to encourage the Standard Drafting Team to set high performance expectations to encourage entities to take all possible actions to promote availability of data and to incent the use of reliable technologies.

For example, telemetry availability may be percentage based (e.g., 98 to 99% on a rolling average considering forced or other unplanned outages). Finally, the IRC SRC reiterates its reservations with modifying definitions that affect Real-time monitoring and Balancing Authority analysis functions due to the unintentional impact on other standards and recommends that the drafting team avoid definition changes if possible and proceed with caution if that path is deemed necessary.

Likes 0

Dislikes 0

Response

Jennifer Malon - Black Hills Corporation - 1,3,5,6 - MRO,WECC

Answer

Yes

Document Name

Comment

Black Hills Corporation supports a risk-based approach for documentation of triggered events and unresolved data conflicts. This would reduce administrative burden while maintaining focus on risk areas.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 1,3,5,6

Answer

Yes

Document Name

Comment

AZPS agrees with the redline modifications made to the SAR.

Likes 0

Dislikes 0

Response

Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy

Answer

Yes

Document Name

Comment

Ensure attestations continue as a method of demonstrating compliance.

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 3,5,6

Answer

Yes

Document Name

Comment

AEP agrees with the purpose and perceived need as expressed in the proposed SAR, and sees value in pursuing it. The clarity that the SAR seeks is definitely needed and would be very beneficial. Having said that, the means by which that clarity is obtained, as well as the content of that clarity, are both important issues that industry will need to work on effectively in order to achieve a successful outcome and meaningful change to these standards. In addition, AEP encourages the members of the future Standards Drafting Team to ensure that their eventual revisions are not written in such a way that they are unduly burdensome, especially for larger entities having voluminous data points.

In order for the TOP to perform the necessary real time assessments for the entire BES, they may require data points at lower voltages which are not needed by the RC and thus not provided. The RTO, serving as the RC, should continue to define what data points they need for their own obligations (as per IRO-010), however AEP recommends that changes be made to TOP-003 to allow the TOP to define what data they need from the RC, including data that might not be required or needed by the RC for their own purposes. Examples of such data include DER data, detailed renewable energy models, and neighboring TOP sub-transmission data that the RTO may not include in their models. All of this type of external DP/GOP/TOP data should be provided by the RTO. Doing this would eliminate the need to create and maintain multiple data communication paths.

With respect to the concerns expressed above, does the SDT believe that SAR's current language would allow the future SDT to adequately address AEP's concerns where the RTO/RC accepts data points from "Entity B" that the RC/RTO may not need to use, but is needed by another "Entity A?" The RTO/RC providing this data routinely to Entity A would avoid the need for Entity A to create and maintain multiple data communication paths w/ Entity B. Further complicating matters, Entity B may not even be a NERC-registered Functional Entity. As currently written, the RC has no existing obligations within TOP-003 to provide such data. With the RTO providing the TOP the necessary data to meet TOP-003 data specifications for Real-time monitoring and RTA/OPA, the revised standards should provide clarity to each applicable entity (RTO/TOP) on which entities need to receive a data specification document from the applicable entity. We believe it would positively impact reliability and data integrity if the RTO were themselves responsible to provide real time data for all TOPs within their footprint, regardless of whether or not the RTO themselves need that data. For example, if Entity A needs data from Entity B, both residing within RTO's footprint, the RTO would then provide that data to Entity A. This would prioritize data sharing and ensure that the necessary data channels are properly functioning as needed, and thus benefiting everyone involved. We encourage the future Standards Drafting Team to pursue this as they develop their revisions to the standards.

Documented specification for the data is shared between TOPs/GOPs/DPs/etc., even though a majority, if not all, of the data is received via the RTO. To reduce the administrative burden, the documented specifications for the data, as covered by TOP-003 R1, should only be communicated to the RTOs and any entities serving as the RC who are directly supplying the TOP data. Other data requirements not covered by NERC standards would be specified in other data specification or non-NERC operating agreements. AEP believes direct data connections (i.e. not through the RTO) should be avoided if at all possible, as managing these types of special links are overly burdensome, complicate data sharing between entities, and increases the risk of non-compliance. In addition, such bi-lateral data links to individual companies may be more susceptible to data reliability issues and could have potential compliance ramifications, with TOP-001 as just one example. Additional clarity also needs to be addressed in the standards regarding the details required in the specification documents. Some entities keep the data specification documents at a very high level (which is preferred) while other entities specify individual data point names and detailed requirements in their data specification documents (not preferred).

Likes 0

Dislikes 0

Response

Carl Pineault - Hydro-Quebec Production - 1,5

Answer

Yes

Document Name

Comment

We reaffirm that we consider that the data specification should be a standalone document. The data specification requirements (TOP-003-4 R1 and IRO-010-3 R1) specify clearly (in our view) that all compliance obligations must be within the data specification. Yet, a number of data specifications in our industry have references to external documents in the data specification and entities have to then find the obligations in those external documents. Sometimes the external documents have further references to other documents, requiring entities find the obligations across multiple documents. Clearly, some entities who draft data specifications therefore do not believe the data specification is standalone and that obligations can be outside the data specification. We believe that having obligations spread across documents through a web of references expands and blurs the compliance obligations unnecessarily. In our view, the SDT should clarify the language to make it clear that the data specification should be standalone.

Likes 0

Dislikes 0

Response

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring

Answer

Yes

Document Name

Comment

WECC agrees with the redlines to the modifies SAR and agrees with the scope of the SAR.

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee

Answer

Yes

Document Name

Comment

We agree with the project, however, please consider updating the SAR to ensure that references to standards are the most recent NERC Board Adopted and/or FERC approved versions of the standards. For example, IRO-010-4 and TOP-003-5 become effective on April 1, 2023, and were part of project 2019-06 Cold Weather. FAC-014-3, IRO-008-3, and TOP-001-6 were part of project 2015-09 Establish and Communicate System Operating Limits and were NERC Board Adopted on June 11, 2021, and were filed with FERC on June 17, 2021.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Yes

Document Name

Comment

EEl supports the current draft of the proposed SAR for Project 2021-06.

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Yes

Document Name

Comment

We support the revised SAR's stated purpose to "simplify administrative burdens" and "limit unnecessary data retention requirements" on the Registered Entities that are required to respond to the IRO-010-3 (RC) and TOP-003-4 (TOP and BA) data specifications. We also support the secondary purpose to "evaluate removing other data exchange requirements dispersed in other standards".

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Yes

Document Name

Comment

The MRO NSRF appreciates the SAR SDT's additions and considerations of its comments as provided in August of 2021.

Likes 0

Dislikes 0

Response**Andy Fuhrman - Minnkota Power Cooperative Inc. - 1,5 - MRO**

Answer

Yes

Document Name

Comment

MPC supports the MRO NERC Standards Review Forum comments.

Likes 0

Dislikes 0

Response**Daniel Gacek - Exelon - 1,3**

Answer

Yes

Document Name

Comment

Exelon supports the current draft of the proposed SAR.

Likes 0

Dislikes 0

Response**Kimberly Turco - Constellation - 5,6**

Answer

Yes

Document Name

Comment

Constellation supports the current draft of the proposed SAR.

Kimberly Turco, **On Behalf of:** Constellation, Segments 5, 6

Likes 0

Dislikes 0

Response

Alison Mackellar - Constellation - 5,6

Answer

Yes

Document Name

Comment

Constellation supports the current draft of the proposed SAR

Likes 0

Dislikes 0

Response

Mike Marshall - IDACORP - Idaho Power Company - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Adrian Andreoiu - BC Hydro and Power Authority - 1,3,5, Group Name BC Hydro

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3,5, Group Name DTE Energy - DTE Electric

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Tony Skourtas - Los Angeles Department of Water and Power - 1,3,5,6

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Nazra Gladu - Manitoba Hydro - 1,3,5,6

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Alan Kloster - Evergy - 1,3,5,6 - MRO

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Scott Langston - Tallahassee Electric (City of Tallahassee, FL) - 1,3,5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Kenisha Webber - Entergy - NA - Not Applicable - SERC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC, Group Name SPP RTO

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Darcy O'Connell - California ISO - 2

Answer

Document Name

Comment

CAISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee

Likes 0

Dislikes 0

Response

2. Provide any additional comments for the drafting team to consider, if desired.

Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC, Group Name SPP RTO

Answer

Document Name

Comment

SPP recommends that the drafting team take into consideration coordinating with the NERC SPIDERWG and their efforts in reference to their MOD-032 SAR. We understand that MOD-032 doesn't meet the scope of this project. However, at this point, our concern is that the both standards are used in the process for data acquisition and doesn't have the foundational language to enable an entity to obtain the pertinent data needed to perform accurate studies (for example- planning and/or ops modeling data) to maintain the reliability of the grid. From our perspective, there is an opportunity for both drafting teams to work together and learn about the needs of both the requesting and sharing entities perspective in reference to data acquisition as well as ensuring the appropriate data exchange is accomplished with the common goal of maintaining the reliability of the grid.

Furthermore, SPP recommends that the drafting team take into consideration delaying the project until the 2021-07 Extreme Cold Weather Grid Operations, Preparedness and Coordination project is completed. Both projects touch the same standards. Depending on the timing of the projects and filings, two projects changing the same standards have the potential to conflict with or fail to support what the other does.

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations

Answer

Document Name

Comment

Thank you for the opportunity to provide comments.

Likes 0

Dislikes 0

Response

Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 SAR

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

The MRO NSRF has no additional comments.

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Document Name

Comment

The SAR is acceptably written to “simplify the administrative burdens” and “eliminate redundant requirements found in other NERC reliability standards.” The drafting team will need to be cautious as it progresses through the revision process so that the two standards (IRO-010 and TOP-003) are not made more complicated and burdensome. The reliability information necessary to plan, monitor, assess, and operate the Bulk Power System is vital to the RC, TOP, and BA. With the intent to enhance IRO-010 and TOP-003, the standard drafting team needs to guard against burdening the registered entities with complicated data clarifications and additional administrative requirements.

Should the “Date Submitted” row near the top of the SAR also be revised to reflect the date the updated SAR Requester submitted the proposed revisions?

“Detailed Description” section - some of the standards noted in parenthesis with the four bulleted tasks listed on page 4 of the SAR have been superseded (TOP-001-4 by TOP-001-5; IRO-002-5 by IRO-002-7; BAL-003-1.1 by BAL-003-2).

With regard to other standards to be considered, we suggest the drafting team consider what use, if any, the RC, BA and TOP have for generator Facility Ratings (reference FAC-008). Under Project 2018-03 (Standards Efficiency Review Retirements), FAC-008-3, Requirement R7, was retired. In NERC’s petition to FERC requesting approval of FAC-008-5 (dated 2/19/2021), MOD-032-1, IRO-010-2, and TOP-003-3 were specifically cited as justification for retiring FAC-008-3, Requirement R7. However, neither MOD-032-1, IRO-010-3 or TOP-003-4 use the term “Facility Rating” to describe an item of GO/GOP data needed by the PC/TP (MOD-032), RC (IRO-010), or BA/TOP (TOP-003). We recommend the Project 2021-06 drafting team

coordinate with the Project 2021-08 (Modifications to FAC-008) drafting team to consider and clarify what a generator Facility Rating is and identify which operational entities need this information for “safe, secure and reliable operations”.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Document Name

Comment

EEl suggests that the SAR be updated to reflect that IRO-010-4 and TOP-003-5 were both approved by the NERC BOT (June 11, 2021) and FERC on August 24, 2021. (See Project 2019-06 Cold Weather)

EEl additionally suggests that the current list of Reliability Standards identified in the Detailed Description be modified to include changes made under other projects and currently submitted for FERC approval. Note the following:

- BAL-005-1 R2
- EOP-005-3 R13
- EOP-005-3 R14.2
- FAC-014-2 R5 – *EEl suggest evaluating the modifications made to FAC-014-3 (Submitted to FERC for approval on 6/28/2021).*
- *FAC-014-2 R6.1. - Suggest evaluating changes made to FAC-014-3 (Submitted to FERC for approval on 6/28/2021). Requirement R6.1 no longer exists in FAC-014-2.*
- *IRO-008-2 R5 - Suggest evaluating changes made to IRO-008-2 (Submitted to FERC for approval on 6/28/2021)*
- *IRO-008-2 R6 - Suggest evaluating changes made to IRO-008-2 (Submitted to FERC for approval on 6/28/2021)*
- IRO-017-1 R3
- *TOP-001-5 R9 - Suggest replacing with TOP-001-6, while the requirement was not changed the SDT should be reviewing the latest version submitted to FERC for approval. (Submitted to FERC for approval on 6/28/2021)*
- *TOP-001-5 R15 - Suggest replacing with TOP-001-6, while the requirement was not changed the SDT should be reviewing the latest version submitted to FERC for approval. (Submitted to FERC for approval on 6/28/2021)*
- VAR-002-4.1 R3
- VAR-002-4.1 R4

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Alan Kloster - Evergy - 1,3,5,6 - MRO

Answer

Document Name

Comment

Evergy supports and incorporates by reference Edison Electric Institute's (EEI) response to question 2.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

Southern Company proposes an alternative means of reducing the administrative burden and mitigating the zero-deficit compliance expectations of data retention that also preserves the language for Reliability Coordinators, Transmission Operators, and Balancing Authorities to require requested data from providers.

We propose that the RC, TOP, and BA requestors identify important/critical information within their data request. The information that is identified as important/critical to the requestor would then need to be tied back to the four tasks identified in IRO-010 and TPO-003. Using this alternative, the requestor would preserve their ability to require data deemed necessary from the provider, but the information requested, which was not identified as important/critical by the requestor, would not be held to the same zero-deficit data retention compliance standards for the provider.

Likes 0

Dislikes 0

Response

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring

Answer

Document Name

Comment

No additional comments.

Likes 0

Dislikes 0

Response

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE agrees there could be efficiencies gained by clarifying certain actions in the standards. Texas RE continues to have the following concerns with the SAR, which include risk-based data specification, reliability-related tasks, and possible retirements. The SAR drafting team's approach is simply assuming these requirements will be handled by the data specification requirements. There are no obligations for what exactly needs to be in the data specification requirements. The Project 2014-03 drafting team stated several times that FERC has made it clear that the assumption cannot be made on something based on other requirements that dictate certain actions. This SAR appears to be assuming that actions will be taken on data based on a data specification in which there are no requirements. Texas RE has several additional concerns, including the statement regarding a zero-defect expectation, proposing risk-based data specification requirements, the four reliability-related tasks, and the requirements proposed for possible retirement.

Texas RE is unclear on how a risk-based approach would achieve the purpose of the standards in an effective and efficient manner. Texas RE is concerned that problems may not be identified if performance oversight is only triggered by significant events or unresolved data conflicts. In order for the system to be operated in a reliable manner, constant and consistent data must be provided. While Texas RE generally supports risk-based

compliance approaches, Texas RE believes that such approaches are best determined within the framework of the specific data specification itself rather than prescribed through the IRO-010 data specification standard itself.

Texas RE does not agree that there are only the four reliability-related tasks specified in the SAR. “Core BES reliability-related tasks” are defined in the SAR by only four tasks, all of them operational, and contained only in the eight Standards specified. Other reliability-related tasks do exist but do not fit in the four categories described in the SAR.

For example, modeling data dictates OPA, RTA, and Real-time monitoring results but is not listed. Based on the language provided, the SAR drafting team envisions that OPA, RTA, or Real-time monitoring will be performed and therefore the entity is “compliant” without ever having any obligation to ensure it receives quality inputs to provide quality output, which would help ensure reliability. This could lead to inconsistencies and diminished accountability for inadequate data specifications, especially for those that lack information necessary to support reliable operations.

The core reliability-related tasks do not include data provisions (EOP-005, IRO-017) because they would not be associated with the OPA or RTA within the IRO-010 and TOP-003 data specifications. As this data would impact reliability studies that occur after the Long-term Planning Horizon, but significantly before the next-day studies, it appears there is a gap in the Standards.

Texas RE does not agree that RTA and OPA need further clarification. Industry should be aware of what is needed regarding these tasks since there are NERC defined terms and ERO endorsed Implementation Guidance on RTA. A definition for Real-time monitoring could help in providing clarity on expectations.

Texas RE is concerned that the requirements being proposed for retirement have to do with conditions that are not part of the OPA and RTA as the data specifications requirements are intended.

For example, notification of changes to the capabilities of a Blackstart Resource affecting the ability to meet the Transmission Operator’s restoration plan may require a TOP to modify its restoration plan. This evaluation and modification would not be within the scope of the OPA or RTA, unless the SDT plans to include these tasks as part of its clarification the core BES reliability-related tasks.

Additionally, IRO-017-1 R3 requires provision of the Planning Assessment to the RC so the TP and PC can jointly develop solutions with its respective RC for identified issues or conflicts with planned outages in its Planning Assessment. As outages are scheduled and coordinated months if not years in advance, relying on entities to identify and resolve these issues or conflicts through the OPA and RTA is not practical.

Another example is that voltage control is not part of one of the core reliability-related tasks, which could lead to voltage collapse if it is not considered in the data specification.

Texas RE is concerned that entities may not include specific data points that are being proposed for removal in its data specification. This will lead to inconsistencies in implementation and could lower the bar for reliability if entities do not consider certain data points. The SAR drafting team should not assume that all entities will have the same reliability tasks and all entities will consider the same data specifications. Making the requirements general

in nature lowers the compliance requirements and increases the risk that data management will not be done in an effective manner to support reliable operations.

Likes 0

Dislikes 0

Response

Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3,5, Group Name DTE Energy - DTE Electric

Answer

Document Name

Comment

none at this time

Likes 0

Dislikes 0

Response

Lindsey Mannion - ReliabilityFirst - 10

Answer

Document Name

Comment

The RF SAR review team is not in favor of pursuing this project. However, under Detailed Description, the removal of "coordinate with pre-qualified organizations to" has resulted in the sentence no longer being grammatically correct. Were this SAR to move forward, we recommend the statement be revised to "develop Implementation Guidance and/or work with NERC staff to develop other ERO guidance..."

Likes 0

Dislikes 0

Response

Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1

Answer

Document Name

Comment

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

Response

Consideration of Comments

Project Name: 2021-06 Modifications to IRO-010 and TOP-003 | Standard Authorization Request (Second Posting)
Comment Period Start Date: 1/11/2022
Comment Period End Date: 2/9/2022

There were 33 sets of responses, including comments from approximately 122 different people from approximately 91 companies representing 10 of the Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the [project page](#).

If you feel that your comment has been overlooked, let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, contact Vice President of Engineering and Standards [Howard Gugel](#) (via email) or at (404) 446-9693.

Questions

1. [Do you agree with the redline modifications made to the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.](#)
2. [Provide any additional comments for the drafting team to consider, if desired.](#)

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|------------------------------|-----------------|------------|-------------|---|------------------------|----------------------------------|-------------------------|---------------------|
| BC Hydro and Power Authority | Adrian Andreoiu | 1,3,5 | WECC | BC Hydro | Hootan Jarollahi | BC Hydro and Power Authority | 3 | WECC |
| | | | | | Helen Hamilton Harding | BC Hydro and Power Authority | 5 | WECC |
| | | | | | Adrian Andreoiu | BC Hydro and Power Authority | 1 | WECC |
| Midcontinent ISO, Inc. | Bobbi Welch | 2 | MRO,RF,SERC | ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 SAR | Ali Miremadi | CAISO | 2 | WECC |
| | | | | | Dana Showalter | ERCOT | 2 | Texas RE |
| | | | | | Helen Lainis | IESO | 2 | NPCC |
| | | | | | Kathleen Goodman | ISO-NE | 2 | NPCC |
| | | | | | Bobbi Welch | MISO | 2 | RF |
| | | | | | Greg Campoli | NYISO | 2 | NPCC |
| | | | | | Michael Del Viscio | PJM | 2 | RF |
| | | | | | Charles Yeung | Southwest Power Pool, Inc. (RTO) | 2 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|----------------------|---------------|------------|---|------------------------------|-------------------|---|-------------------------|---------------------|
| ACES Power Marketing | Jodirah Green | 1,3,4,5,6 | MRO,NA - Not Applicable,RF,SERC,Texas RE,WECC | ACES Standard Collaborations | Bob Solomon | Hoosier Energy Rural Electric Cooperative, Inc. | 1 | SERC |
| | | | | | Kevin Lyons | Central Iowa Power Cooperative | 1 | MRO |
| | | | | | Bill Hutchison | Southern Illinois Power Cooperative | 1 | SERC |
| | | | | | Susan Sosbe | Wabash Valley Power Association | 3 | RF |
| | | | | | Jennifer Bray | Arizona Electric Power Cooperative, Inc. | 1 | WECC |
| | | | | | Scott Brame | NC Electric Membership Corporation | 3,4,5 | SERC |
| | | | | | Shari Heino | Brazos Electric Power Cooperative, Inc. | 5 | Texas RE |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------------------------|-----------------|-------------|--------|---------------------------|-------------------|---|-------------------------|---------------------|
| DTE Energy - Detroit Edison Company | Karie Barczak | 3,5 | | DTE Energy - DTE Electric | Adrian Raducea | DTE Energy - Detroit Edison Company | 5 | RF |
| | | | | | Patricia Ireland | DTE Energy - DTE Electric | 4 | RF |
| | | | | | Karie Barczak | DTE Energy - DTE Electric | 3 | RF |
| MRO | Kendra Buesgens | 1,2,3,4,5,6 | MRO | MRO NSRF | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Christopher Bills | City of Independence Power & Light | 3,5 | MRO |
| | | | | | Fred Meyer | Algonquin Power Co. | 3 | MRO |
| | | | | | Jamie Monette | Allete - Minnesota Power, Inc. | 1 | MRO |
| | | | | | Larry Heckert | Alliant Energy Corporation Services, Inc. | 4 | MRO |
| | | | | | Marc Gomez | Southwestern Power Administration | 1 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|-----------------------|-------------|-------------------|---------------------------------------|-------------------------|---------------------|
| | | | | | Matthew Harward | Southwest Power Pool, Inc. | 2 | MRO |
| | | | | | LaTroy Brumfield | American Transmission Company, LLC | 1 | MRO |
| | | | | | Bryan Sherrow | Kansas City Board Of Public Utilities | 1 | MRO |
| | | | | | Terry Harbour | MidAmerican Energy | 1,3 | MRO |
| | | | | | Jamison Cawley | Nebraska Public Power | 1,3,5 | MRO |
| | | | | | Seth Shoemaker | Muscatine Power & Water | 1,3,5,6 | MRO |
| | | | | | Michael Brytowski | Great River Energy | 1,3,5,6 | MRO |
| | | | | | David Heins | Omaha Public Power District | 1,3,5,6 | MRO |
| | | | | | George Brown | Acciona Energy North America | 5 | MRO |
| Duke Energy | | 1,3,5,6 | FRCC,RF,SERC,Texas RE | Duke Energy | Laura Lee | Duke Energy | 1 | SERC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--|----------------|------------|--------------------------------|------------------|-------------------|--|-------------------------|---------------------|
| | Kim Thomas | | | | Dale Goodwine | Duke Energy | 5 | SERC |
| | | | | | Greg Cecil | Duke Energy | 6 | RF |
| FirstEnergy - FirstEnergy Corporation | Mark Garza | 1,3,4,5,6 | | FE Voter | Julie Severino | FirstEnergy - FirstEnergy Corporation | 1 | RF |
| | | | | | Aaron Ghodooshim | FirstEnergy - FirstEnergy Corporation | 3 | RF |
| | | | | | Robert Loy | FirstEnergy - FirstEnergy Solutions | 5 | RF |
| | | | | | Tricia Bynum | FirstEnergy - FirstEnergy Corporation | 6 | RF |
| | | | | | Mark Garza | FirstEnergy-FirstEnergy | 4 | RF |
| Southern Company - Southern Company Services, Inc. | Pamela Frazier | 1,3,5,6 | MRO,NPCC,RF,SERC,Texas RE,WECC | Southern Company | Matt Carden | Southern Company - Southern Company Services, Inc. | 1 | SERC |
| | | | | | Joel Dembowski | Southern Company - Alabama | 3 | SERC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--------------------------------------|-----------|----------------------|--------|-----------------------------------|-------------------|--|-------------------------|---------------------|
| | | | | | | Power Company | | |
| | | | | | Ron Carlsen | Southern Company - Southern Company Generation | 6 | SERC |
| | | | | | James Howell | Southern Company - Southern Company Generation | 5 | SERC |
| Northeast Power Coordinating Council | Ruida Shu | 1,2,3,4,5,6,7,8,9,10 | NPCC | NPCC Regional Standards Committee | Gerry Dunbar | Northeast Power Coordinating Council | 10 | NPCC |
| | | | | | Randy MacDonald | New Brunswick Power | 2 | NPCC |
| | | | | | Glen Smith | Entergy Services | 4 | NPCC |
| | | | | | Alan Adamson | New York State Reliability Council | 7 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|--------------------|---|-------------------------|---------------------|
| | | | | | David Burke | Orange & Rockland Utilities | 3 | NPCC |
| | | | | | Helen Lainis | IESO | 2 | NPCC |
| | | | | | David Kiguel | Independent | 7 | NPCC |
| | | | | | Nick Kowalczyk | Orange and Rockland | 1 | NPCC |
| | | | | | Joel Charlebois | AESI - Acumen Engineered Solutions International Inc. | 5 | NPCC |
| | | | | | Mike Cooke | Ontario Power Generation, Inc. | 4 | NPCC |
| | | | | | Salvatore Spagnolo | New York Power Authority | 1 | NPCC |
| | | | | | Shivaz Chopra | New York Power Authority | 5 | NPCC |
| | | | | | Deidre Altobell | Con Ed - Consolidated Edison | 4 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|--|-------------------------|---------------------|
| | | | | | Dermot Smyth | Con Ed - Consolidated Edison Co. of New York | 1 | NPCC |
| | | | | | Peter Yost | Con Ed - Consolidated Edison Co. of New York | 3 | NPCC |
| | | | | | Cristhian Godoy | Con Ed - Consolidated Edison Co. of New York | 6 | NPCC |
| | | | | | Nurul Abser | NB Power Corporation | 1 | NPCC |
| | | | | | Randy MacDonald | NB Power Corporation | 2 | NPCC |
| | | | | | Michael Ridolfino | Central Hudson Gas and Electric | 1 | NPCC |
| | | | | | Vijay Puran | NYSPS | 6 | NPCC |
| | | | | | ALAN ADAMSON | New York State Reliability Council | 10 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|--|-------------------------|---------------------|
| | | | | | Sean Cavote | PSEG - Public Service Electric and Gas Co. | 1 | NPCC |
| | | | | | Brian Robinson | Utility Services | 5 | NPCC |
| | | | | | Quintin Lee | Eversource Energy | 1 | NPCC |
| | | | | | Jim Grant | NYISO | 2 | NPCC |
| | | | | | John Pearson | ISONE | 2 | NPCC |
| | | | | | Nicolas Turcotte | Hydro-Quebec TransEnergie | 1 | NPCC |
| | | | | | Chantal Mazza | Hydro-Quebec | 2 | NPCC |
| | | | | | Michele Tondalo | United Illuminating Co. | 1 | NPCC |
| | | | | | Paul Malozewski | Hydro One Networks, Inc. | 3 | NPCC |
| | | | | | Sean Bodkin | Dominion - Dominion Resources, Inc. | 6 | NPCC |
| | | | | | John Hastings | National Grid | 3 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|----------------------------------|-----------------|------------|-----------------|------------|-------------------|---------------------------|-------------------------|---------------------|
| | | | | | Michael Jones | National Grid USA | 1 | NPCC |
| Southwest Power Pool, Inc. (RTO) | Shannon Mickens | 2 | MRO,SPP RE,WECC | SPP RTO | Shannon Mickens | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Matt Harward | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Charles Cates | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Mason Favazza | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Melissa Rinehart | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Zack Sharp | Southwest Power Pool Inc. | 2 | MRO |
| | | | | | Brent Springfield | Southwest Power Pool Inc. | 2 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--|-----------------|------------|--------|------------------------|-------------------|---------------------------|-------------------------|---------------------|
| | | | | | Jim Williams | Southwest Power Pool Inc. | 2 | MRO |
| Western Electricity Coordinating Council | Steven Rueckert | 10 | | WECC Entity Monitoring | Steve Rueckert | WECC | 10 | WECC |
| | | | | | Phil O'Donnell | WECC | 10 | WECC |

1. Do you agree with the redline modifications made to the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.

Lindsey Mannion - ReliabilityFirst - 10

Answer

No

Document Name

Comment

While the redline modifications to the SAR do clarify that main intention of the proposed project is to address perceived excessive data retention requirements, the RF SAR review team still does not support implementation of the project. We therefore disagree with both the redline modifications and the previously posted SAR.

The SAR indicates that “as written the standards may create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period.” We note that the existing data retention period is 90 calendar days for both TOP-003-4 R5 and IRO-010-3 R3, and that under the present standards it would be unreasonable for any Compliance Enforcement Authority to expect retention of the full data set needed to meet the data specification for “an entire audit period.”

We also note that the applicable measures for these requirements list “attestations of receiving entities” as an example of evidence that an entity has satisfied a data specification, which provides entities the opportunity to demonstrate compliance without maintaining or providing records of the transmission of individual data points. The inclusion of third-party attestations in the measures of these requirements already allows entities to obtain the support of their TOP, BA, and/or RC to implement an exception-driven approach to demonstrating compliance.

For these reasons, we deem revisions to the existing requirements unnecessary.

Additionally, the SAR indicates that a secondary purpose is to evaluate other data exchange requirements for redundancy and possibly to remove redundant requirements (considering them rolled them into the TOP-003 and IRO-010 data specifications). We note that the existing VRF is Medium for IRO-010-3 R3 and TOP-003-4 R5, while some of the requirements referenced as potentially redundant under

Detailed Description have an existing VRF of High. We caution against considering rolling in stand-alone High VRF requirements into a requirement with an existing VRF of Medium, else the Violation Risk Factor for satisfying the obligations of the TOP-003 and IRO-010 data specifications will need to be increased to High.

Likes 0

Dislikes 0

Response

Thank you for your comments. While the SAR drafting team (DT) notes the commenter’s desire to not proceed with the SAR, there is other support expressed by stakeholders to proceed. The SAR DT notes the concerns on rolling in High Violation Risk Factor (VRF) requirements causing a new one. This will be submitted to the standard drafting team (SDT) to consider.

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer

No

Document Name

Comment

Reclamation observes that this project is based on proposed modifications to two standards that have not even become effective yet. Reclamation recommends the proposed modifications be incorporated into other proposed or pending standards development projects so as to reduce the amount of churn among standard versions. For example, the efforts proposed in the SAR could be combined with project 2021-07, 2021-02, 2021-01, and/or 2020-06.

Likes 0

Dislikes 0

Response

Thank you for your comments and perspective. This will be submitted to the SDT to consider.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

No

| | |
|--|----|
| Document Name | |
| Comment | |
| <p>Southern Company does not agree. The proposal to attempt to specify or determine the necessity of data that can be requested for reliability for all entities and all regions will not resolve the compliance issues the SAR is intending to address.</p> <p>Making this standard more prescriptive may create difficulties in the RC/TOP/BAs ability to quickly react to changing system conditions, which might require additional information from providers. This has the potential to create a reliability concern.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comments. The intent of the SAR is not to specify or determine the necessity of data that can be requested. The SAR explicitly mentions that creating a minimum list of items to include in a data specification is not desired. Further, the SAR states the intent is to not be overly prescriptive so that Registered Entities may continue, as under the current standards, to request and receive the data necessary to support the four tasks identified in the applicable standards.</p> | |
| <p>Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 SAR</p> | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>The ISO/RTO Council Standards Review Committee (IRC SRC) is concerned with the overlap between this SAR and the Cold Weather SAR, as both projects are seeking to modify IRO-010 and TOP-003 concurrently, which is a difficult process to manage. The IRC SRC encourages NERC to consider whether there may be other approaches to resolve the zero defect, confidentiality, and dispute resolution issues without changing the standards, obviating the need for this project. For example, establish technical rationale / compliance guidance for the zero defect and confidentiality issues or modify NERC Rules of Procedure to address the dispute resolution issue.</p> | |

If this project continues forward, the IRC SRC notes that it supports the Standards Efficiency Review (SER) concepts and this project’s goal to remove redundancy; but wants to ensure that the Responsible Entities (RC, BA, TOP) have the ability to request and receive any information the Responsible Entity deems necessary to perform its responsibilities. The IRC SRC asks that the drafting team be mindful that compliance obligations should not prohibit or restrict Responsible Entities from retaining or requiring additional telemetry that enhances real time monitoring capabilities (e.g., PMU, adding additional SCADA measurements), given new and more challenging technologies (e.g., inverter-based resources, distributed generation resources, co-located generation/load) are being integrated on the electric system. The IRC SRC would like to encourage the Standard Drafting Team to set high performance expectations to encourage entities to take all possible actions to promote availability of data and to incent the use of reliable technologies. For example, telemetry availability may be percentage based (e.g., 98 to 99% on a rolling average considering forced or other unplanned outages). Finally, the IRC SRC reiterates its reservations with modifying definitions that affect Real-time monitoring and Balancing Authority analysis functions due to the unintentional impact on other standards and recommends that the drafting team avoid definition changes if possible and proceed with caution if that path is deemed necessary.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SAR DT will pass on the comment to the NERC staff however, there appears to be support for the SAR as drafted with only minor clarifications needed. The SAR is written to support that the RC, BA, and TOP have the ability to include in its data specification what is needed to support the specific reliability tasks needed. Currently the SAR does not include scope to expand beyond those specific reliability tasks listed, however nothing precludes other specifications or agreements for data provision to be made outside of these standards and this SAR does not seek to limit or preclude such abilities either. If the desire is to expand beyond the four cited reliability tasks (OPA, RTA, Real time monitoring and BA analysis), then the SAR scope would have to be expanded or a future SAR submitted to accomplish that. The SAR DT notes the concern on definitions and will pass on to the SDT, but the SAR will at a minimum maintain flexibility for the SDT to assess the need for any changes IF such changes were warranted and supported. The SAR DT will also pass on the comment for promoting robust availability.

Jennifer Malon - Black Hills Corporation - 1,3,5,6 - MRO,WECC

Answer

Yes

Document Name

Comment

Black Hills Corporation supports a risk-based approach for documentation of triggered events and unresolved data conflicts. This would reduce administrative burden while maintaining focus on risk areas.

Likes 0

Dislikes 0

Response

Thank you for your comments and perspective. This will be submitted to the SDT to consider.

Marcus Bortman - APS - Arizona Public Service Co. - 1,3,5,6

Answer

Yes

Document Name

Comment

AZPS agrees with the redline modifications made to the SAR.

Likes 0

Dislikes 0

Response

Thank you for your support.

Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy

Answer

Yes

Document Name

Comment

Ensure attestations continue as a method of demonstrating compliance.

Likes 0

Dislikes 0

Response

Thank you for your comment. This will be submitted to the SDT to consider.

Thomas Foltz - AEP - 3,5,6

Answer

Yes

Document Name

Comment

AEP agrees with the purpose and perceived need as expressed in the proposed SAR, and sees value in pursuing it. The clarity that the SAR seeks is definitely needed and would be very beneficial. Having said that, the means by which that clarity is obtained, as well as the content of that clarity, are both important issues that industry will need to work on effectively in order to achieve a successful outcome and meaningful change to these standards. In addition, AEP encourages the members of the future Standards Drafting Team to ensure that their eventual revisions are not written in such a way that they are unduly burdensome, especially for larger entities having voluminous data points.

In order for the TOP to perform the necessary real time assessments for the entire BES, they may require data points at lower voltages which are not needed by the RC and thus not provided. The RTO, serving as the RC, should continue to define what data points they need for their own obligations (as per IRO-010), however AEP recommends that changes be made to TOP-003 to allow the TOP to define what data they need from the RC, including data that might not be required or needed by the RC for their own purposes. Examples of such data include DER data, detailed renewable energy models, and neighboring TOP sub-transmission data that the RTO may not include in their models. All of this type of external DP/GOP/TOP data should be provided by the RTO. Doing this would eliminate the need to create and maintain multiple data communication paths.

With respect to the concerns expressed above, does the SDT believe that SAR’s current language would allow the future SDT to adequately address AEP’s concerns where the RTO/RC accepts data points from “Entity B” that the RC/RTO may not need to use, but is

needed by another “Entity A?” The RTO/RC providing this data routinely to Entity A would avoid the need for Entity A to create and maintain multiple data communication paths w/ Entity B. Further complicating matters, Entity B may not even be a NERC-registered Functional Entity. As currently written, the RC has no existing obligations within TOP-003 to provide such data. With the RTO providing the TOP the necessary data to meet TOP-003 data specifications for Real-time monitoring and RTA/OPA, the revised standards should provide clarity to each applicable entity (RTO/TOP) on which entities need to receive a data specification document from the applicable entity. We believe it would positively impact reliability and data integrity if the RTO were themselves responsible to provide real time data for all TOPs within their footprint, regardless of whether or not the RTO themselves need that data. For example, if Entity A needs data from Entity B, both residing within RTO’s footprint, the RTO would then provide that data to Entity A. This would prioritize data sharing and ensure that the necessary data channels are properly functioning as needed, and thus benefiting everyone involved. We encourage the future Standards Drafting Team to pursue this as they develop their revisions to the standards.

Documented specification for the data is shared between TOPs/GOPs/DPs/etc., even though a majority, if not all, of the data is received via the RTO. To reduce the administrative burden, the documented specifications for the data, as covered by TOP-003 R1, should only be communicated to the RTOs and any entities serving as the RC who are directly supplying the TOP data. Other data requirements not covered by NERC standards would be specified in other data specification or non-NERC operating agreements. **AEP believes direct data connections (i.e. not through the RTO) should be avoided if at all possible, as managing these types of special links are overly burdensome, complicate data sharing between entities, and increases the risk of non-compliance.** In addition, such bi-lateral data links to individual companies may be more susceptible to data reliability issues and could have potential compliance ramifications, with TOP-001 as just one example. Additional clarity also needs to be addressed in the standards regarding the details required in the specification documents. Some entities keep the data specification documents at a very high level (which is preferred) while other entities specify individual data point names and detailed requirements in their data specification documents (not preferred).

| | |
|---|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments and perspective. This will be submitted to the SDT to consider. | |
| Carl Pineault - Hydro-Qu?bec Production - 1,5 | |
| Answer | Yes |
| Document Name | |

Comment

*We reaffirm that we consider that the data specification should be a **standalone document**. The data specification requirements (TOP-003-4 R1 and IRO-010-3 R1) specify clearly (in our view) that all compliance obligations must be within the data specification. Yet, a number of data specifications in our industry have references to external documents in the data specification and entities have to then find the obligations in those external documents. Sometimes the external documents have further references to other documents, requiring entities find the obligations across multiple documents. Clearly, some entities who draft data specifications therefore do not believe the data specification is standalone and that obligations can be outside the data specification We believe that having obligations spread across documents through a web of references expands and blurs the compliance obligations unnecessarily. In our view, the SDT should clarify the language to make it clear that the data specification should be standalone.*

Likes 0

Dislikes 0

Response

Thank you for your comment. Based on other comments and team discussions, the SAR DT believes flexibility in the data specification will allow a requestor to meet its obligations under its governing documents, and is not so great a burden on industry. The SAR DT has included dispute resolution in the scope, which may allow entities with conflicts regarding data exchanges to gain clarity in communication with the other parties.

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring

Answer

Yes

Document Name

Comment

WECC agrees with the redlines to the modifies SAR and agrees with the scope of the SAR.

Likes 0

Dislikes 0

Response

| | |
|---|-----|
| Thank you for the support and the comment. | |
| Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee | |
| Answer | Yes |
| Document Name | |
| Comment | |
| We agree with the project, however, please consider updating the SAR to ensure that references to standards are the most recent NERC Board Adopted and/or FERC approved versions of the standards . For example, IRO-010-4 and TOP-003-5 become effective on April 1, 2023, and were part of project 2019-06 Cold Weather. FAC-014-3, IRO-008-3, and TOP-001-6 were part of project 2015-09 Establish and Communicate System Operating Limits and were NERC Board Adopted on June 11, 2021, and were filed with FERC on June 17, 2021. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments and perspective. This will be submitted to the SDT to consider. | |
| Mark Gray – Edison Electric Institute – NA – Not Applicable – NA – Not Applicable | |
| Answer | Yes |
| Document Name | |
| Comment | |
| EEI supports the current draft of the proposed SAR for Project 2021-06. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |

| | |
|--|-----|
| Dennis Chastain – Tennessee Valley Authority – 1,3,5,6 – SERC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| We support the revised SAR’s stated purpose to “simplify administrative burdens” and “limit unnecessary data retention requirements” on the Registered Entities that are required to respond to the IRO-010-3 (RC) and TOP-003-4 (TOP and BA) data specifications. We also support the secondary purpose to “evaluate removing other data exchange requirements dispersed in other standards”. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support and the comment. | |
| Kendra Buesgens – MRO – 1,2,3,4,5,6 – MRO, Group Name MRO NSRF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The MRO NSRF appreciates the SAR SDT’s additions and considerations of its comments as provided in August of 2021. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support and the comment. | |
| Andy Fuhrman – Minnkota Power Cooperative Inc. – 1,5 – MRO | |
| Answer | Yes |

| | |
|--|-----|
| Document Name | |
| Comment | |
| MPC supports the MRO NERC Standards Review Forum comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support and the comment. | |
| Daniel Gacek – Exelon – 1,3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Exelon supports the current draft of the proposed SAR. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support and the comment. | |
| Kimberly Turco – Constellation – 5,6 | |
| Answer | Yes |
| Document Name | |
| Comment | |

Constellation supports the current draft of the proposed SAR.

Likes 0

Dislikes 0

Response

Thank you for the support and the comment.

Alison Mackellar – Constellation – 5,6

Answer

Yes

Document Name

Comment

Constellation supports the current draft of the proposed SAR

Likes 0

Dislikes 0

Response

Thank you for the support and the comment.

Mike Marshall – IDACORP – Idaho Power Company – 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

| | |
|--|-----|
| Response | |
| Thank you for the support. | |
| Jennifer Bray – Arizona Electric Power Cooperative, Inc. – 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |
| Adrian Andreoiu – BC Hydro and Power Authority – 1,3,5, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |
| Karie Barczak – DTE Energy – Detroit Edison Company – 3,5, Group Name DTE Energy – DTE Electric | |
| Answer | Yes |
| Document Name | |

| Comment | |
|--|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |
| Rachel Coyne – Texas Reliability Entity, Inc. – 10 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |
| Tony Skourtas – Los Angeles Department of Water and Power – 1,3,5,6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|-----|
| Thank you for the support. | |
| Nazra Gladu – Manitoba Hydro – 1,3,5,6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support. | |
| Andrea Jessup – Bonneville Power Administration – 1,3,5,6 – WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support. | |
| Alan Kloster – Evergy – 1,3,5,6 – MRO | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|--|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |
| Mark Garza – FirstEnergy – FirstEnergy Corporation – 1,3,4,5,6, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |
| Scott Langston – Tallahassee Electric (City of Tallahassee, FL) – 1,3,5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |

| | |
|--|-----|
| Kenisha Webber – Entergy – NA – Not Applicable – SERC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |
| Jodirah Green – ACES Power Marketing – 1,3,4,5,6 – MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support. | |
| Shannon Mickens – Southwest Power Pool, Inc. (RTO) – 2 – MRO,WECC, Group Name SPP RTO | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|--|---|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support. | |
| Darcy O’Connell – California ISO – 2 | |
| Answer | |
| Document Name | |
| Comment | |
| CAISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support and the comment. | |

2. Provide any additional comments for the drafting team to consider, if desired.

Shannon Mickens – Southwest Power Pool, Inc. (RTO) – 2 – MRO,WECC, Group Name SPP RTO

Answer

Document Name

Comment

SPP recommends that the drafting team take into consideration coordinating with the NERC SPIDERWG and their efforts in reference to their MOD-032 SAR (2022-02). We understand that MOD-032 doesn't meet the scope of this project. However, at this point, our concern is that the both standards are used in the process for data acquisition and doesn't have the foundational language to enable an entity to obtain the pertinent data needed to perform accurate studies (for example- planning and/or ops modeling data) to maintain the reliability of the grid. From our perspective, there is an opportunity for both drafting teams to work together and learn about the needs of both the requesting and sharing entities perspective in reference to data acquisition as well as ensuring the appropriate data exchange is accomplished with the common goal of maintaining the reliability of the grid.

Furthermore, SPP recommends that the drafting team take into consideration delaying the project until the 2021-07 Extreme Cold Weather Grid Operations, Preparedness and Coordination project is completed. Both projects touch the same standards. Depending on the timing of the projects and filings, two projects changing the same standards have the potential to conflict with or fail to support what the other does.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT will look to coordinate with the proper person, group, or team. The SAR DT will pass the recommendation of delaying the process to NERC for consideration.

| | |
|---|--|
| | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations | |
| Answer | |
| Document Name | |
| Comment | |
| Thank you for the opportunity to provide comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support and comment. | |
| Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 SAR | |
| Answer | |
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support and comment. | |

| | |
|---|--|
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | |
| Document Name | |
| Comment | |
| The MRO NSRF has no additional comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support and comment. | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |
| Answer | |
| Document Name | |
| Comment | |
| <p>The SAR is acceptably written to “simplify the administrative burdens” and “eliminate redundant requirements found in other NERC reliability standards.” The drafting team will need to be cautious as it progresses through the revision process so that the two standards (IRO-010 and TOP-003) are not made more complicated and burdensome. The reliability information necessary to plan, monitor, assess, and operate the Bulk Power System is vital to the RC, TOP, and BA. With the intent to enhance IRO-010 and TOP-003, the standard drafting team needs to guard against burdening the registered entities with complicated data clarifications and additional administrative requirements.</p> <p>Should the “Date Submitted” row near the top of the SAR also be revised to reflect the date the updated SAR Requester submitted the proposed revisions?</p> | |

“Detailed Description” section - some of the standards noted in parenthesis with the four bulleted tasks listed on page 4 of the SAR have been superseded (TOP-001-4 by TOP-001-5; IRO-002-5 by IRO-002-7; BAL-003-1.1 by BAL-003-2).

With regard to other standards to be considered, we suggest the drafting team consider what use, if any, the RC, BA and TOP have for generator Facility Ratings (reference FAC-008). Under Project 2018-03 (Standards Efficiency Review Retirements), FAC-008-3, Requirement R7, was retired. In NERC’s petition to FERC requesting approval of FAC-008-5 (dated 2/19/2021), MOD-032-1, IRO-010-2, and TOP-003-3 were specifically cited as justification for retiring FAC-008-3, Requirement R7. However, neither MOD-032-1, IRO-010-3 or TOP-003-4 use the term “Facility Rating” to describe an item of GO/GOP data needed by the PC/TP (MOD-032), RC (IRO-010), or BA/TOP (TOP-003). We recommend the Project 2021-06 drafting team coordinate with the Project 2021-08 (Modifications to FAC-008) drafting team to consider and clarify what a generator Facility Rating is and identify which operational entities need this information for “safe, secure and reliable operations”.

Likes 0

Dislikes 0

Response

The DT will consider multiple standards and the data specification within those when determining the language revision to the SAR and standard language.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Document Name

Comment

EEI suggests that the SAR be updated to reflect that IRO-010-4 and TOP-003-5 were both approved by the NERC BOT (June 11, 2021) and FERC on August 24, 2021. (See Project 2019-06 Cold Weather)

EEI additionally suggests that the current list of Reliability Standards identified in the Detailed Description be modified to include changes made under other projects and currently submitted for FERC approval. Note the following:

- BAL-005-1 R2

- EOP-005-3 R13
- EOP-005-3 R14.2
- FAC-014-2 R5 – *EI suggest evaluating the modifications made to FAC-014-3 (Submitted to FERC for approval on 6/28/2021).*
- *FAC-014-2 R6.1. - Suggest evaluating changes made to FAC-014-3 (Submitted to FERC for approval on 6/28/2021). Requirement R6.1 no longer exists in FAC-014-2.*
- *IRO-008-2 R5 - Suggest evaluating changes made to IRO-008-2 (Submitted to FERC for approval on 6/28/2021)*
- *IRO-008-2 R6 - Suggest evaluating changes made to IRO-008-2 (Submitted to FERC for approval on 6/28/2021)*
- IRO-017-1 R3
- *TOP-001-5 R9 - Suggest replacing with TOP-001-6, while the requirement was not changed the SDT should be reviewing the latest version submitted to FERC for approval. (Submitted to FERC for approval on 6/28/2021)*
- *TOP-001-5 R15 - Suggest replacing with TOP-001-6, while the requirement was not changed the SDT should be reviewing the latest version submitted to FERC for approval. (Submitted to FERC for approval on 6/28/2021)*
- VAR-002-4.1 R3
- VAR-002-4.1 R4

Likes 0

Dislikes 0

Response

Thank you for the attention to detail in the SAR. The team will make the appropriate modifications to the SAR.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

| Response | |
|---|--|
| Thank you for your participation. | |
| Alan Kloster - Eergy - 1,3,5,6 - MRO | |
| Answer | |
| Document Name | |
| Comment | |
| Eergy supports and incorporates by reference Edison Electric Institute's (EEI) response to question 2. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| See response to EEI. | |
| Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Southern Company proposes an alternative means of reducing the administrative burden and mitigating the zero-deficit compliance expectations of data retention that also preserves the language for Reliability Coordinators, Transmission Operators, and Balancing Authorities to require requested data from providers.</p> <p>We propose that the RC, TOP, and BA requestors identify important/critical information within their data request. The information that is identified as important/critical to the requestor would then need to be tied back to the four tasks identified in IRO-010 and TPO-003. Using this alternative, the requestor would preserve their ability to require data deemed necessary from the provider, but the</p> | |

information requested, which was not identified as important/critical by the requestor, would not be held to the same zero-deficit data retention compliance standards for the provider.

Likes 0

Dislikes 0

Response

Thank you for your comment. This will be forwarded to the SDT to consider in drafting standards that meet the intent of the SAR.

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring

Answer

Document Name

Comment

No additional comments.

Likes 0

Dislikes 0

Response

Thank you for your participation.

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer

Document Name

Comment

None.

Likes 0

| | |
|---|---|
| Dislikes | 0 |
| Response | |
| Thank you for your participation. | |
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Texas RE agrees there could be efficiencies gained by clarifying certain actions in the standards. Texas RE continues to have the following concerns with the SAR, which include risk-based data specification, reliability-related tasks, and possible retirements. The SAR drafting team’s approach is simply assuming these requirements will be handled by the data specification requirements. There are no obligations for what exactly needs to be in the data specification requirements. The Project 2014-03 drafting team stated several times that FERC has made it clear that the assumption cannot be made on something based on other requirements that dictate certain actions. This SAR appears to be assuming that actions will be taken on data based on a data specification in which there are no requirements. Texas RE has several additional concerns, including the statement regarding a zero-defect expectation, proposing risk-based data specification requirements, the four reliability-related tasks, and the requirements proposed for possible retirement.</p> <p>Texas RE is unclear on how a risk-based approach would achieve the purpose of the standards in an effective and efficient manner. Texas RE is concerned that problems may not be identified if performance oversight is only triggered by significant events or unresolved data conflicts. In order for the system to be operated in a reliable manner, constant and consistent data must be provided. While Texas RE generally supports risk-based compliance approaches, Texas RE believes that such approaches are best determined within the framework of the specific data specification itself rather than prescribed through the IRO-010 data specification standard itself.</p> <p>Texas RE does not agree that there are only the four reliability-related tasks specified in the SAR. “Core BES reliability-related tasks” are defined in the SAR by only four tasks, all of them operational, and contained only in the eight Standards specified. Other reliability-related tasks do exist but do not fit in the four categories described in the SAR.</p> <p>For example, modeling data dictates OPA, RTA, and Real-time monitoring results but is not listed. Based on the language provided, the SAR drafting team envisions that OPA, RTA, or Real-time monitoring will be performed and therefore the entity is “compliant” without ever having any obligation to ensure it receives quality inputs to provide quality output, which would help ensure reliability. This could</p> | |

lead to inconsistencies and diminished accountability for inadequate data specifications, especially for those that lack information necessary to support reliable operations.

The core reliability-related tasks do not include data provisions (EOP-005, IRO-017) because they would not be associated with the OPA or RTA within the IRO-010 and TOP-003 data specifications. As this data would impact reliability studies that occur after the Long-term Planning Horizon, but significantly before the next-day studies, it appears there is a gap in the Standards.

Texas RE does not agree that RTA and OPA need further clarification. Industry should be aware of what is needed regarding these tasks since there are NERC defined terms and ERO endorsed Implementation Guidance on RTA. A definition for Real-time monitoring could help in providing clarity on expectations.

Texas RE is concerned that the requirements being proposed for retirement have to do with conditions that are not part of the OPA and RTA as the data specifications requirements are intended.

For example, notification of changes to the capabilities of a Blackstart Resource affecting the ability to meet the Transmission Operator's restoration plan may require a TOP to modify its restoration plan. This evaluation and modification would not be within the scope of the OPA or RTA, unless the SDT plans to include these tasks as part of its clarification the core BES reliability-related tasks.

Additionally, IRO-017-1 R3 requires provision of the Planning Assessment to the RC so the TP and PC can jointly develop solutions with its respective RC for identified issues or conflicts with planned outages in its Planning Assessment. As outages are scheduled and coordinated months if not years in advance, relying on entities to identify and resolve these issues or conflicts through the OPA and RTA is not practical.

Another example is that voltage control is not part of one of the core reliability-related tasks, which could lead to voltage collapse if it is not consider in the data specification.

Texas RE is concerned that entities may not include specific data points that are being proposed for removal in its data specification. This will lead to inconsistencies in implementation and could lower the bar for reliability if entities do not consider certain data points. The SAR drafting team should not assume that all entities will have the same reliability tasks and all entities will consider the same data specifications. Making the requirements general in nature lowers the compliance requirements and increases the risk that data management will not be done in an effective manner to support reliable operations.

Likes 0

| | |
|---|---|
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comment. The SAR DT recognizes that zero-defect expectations may not be an issue within Texas RE; however, there are comments from entities in other RE footprints that have expressed the concern, for which the SAR is intending to address. Regarding Texas RE’s other concerns regarding risk-based requirements, the four reliability-related tasks and requirements for retirement, the SAR DT offers the following clarifications/responses:</p> | |
| <ol style="list-style-type: none"> 1. The DT has revised the SAR to remove language that appears to pre-determine what risk-based approach, if any, will be utilized by the SDT. 2. The DT agrees there are more reliability-related tasks than identified in the SAR; however, this SAR only deals with the four identified in the subject IRO and TOP standards. The DT has made minor modifications to the SAR to clarify which reliability-related tasks are the focus of the SAR. The current standards do not have a requirement that obligates the entity performing the OPA, RTA, or Real-time monitoring to ensure it received quality inputs and the scope of the SAR is not intended to address that issue. With regards to definitions, the SAR DT will pass your recommendation regarding definitions into the SDT. 3. The SAR DT has revised the SAR to clarify that the intent is to not retire requirements that are necessary for other studies or actions related to other reliability-related tasks that are not included in the subject IRO and TOP standards. The SDT should take great care to only retire requirements that are truly redundant and captured under the umbrella of the subject ITO and TOP standards. If needed for other requirements, e.g., MOD-32 and TPL planning then the requirements would not be viewed as redundant. Additionally, The SAR is not proposing to remove or retire any specific standards; rather, the SAR DT recommends the SDT simply review other standards for redundancies while leaving necessary requirements in place. The SAR DT has not made any assumptions that all entities have the same reliability tasks nor that all have the same data specifications. There is no intent stated in the SAR to make the requirements in the subject IRO and TOP standards more generalized than they already are. | |
| Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy | |
| Answer | |
| Document Name | |
| Comment | |

| | |
|---|--|
| None. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your participation. | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3,5, Group Name DTE Energy - DTE Electric | |
| Answer | |
| Document Name | |
| Comment | |
| none at this time | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your participation. | |
| Lindsey Mannion - ReliabilityFirst - 10 | |
| Answer | |
| Document Name | |
| Comment | |
| The RF SAR review team is not in favor of pursuing this project. However, under Detailed Description, the removal of "coordinate with pre-qualified organizations to" has resulted in the sentence no longer being grammatically correct. Were this SAR to move forward, we | |

recommend the statement be revised to "develop Implementation Guidance and/or work with NERC staff to develop other ERO guidance..."S

Likes 0

Dislikes 0

Response

Thank you for your comment. The SAR has been updated.

Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1

Answer

Document Name

Comment

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

Response

Thank you for your comment.

End of Report

Standard Authorization Request (SAR)

Complete and submit this form, with attachment(s) to the [NERC Help Desk](#). Upon entering the Captcha, please type in your contact information, and attach the SAR to your ticket. Once submitted, you will receive a confirmation number which you can use to track your request.

The North American Electric Reliability Corporation (NERC) welcomes suggestions to improve the reliability of the bulk power system through improved Reliability Standards.

| Requested information | | | |
|--|---|--------|---|
| SAR Title: | Operational Data Exchange Simplification | | |
| Date Submitted: | June 23, 2020(Revised on March 16, 2022) | | |
| SAR Requester | | | |
| Name: | Standards Efficiency Review Phase 2 Team (Michael Cruz-Montes) (Revised by Project 2021-06 SAR Drafting Team) | | |
| Organization: | CenterPoint Energy | | |
| Telephone: | 713-207-2132 | Email: | michael.cruz-montes@centerpointenergy.com |
| SAR Type (Check as many as apply) | | | |
| <input type="checkbox"/> New Standard | <input type="checkbox"/> Imminent Action/ Confidential Issue (SPM Section 10) | | |
| <input checked="" type="checkbox"/> Revision to Existing Standard | <input type="checkbox"/> Variance development or revision | | |
| <input checked="" type="checkbox"/> Add, Modify or Retire a Glossary Term | <input checked="" type="checkbox"/> Other (Please specify) | | |
| <input checked="" type="checkbox"/> Withdraw/retire an Existing Standard | | | |
| Justification for this proposed standard development project (Check all that apply to help NERC prioritize development) | | | |
| <input type="checkbox"/> Regulatory Initiation | <input type="checkbox"/> NERC Standing Committee Identified | | |
| <input type="checkbox"/> Emerging Risk (Reliability Issues Steering Committee) Identified | <input type="checkbox"/> Enhanced Periodic Review Initiated | | |
| <input type="checkbox"/> Reliability Standard Development Plan | <input checked="" type="checkbox"/> Industry Stakeholder Identified | | |
| Industry Need (What Bulk Electric System (BES) reliability benefit does the proposed project provide?): | | | |
| The proposed project will enhance the effective and efficient administration of operational data exchanges between Responsible Entities essential for safe, secure and reliable operations. | | | |
| Purpose or Goal (How does this proposed project provide the reliability-related benefit described above?): | | | |
| The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IR0-010-4 and TOP-003-5 standards and limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency. As written the standards may create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, | | | |

Requested information

including excessive data retention. If instead a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

Therefore, the industry would benefit from continuing the efforts of Project 2014-03 and further revising IRO-010-4 and TOP-003-5 to enhance the “data specification” approach to reduce the administrative burdens of excessive data retention, while ensuring Registered Entities with operational responsibilities continue, as under the current standards, to request and receive the data necessary to support the four tasks identified in IRO-010-4 and TOP-003-5 (and described in the Detailed Description section below), while protecting public disclosure of commercially sensitive information and providing a dispute resolution process . To preserve the “data specification” concept, flexibility for differences in operational environments and emerging technology must be maintained. Therefore, creating a minimum list of items to include in a data specification is not desired. However, more clarity regarding the scope of the four tasks identified in IRO-010-4 and TOP-003-5 would be beneficial and is desired. The scope of the data specification would then just reflect the information necessary to cover the scope of the applicable tasks identified in IRO-010-4 or TOP-003-5 for the individual Registered Entity. The SER Phase 2 team received some feedback from industry participants who believe the scope of a data specification would only contain routine real time operating data typically provided systematically from field devices via SCADA/ICCP. Therefore, it is also necessary to clarify for industry if it should contain other data/information and methods of transfer such as phone, instant messaging, internet-based systems, etc.

A secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-4 and TOP-003-5 the ability to request and receive any information it needs from other Registered Entities to perform those tasks. The intent of the project is not to do away with specific requirements in other Reliability Standards under the assumption that the same data will be requested per a data exchange under IRO-010-4 and TOP-003-5; and the Standard Drafting Team should evaluate any potential reliability risk incurred by removing a perceived redundant requirement prior to recommending changes to requirements in other Reliability Standards.

Project Scope (Define the parameters of the proposed project):

The scope of the proposed project is to simplify the administrative burden with IRO-010-4, TOP-003-5 by developing risk-based compliance expectations and clarifying the four tasks identified in IRO-010-4 and TOP-003-5. The proposed project may require revisions to IRO-010-4, TOP-003-5 and associated definitions (especially Real-time monitoring and Balancing Authority analysis functions) as necessary to mitigate expectations of zero-defect compliance (e.g., setting thresholds to address telemetry availability), include provisions for dispute resolution, negotiating data exchanges where entities disagree on the necessity of data for reliability, and address confidentiality concerns. The proposed

Requested information

project will need to utilize any available industry resource necessary to maintain flexibility for various operational environments and technology (i.e., SCADA/ICCP, phone, instant messaging, internet-based systems, etc.). The project may also require development of Implementation Guidance or other ERO guidance to simplify the administrative burden.

The proposed project may also require revisions to other standards as necessary to remove redundant data specification obligations contained in other Reliability Standards that are associated with the four reliability tasks identified in the Detailed Description below. The scope of the project should also include coordination with existing projects that have operational data exchange within their scope.

If necessary, the proposed project may also require revisions to address data and information exchanges and obligations between provider and requester that are facilitated through a third-party intermediary.

Detailed Description (Describe the proposed deliverable(s) with sufficient detail for a drafting team to execute the project. If you propose a new or substantially revised Reliability Standard or definition, provide: (1) a technical justification¹ which includes a discussion of the reliability-related benefits of developing a new or revised Reliability Standard or definition, and (2) a technical foundation document (e.g., research paper) to guide development of the Standard or definition).

The project may require revisions to IRO-010-4, TOP-003-5 and associated definitions in the NERC Glossary (especially Real-time monitoring and Balancing Authority analysis functions) to clarify expectations for the “data specification” and associated tasks identified in IRO-010-4 and TOP-003-5. The revisions should continue to allow each Registered Entity with operational responsibilities to perform the tasks identified in IRO-010-4 and TOP-003-5 the ability to request and receive the information it needs to perform those tasks, while protecting public disclosure of commercially sensitive information and providing a dispute resolution process for conflicts between entities related to necessary data exchanges. The four tasks identified in IRO-010-4 and TOP-003-5 and associated standards are listed below.

- Operational Planning Analysis (IRO-008-2 and TOP-002-4)
- Real-time Assessments (IRO-008-2 and TOP-001-4)
- Real-time monitoring (IRO-002-5 and TOP-001-4)
- Balancing Authority analysis functions (BAL-001-2, BAL-002-3, BAL-003-1.1 and BAL-005-1)

This may necessitate revisions to the standards included above and any other standard or definition identified by the drafting team during the project as necessary to achieve the purpose of this project.

¹ The NERC Rules of Procedure require a technical justification for new or substantially revised Reliability Standards. Please attach pertinent information to this form before submittal to NERC.

Requested information

The drafting team should also develop Implementation Guidance and/or work with NERC staff to develop other ERO guidance to simplify the administrative burden as needed.

Once those activities are clarified, the drafting team should also evaluate and revise, if necessary, potentially redundant operational data exchange requirements dispersed in other standards including, but not limited to, the following:

- BAL-005-1 R2
- EOP-005-3 R13
- EOP-005-3 R14.2
- FAC-014-3 R5
- FAC-014-3 R6.1.
- IRO-008-3 R5
- IRO-008-3 R6
- IRO-017-1 R3
- TOP-001-6 R9
- TOP-001-6 R15
- VAR-002-4.1 R3
- VAR-002-4.1 R4

The Standard Drafting Team should seek to identify opportunities to evaluate and revise redundant requirements; however, the Standard Drafting Team should not revise requirements that are not directly related to the four reliability tasks identified above. The evaluation at a minimum should consider the following questions:

- Is the purpose of the activity currently within the scope of one or more of the tasks identified in IRO-010-4 and TOP-003-5? If so, then consider revising due to redundancy.
- If minor modifications were made to IRO-010-4, TOP-003-5 and/or associated definitions (especially Real-time monitoring and Balancing Authority analysis functions), then would the activity be within the scope of those standards? If so, then consider revising due to redundancy.

The drafting team should reference precedence from past projects to support this effort, including background materials developed during Project 2014-03 that describe the “data specification” concept including the petition to the FERC and the [Project 2014-03 Mapping Document](#).

Cost Impact Assessment, if known (Provide a paragraph describing the potential cost impacts associated with the proposed project):

unknown

Please describe any unique characteristics of the BES facilities that may be impacted by this proposed standard development project (e.g., Dispersed Generation Resources):

N/A

To assist the NERC Standards Committee in appointing a drafting team with the appropriate members, please indicate to which Functional Entities the proposed standard(s) should apply (e.g., Transmission

| Requested information | |
|------------------------------|---|
| | Operator, Reliability Coordinator, etc. See the most recent version of the NERC Functional Model for definitions): |
| | All NERC Functional Entities are potentially impacted by the scope of this SAR. The recommendations are both technical and administrative in nature but meant to address inefficiencies within requirements for data collection. Therefore, the drafting team should consist of members who are familiar with both aspects. |
| | Do you know of any consensus building activities ² in connection with this SAR? If so, please provide any recommendations or findings resulting from the consensus building activity. |
| | The SER Phase 2 team hosted an industry webinar on February 22, 2019 presenting six efficiency concepts, including consolidating and simplifying information and data requirements. The presentation was followed up by an industry survey to assess support for the concepts. This concept received the second highest support from industry. In addition, an informal survey was conducted on the content of this SAR to assess industry support. The feedback from industry and SER Phase 2 team responses are located on the Standards Efficiency Review page . |
| | Are there any related standards or SARs that should be assessed for impact as a result of this proposed project? If so, which standard(s) or project number(s)? |
| | The Standard Drafting team should coordinate with existing projects that have operational data exchange within their scope. |
| | Are there alternatives (e.g., guidelines, white paper, alerts, etc.) that have been considered or could meet the objectives? If so, please list the alternatives. |
| | Yes, Implementation Guidance and/or other ERO guidance could assist with simplifying the administrative burden for the interim period while this project is being administered. |

| Reliability Principles | |
|-------------------------------------|---|
| | Does this proposed standard development project support at least one of the following Reliability Principles (Reliability Interface Principles)? Please check all those that apply. |
| <input type="checkbox"/> | 1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards. |
| <input type="checkbox"/> | 2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand. |
| <input checked="" type="checkbox"/> | 3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably. |
| <input type="checkbox"/> | 4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented. |

² Consensus building activities are occasionally conducted by NERC and/or project review teams. They typically are conducted to obtain industry inputs prior to proposing any standard development project to revise, or develop a standard or definition.

| Reliability Principles | |
|--------------------------|--|
| <input type="checkbox"/> | 5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems. |
| <input type="checkbox"/> | 6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions. |
| <input type="checkbox"/> | 7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis. |
| <input type="checkbox"/> | 8. Bulk power systems shall be protected from malicious physical or cyber attacks. |

| Market Interface Principles | |
|--|----------------|
| Does the proposed standard development project comply with all of the following Market Interface Principles ? | Enter (yes/no) |
| 1. A reliability standard shall not give any market participant an unfair competitive advantage. | Yes |
| 2. A reliability standard shall neither mandate nor prohibit any specific market structure. | Yes |
| 3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. | Yes |
| 4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. | Yes |

| Identified Existing or Potential Regional or Interconnection Variances | |
|--|-------------|
| Region(s)/ Interconnection | Explanation |
| <i>e.g.</i> , NPCC | |

For Use by NERC Only

| SAR Status Tracking (Check off as appropriate). | |
|---|--|
| <input type="checkbox"/> Draft SAR reviewed by NERC Staff | <input type="checkbox"/> Final SAR endorsed by the SC |
| <input type="checkbox"/> Draft SAR presented to SC for acceptance | <input type="checkbox"/> SAR assigned a Standards Project by NERC |
| <input type="checkbox"/> DRAFT SAR approved for posting by the SC | <input type="checkbox"/> SAR denied or proposed as Guidance document |

Version History

| Version | Date | Owner | Change Tracking |
|---------|--------------|-------|-----------------|
| 1 | June 3, 2013 | | Revised |

| | | | |
|---|-------------------|-----------------------------|--|
| 1 | August 29, 2014 | Standards Information Staff | Updated template |
| 2 | January 18, 2017 | Standards Information Staff | Revised |
| 2 | June 28, 2017 | Standards Information Staff | Updated template |
| 3 | February 22, 2019 | Standards Information Staff | Added instructions to submit via Help Desk |

Standard Authorization Request (SAR)

Complete and submit this form, with attachment(s) to the [NERC Help Desk](#). Upon entering the Captcha, please type in your contact information, and attach the SAR to your ticket. Once submitted, you will receive a confirmation number which you can use to track your request.

The North American Electric Reliability Corporation (NERC) welcomes suggestions to improve the reliability of the bulk power system through improved Reliability Standards.

| Requested information | | | |
|--|--|--------|---|
| SAR Title: | Operational Data Exchange Simplification | | |
| Date Submitted: | June 23, 2020 <u>(Revised on March 16, 2022)</u> | | |
| SAR Requester | | | |
| Name: | Standards Efficiency Review Phase 2 Team (Michael Cruz-Montes) <u>(Revised by Project 2021-06 SAR Drafting Team)</u> | | |
| Organization: | CenterPoint Energy | | |
| Telephone: | 713-207-2132 | Email: | michael.cruz-montes@centerpointenergy.com |
| SAR Type (Check as many as apply) | | | |
| <input type="checkbox"/> New Standard | <input type="checkbox"/> Imminent Action/ Confidential Issue (SPM Section 10) | | |
| <input checked="" type="checkbox"/> Revision to Existing Standard | <input type="checkbox"/> Variance development or revision | | |
| <input checked="" type="checkbox"/> Add, Modify or Retire a Glossary Term | <input checked="" type="checkbox"/> Other (Please specify) | | |
| <input checked="" type="checkbox"/> Withdraw/retire an Existing Standard | | | |
| Justification for this proposed standard development project (Check all that apply to help NERC prioritize development) | | | |
| <input type="checkbox"/> Regulatory Initiation | <input type="checkbox"/> NERC Standing Committee Identified | | |
| <input type="checkbox"/> Emerging Risk (Reliability Issues Steering Committee) Identified | <input type="checkbox"/> Enhanced Periodic Review Initiated | | |
| <input type="checkbox"/> Reliability Standard Development Plan | <input checked="" type="checkbox"/> Industry Stakeholder Identified | | |
| Industry Need (What Bulk Electric System (BES) reliability benefit does the proposed project provide?): | | | |
| The proposed project will enhance the effective and efficient administration of operational data exchanges between Responsible Entities essential for safe, secure and reliable operations. | | | |
| Purpose or Goal (How does this proposed project provide the reliability-related benefit described above?): | | | |
| The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IR0-010- 43 and TOP-003- 54 standards and limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency. As written the standards may create a zero-defect expectation for each Registered Entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the Registered Entity to demonstrate compliance, | | | |

Requested information

including excessive data retention. If instead a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

Therefore, the industry would benefit from continuing the efforts of Project 2014-03 and further revising IRO-010-~~43~~ and TOP-003-~~54~~ to enhance the “data specification” approach to reduce the administrative burdens of excessive data retention, while ensuring Registered Entities with operational responsibilities continue, as under the current standards, to request and receive the data necessary to support the four tasks identified in IRO-010-~~34~~ and TOP-003-~~54~~ (and described in the Detailed Description section below), while protecting public disclosure of commercially sensitive information and providing a dispute resolution process. To preserve the “data specification” concept, flexibility for differences in operational environments and emerging technology must be maintained. Therefore, creating a minimum list of items to include in a data specification is not desired. However, more clarity regarding the scope of the four tasks identified in IRO-010-~~43~~ and TOP-003-~~54~~ would be beneficial and is desired. The scope of the data specification would then just reflect the information necessary to cover the scope of the applicable tasks identified in IRO-010-~~43~~ or TOP-003-~~54~~ for the individual Registered Entity. The SER Phase 2 team received some feedback from industry participants who believe the scope of a data specification would only contain routine real time operating data typically provided systematically from field devices via SCADA/ICCP. Therefore, it is also necessary to clarify for industry if it should contain other data/information and methods of transfer such as phone, instant messaging, internet-based systems, etc.

A secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. This may require enhancing the standards to allow each Registered Entity with responsibilities to perform the tasks identified in IRO-010-~~43~~ and TOP-003-~~45~~ the ability to request and receive any information it needs from other Registered Entities to perform those tasks. The intent of the project is not to do away with specific requirements in other Reliability Standards under the assumption that the same data will be requested per a data exchange under IRO-010-~~43~~ and TOP-003-~~54~~; and the Standard Drafting Team should evaluate any potential reliability risk incurred by removing a perceived redundant requirement prior to recommending changes to requirements in other Reliability Standards.

Project Scope (Define the parameters of the proposed project):

The scope of the proposed project is to simplify the administrative burden with IRO-010-~~43~~, TOP-003-~~54~~ by developing risk-based compliance expectations and clarifying the four tasks identified in IRO-010-~~43~~ and TOP-003-~~45~~. The proposed project may require revisions to IRO-010-~~43~~, TOP-003-~~54~~ and associated definitions (especially Real-time monitoring and Balancing Authority analysis functions) as necessary to mitigate expectations of zero-defect compliance (e.g., setting thresholds to address telemetry availability), include provisions for dispute resolution, negotiating data exchanges where entities disagree on the necessity of data for reliability, and address confidentiality concerns. The proposed

Requested information

project will need to utilize any available industry resource necessary to maintain flexibility for various operational environments and technology (i.e., SCADA/ICCP, phone, instant messaging, internet-based systems, etc.). The project may also require development of Implementation Guidance or other ERO guidance to simplify the administrative burden.

The proposed project may also require revisions to other standards as necessary to remove redundant data specification obligations contained in other Reliability Standards that are associated with the four reliability tasks identified in the Detailed Description below. The scope of the project should also include coordination with existing projects that have operational data exchange within their scope.

If necessary, the proposed project may also require revisions to address data and information exchanges and obligations between provider and requester that are facilitated through a third-party intermediary.

Detailed Description (Describe the proposed deliverable(s) with sufficient detail for a drafting team to execute the project. If you propose a new or substantially revised Reliability Standard or definition, provide: (1) a technical justification¹ which includes a discussion of the reliability-related benefits of developing a new or revised Reliability Standard or definition, and (2) a technical foundation document (e.g., research paper) to guide development of the Standard or definition).

The project may require revisions to IRO-010-~~43~~, TOP-003-~~54~~ and associated definitions in the NERC Glossary (especially Real-time monitoring and Balancing Authority analysis functions) to clarify expectations for the “data specification” and associated tasks identified in IRO-010-~~43~~ and TOP-003-~~54~~. The revisions should continue to allow each Registered Entity with operational responsibilities to perform the tasks identified in IRO-010-~~43~~ and TOP-003-~~54~~ the ability to request and receive the information it needs to perform those tasks, while protecting public disclosure of commercially sensitive information and providing a dispute resolution process for conflicts between entities related to necessary data exchanges. The four tasks identified in IRO-010-~~43~~ and TOP-003-~~54~~ and associated standards are listed below.

- Operational Planning Analysis (IRO-008-2 and TOP-002-4)
- Real-time Assessments (IRO-008-2 and TOP-001-4)
- Real-time monitoring (IRO-002-5 and TOP-001-4)
- Balancing Authority analysis functions (BAL-001-2, BAL-002-3, BAL-003-1.1 and BAL-005-1)

This may necessitate revisions to the standards included above and any other standard or definition identified by the drafting team during the project as necessary to achieve the purpose of this project.

¹ The NERC Rules of Procedure require a technical justification for new or substantially revised Reliability Standards. Please attach pertinent information to this form before submittal to NERC.

Requested information

The drafting team should also develop Implementation Guidance and/or work with NERC staff to develop other ERO guidance to simplify the administrative burden as needed.

Once those activities are clarified, the drafting team should also evaluate and revise, if necessary, ~~remove~~ potentially redundant operational data exchange requirements dispersed in other standards including, but not limited to, the following:

- BAL-005-1 R2
- EOP-005-3 R13
- EOP-005-3 R14.2
- FAC-014-~~32~~ R5
- FAC-014-~~23~~ R6.1.
- IRO-008-~~32~~ R5
- IRO-008-~~23~~ R6
- IRO-017-1 R3
- TOP-001-~~56~~ R9
- TOP-001-~~65~~ R15
- VAR-002-4.1 R3
- VAR-002-4.1 R4

~~The project should also evaluate any other standard identified by the drafting team during the project as necessary to achieve the purpose of this project.~~ The Standard Drafting Team should seek to identify opportunities to evaluate and revise ~~remove~~ redundant requirements ~~and, if necessary, retire requirements that are not needed for reliability~~; however, the Standard Drafting Team should not ~~revisetire~~ requirements that are not directly related to the four reliability tasks identified above. The evaluation at a minimum should consider the following questions:

- Is the purpose of the activity currently within the scope of one or more of the tasks ~~and consequently identified in~~ IRO-010-~~43~~ and TOP-003-~~54~~? If so, then consider removing-revising due to redundancy.
- If minor modifications were made to IRO-010-~~43~~, TOP-003-~~45~~ and/or associated definitions (especially Real-time monitoring and Balancing Authority analysis functions), then would the activity be within the scope of those standards? If so, then ~~consider removing~~consider revising due to redundancy.

The drafting team should reference precedence from past projects to support this effort, including background materials developed during Project 2014-03 that describe the “data specification” concept including the petition to the FERC and the [Project 2014-03 Mapping Document](#).

Cost Impact Assessment, if known (Provide a paragraph describing the potential cost impacts associated with the proposed project):

unknown

| Requested information | |
|---|--|
| Please describe any unique characteristics of the BES facilities that may be impacted by this proposed standard development project (e.g., Dispersed Generation Resources): | |
| N/A | |
| To assist the NERC Standards Committee in appointing a drafting team with the appropriate members, please indicate to which Functional Entities the proposed standard(s) should apply (e.g., Transmission Operator, Reliability Coordinator, etc. See the most recent version of the NERC Functional Model for definitions): | |
| All NERC Functional Entities are potentially impacted by the scope of this SAR. The recommendations are both technical and administrative in nature but meant to address inefficiencies within requirements for data collection. Therefore, the drafting team should consist of members who are familiar with both aspects. | |
| Do you know of any consensus building activities ² in connection with this SAR? If so, please provide any recommendations or findings resulting from the consensus building activity. | |
| The SER Phase 2 team hosted an industry webinar on February 22, 2019 presenting six efficiency concepts, including consolidating and simplifying information and data requirements. The presentation was followed up by an industry survey to assess support for the concepts. This concept received the second highest support from industry. In addition, an informal survey was conducted on the content of this SAR to assess industry support. The feedback from industry and SER Phase 2 team responses are located on the Standards Efficiency Review page . | |
| Are there any related standards or SARs that should be assessed for impact as a result of this proposed project? If so, which standard(s) or project number(s)? | |
| The Standard Drafting team should coordinate with existing projects that have operational data exchange within their scope. | |
| Are there alternatives (e.g., guidelines, white paper, alerts, etc.) that have been considered or could meet the objectives? If so, please list the alternatives. | |
| Yes, Implementation Guidance and/or other ERO guidance could assist with simplifying the administrative burden for the interim period while this project is being administered. | |

| Reliability Principles | |
|---|---|
| Does this proposed standard development project support at least one of the following Reliability Principles (Reliability Interface Principles)? Please check all those that apply. | |
| <input type="checkbox"/> | 1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards. |
| <input type="checkbox"/> | 2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand. |

² Consensus building activities are occasionally conducted by NERC and/or project review teams. They typically are conducted to obtain industry inputs prior to proposing any standard development project to revise, or develop a standard or definition.

| Reliability Principles | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | 3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably. |
| <input type="checkbox"/> | 4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented. |
| <input type="checkbox"/> | 5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems. |
| <input type="checkbox"/> | 6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions. |
| <input type="checkbox"/> | 7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis. |
| <input type="checkbox"/> | 8. Bulk power systems shall be protected from malicious physical or cyber attacks. |

| Market Interface Principles | |
|--|-------------------|
| Does the proposed standard development project comply with all of the following Market Interface Principles ? | Enter (yes/no) |
| 1. A reliability standard shall not give any market participant an unfair competitive advantage. | Yes |
| 2. A reliability standard shall neither mandate nor prohibit any specific market structure. | Yes |
| 3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. | Yes |
| 4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. | Yes |

| Identified Existing or Potential Regional or Interconnection Variances | |
|---|-------------|
| Region(s)/ Interconnection | Explanation |
| <i>e.g.</i> , NPCC | |

For Use by NERC Only

| SAR Status Tracking (Check off as appropriate). | |
|---|--|
| <input type="checkbox"/> Draft SAR reviewed by NERC Staff | <input type="checkbox"/> Final SAR endorsed by the SC |
| <input type="checkbox"/> Draft SAR presented to SC for acceptance | <input type="checkbox"/> SAR assigned a Standards Project by NERC |
| <input type="checkbox"/> DRAFT SAR approved for posting by the SC | <input type="checkbox"/> SAR denied or proposed as Guidance document |

Version History

| Version | Date | Owner | Change Tracking |
|----------------|-------------------|-----------------------------|--|
| 1 | June 3, 2013 | | Revised |
| 1 | August 29, 2014 | Standards Information Staff | Updated template |
| 2 | January 18, 2017 | Standards Information Staff | Revised |
| 2 | June 28, 2017 | Standards Information Staff | Updated template |
| 3 | February 22, 2019 | Standards Information Staff | Added instructions to submit via Help Desk |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the first draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 – August 6, 2021 |
| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|-----------------------------|
| 45-day formal comment period with additional ballot | February 22 – April 3, 2023 |
| 10-day final ballot | April 17 – April 27, 2023 |
| Board adoption | May 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data and Information Specification and Collection
2. **Number:** IRO-010-5
3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring the Reliability Coordinator has the data and information it needs to plan, monitor and assess the operation of its Reliability Coordinator Area.
4. **Applicability**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2019-06.

B. Requirements

- R1.** The Reliability Coordinator shall maintain a documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- 1.1.** A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessment, including non-BES data and information, external network data and information, and identification of the applicable entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Provisions for the identification of any data and information where the responsible respondent identified in Part 1.1 will utilize an applicable entity as an intermediary to pass through the data and information unaltered from the entities that originated the data and information.
 - 1.5.** Protocols for the responsible respondent identified in Part 1.1 to provide data and information that includes, but is not limited to:
 - 1.5.1** Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3** Provisions to update or correct data and information, as applicable or necessary.

- 1.6.** Identification of the mutually agreed upon format.
 - 1.7.** Identification of the mutually agreed upon process for resolving conflicts between the Reliability Coordinator, the responsible respondent identified in Part 1.1 that has the required data and information, and if necessary, the intermediary.
 - 1.8.** Identification of the mutually agreed upon security protocol or method for securely transferring data and information.
-
- M1.** The Reliability Coordinator shall make available its dated, current, in force documented specification for data and information.
 - R2.** The Reliability Coordinator shall distribute its data and information specification to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
 - M2.** The Reliability Coordinator shall make available evidence that it has distributed its specification to entities that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.
 - R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R2 shall satisfy the documented specifications using the criteria established in Requirement Parts 1.5 through 1.8. (*Violation Risk Factor: Medium*) (*Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations*)
 - M3.** The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority:

“Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. Evidence Retention:

The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its data specification to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

1.3. Compliance Monitoring and Enforcement Program:

As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R # | Time Horizons | VRF | Violation Severity Levels | | | |
|---|---------------------|-----|--|---|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include two or fewer of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three to four of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include five to seven of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |

| R # | Time Horizons | VRF | Violation Severity Levels | | | |
|-----|--|--------|--|--|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R2 | Operations Planning | Low | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R3 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use one of the criteria in Requirement R1 Parts 1.5 – 1.8. | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use two of the criteria in Requirement R1 Parts 1.5 – 1.8. | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use three or more of the criteria in Requirement R1 Parts 1.5 – 1.8. | The responsible entity receiving a specification in Requirement R2 did not satisfy the documented specifications. |

D. Regional Variances

None

E. Interpretations

None

F. Associated Documents

None

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|--|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
| 1a | August 5, 2009 | Added Appendix 1: Interpretation of R1.2 and R3 as approved by Board of Trustees | Addition |
| 1a | March 17, 2011 | Order issued by FERC approving IRO-010-1a (approval effective 5/23/11) | |
| 1a | November 19, 2013 | Updated VRFs based on June 24, 2013 approval | |
| 2 | April 2014 | Revisions pursuant to Project 2014-03 | |
| 2 | November 13, 2014 | Adopted by NERC Board of Trustees | Revisions under Project 2014-03 |
| 2 | November 19, 2015 | FERC approved IRO-010-2. Docket No. RM15-16-000 | |
| 3 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | TBD | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 Cold Weather |
| 3 | October 30, 2020 | FERC approved IRO-010-2. Docket No. RD20-4-000 | |
| 4 | June 11, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 |
| 4 | August 24, 2021 | FERC approved IRO-010-4 Docket No. RD21-5-000 | |
| 4 | August 24, 2021 | April 1, 2023 | Effective Date |
| 5 | | TBD | TBD |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the first draft of the proposed standard.

| Completed Actions | Date |
|---|--------------------------------|
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| 45-day formal comment period with additional ballot | February 22 – April 03, 2023 |
| 10-day final ballot | April 17 – April 27, 2023 |
| Board adoption | May 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data [and Information](#) Specification and Collection
2. **Number:** IRO-010-[54](#)
3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring the Reliability Coordinator has the data [and information](#) it needs to [plan](#), Monitor and assess the operation of its Reliability Coordinator Area.
4. **Applicability**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2019-06.

B. Requirements

- R1. The Reliability Coordinator shall maintain a documented specification for the data [and information](#) necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
 - 1.1. A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessment, including non-BES data and [information](#), external network data [and information](#), [and identification of the applicable entities responsible for responding to the specification](#) as deemed necessary by the Reliability Coordinator.
 - 1.2. Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3. Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1 Operating limitations based on:
 - 1.3.1.1. capability and availability;
 - 1.3.1.2. fuel supply and inventory concerns;

1.3.1.3. fuel switching capabilities; and

1.3.1.4. environmental constraints

1.3.2. Generating unit(s) minimum:

1.3.2.1. design temperature; or

1.3.2.2. historical operating temperature; or

1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

1.4. Provisions for the identification of any data and information where the responsible respondent identified in Part 1.1 will utilize an applicable entity as an intermediary to pass through the data and information unaltered from the entities that originated the data and information.

1.5. Protocols for the responsible respondent identified in Part 1.1 to provide data and information that includes, but is not limited to:

1.5.1 Specific deadlines or periodicity in which data and information is to be provided;

1.5.2 Performance criteria for the availability and accuracy of data and information, as applicable;

1.5.3 Provisions to update or correct data and information, as applicable or necessary.

1.6. Identification of the mutually agreed upon format.

1.7. Identification of the mutually agreed upon process for resolving conflicts between the Reliability Coordinator, the responsible respondent identified in Part 1.1 that has the required data and information, and if necessary, the intermediary.

1.8. Identification of the mutually agreed upon security protocol or method for securely transferring data and information.

~~The deadline by which the respondent is to provide the indicated data.~~

M1. The Reliability Coordinator shall make available its dated, current, in force documented specification for data and information.

R2. The Reliability Coordinator shall distribute its data and information specification to entities that have data required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)

M2. The Reliability Coordinator shall make available evidence that it has distributed its ~~data~~ specification to entities that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and

Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

- R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a [data](#) specification in Requirement R2 shall satisfy the [obligations of the documented specifications using the criteria established in Requirement Parts 1.5 through 1.8: \(Violation Risk Factor: Medium\) \(Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations\)](#)

~~3.1. A mutually agreeable format~~

~~3.2. A mutually agreeable process for resolving data conflicts~~

~~3.3. A mutually agreeable security protocol~~

- M3.** The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a [data](#) specification in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

- 1.1. Compliance Enforcement Authority:** “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.
- 1.2. Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its data specification to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

- 1.3. Compliance Monitoring and Enforcement Program:** As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|---------------------|-----|--|--|---|---|
| | | | Lower | Moderate | High | Severe |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include two or fewer of the parts (Part 1.1 through Part 1.85) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three <u>to four</u> of the parts (Part 1.1 through Part 1.85) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include <u>five to seven</u> our of the parts (Part 1.1 through Part 1.85) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.85) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time |

| | | | | | | |
|---|---------------------|-----|--|--|---|--|
| | | | | | | monitoring, and Real-time Assessments |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |
| R2 | Operations Planning | Low | <p>The Reliability Coordinator did not distribute its data specification as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not distribute its data specification as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator's Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not distribute its data specification as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not distribute its data specification as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> |

| | | | | | | |
|------------------|--|---------------|--|--|--|--|
| <p>R3</p> | <p>Operations Planning, Same-Day Operations , Real-time Operations</p> | <p>Medium</p> | <p>The responsible entity receiving a data specification in Requirement R2 satisfied the obligations of the documented specifications for data but failed to follow use one of the criteria shown in <u>Requirement R1</u> Parts <u>13.51</u> – <u>13.83</u>.</p> | <p>The responsible entity receiving a data specification in Requirement R2 satisfied the obligations of the documented specifications for data but failed to use follow two of the criteria shown in <u>Requirement R1</u> Parts <u>13.51</u> – <u>13.83</u>.</p> | <p>The responsible entity receiving a data specification in Requirement R2 satisfied the obligations of the documented specifications for data but failed to use follow any three or more of the criteria shown in <u>Requirement R1</u> Parts <u>13.51</u> – <u>13.83</u>.</p> | <p>The responsible entity receiving a data specification in Requirement R2 did not satisfy the obligations of the documented specifications for data.</p> |
|------------------|--|---------------|--|--|--|--|

D. Regional Variances

None

E. Interpretations

None

F. Associated Documents

None

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|--|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
| 1a | August 5, 2009 | Added Appendix 1: Interpretation of R1.2 and R3 as approved by Board of Trustees | Addition |
| 1a | March 17, 2011 | Order issued by FERC approving IRO-010-1a (approval effective 5/23/11) | |
| 1a | November 19, 2013 | Updated VRFs based on June 24, 2013 approval | |
| 2 | April 2014 | Revisions pursuant to Project 2014-03 | |
| 2 | November 13, 2014 | Adopted by NERC Board of Trustees | Revisions under Project 2014-03 |
| 2 | November 19, 2015 | FERC approved IRO-010-2. Docket No. RM15-16-000 | |
| 3 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | TBD | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 Cold Weather |
| 3 | October 30, 2020 | FERC approved IRO-010-2. Docket No. RD20-4-000 | |
| 4 | June 11, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 |
| 4 | August 24, 2021 | FERC approved IRO-010-4 Docket No. RD21-5-000 | |
| 4 | August 24, 2021 | April 1, 2023 | Effective Date |
| | | TBD | TBD |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the first draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 – August 6, 2021 |
| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|-----------------------------|
| 45-day formal comment period with additional ballot | February 22 – April 3, 2023 |
| 10-day final ballot | April 17 – April 27, 2023 |
| Board adoption | May 2023 |

A. Introduction

- 1. Title:** Transmission Operator and Balancing Authority Data and Information Specification and Collection
- 2. Number:** TOP-003-6
- 3. Purpose:** To ensure that the Transmission Operator and Balancing Authority have the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.
- 4. Applicability:**
 - 4.1.** Transmission Operator
 - 4.2.** Balancing Authority
 - 4.3.** Generator Owner
 - 4.4.** Generator Operator
 - 4.5.** Transmission Owner
 - 4.6.** Distribution Provider
- 5. Effective Date:** See Implementation Plan for Project 2019-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain a documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the applicable entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Provisions for the identification of any data and information where the responsible respondent identified in Part 1.1 will utilize an applicable entity as an intermediary to pass through the data and information unaltered from the entities that originated the data and information.
 - 1.5.** Protocols for the responsible respondent identified in Part 1.1 to provide the data and information that includes, but is not limited to:
 - 1.5.1.** Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2.** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3.** Provisions to update or correct data and information, as applicable or necessary.
 - 1.6.** Identification of the mutually agreed upon format.

- 1.7.** Identification of the mutually agreed upon process for resolving conflicts between the Transmission Operator, the responsible respondent identified in Part 1.1 that has the required data and information, and where applicable, the intermediary.
- 1.8.** Identification of the mutually agreed upon security protocol or method for securely transferring data and information.
- M1.** Each Transmission Operator shall make available its dated, current, in force documented specification for data and information.
- R2.** Each Balancing Authority shall maintain a documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: [*Violation Risk Factor: Lower*] [*Time Horizon: Operations Planning*]
 - 2.1.** A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-BES data and information, and external network data and information, as deemed necessary by the Balancing Authority. The list shall include, but is not limited to, identification of the applicable entity responsible for responding to the specification.
 - 2.2.** Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
 - 2.3.** Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
 - 2.3.1.** Operating limitations based on:
 - 2.3.1.1.** capability and availability;
 - 2.3.1.2.** fuel supply and inventory concerns;
 - 2.3.1.3.** fuel switching capabilities; and
 - 2.3.1.4.** environmental constraints.
 - 2.3.2.** Generating unit(s) minimum:
 - 2.3.2.1.** design temperature; or
 - 2.3.2.2.** historical operating temperature; or
 - 2.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 2.4.** Provisions for the identification of any data and information where the responsible respondent identified in Part 2.1 will utilize an applicable entity as an intermediary to pass through the data and information unaltered from the entities that originated the data and information.
 - 2.5.** Protocols for the responsible respondent identified in Part 2.1 to provide data and information that includes, but is not limited to:

- 2.5.1.** Specific deadlines or periodicity in which data and information is to be provided;
 - 2.5.2.** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 2.5.3.** Provisions to update or correct data and information, as applicable or necessary.
 - 2.6.** Identification of the mutually agreed upon format.
 - 2.7.** Identification of the mutually agreed upon process in resolving conflicts between the Balancing Authority, the responsible respondent identified in Part 2.1 that has the required data and information, and if necessary, the intermediary.
 - 2.8.** Identification of the mutually agreed upon security protocol or method for securely transferring data and information.
- M2.** Each Balancing Authority shall make available its dated, current, in force documented specification for data and information.
- R3.** Each Transmission Operator shall distribute its data and information specification to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M3.** Each Transmission Operator shall make available evidence that it has distributed its specification to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

- R4.** Each Balancing Authority shall distribute its data and information specification to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M4.** Each Balancing Authority shall make available evidence that it has distributed its data specification to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.
- R5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall satisfy the documented specifications using the criteria established in Parts 1.5 through 1.8 or Parts 2.5 through 2.8, as applicable. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-*

time Operations]

- M5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specification using the specified criteria. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority:

“Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. Evidence Retention:

The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its data specification to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its data specification to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in

accordance with Requirement R5 and Measurement M5.

1.3. Compliance Monitoring and Enforcement Program:

As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|---------------------|-------|--|---|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include two or fewer of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three to four of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include five to seven of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|--|---------------------|-------|---|--|--|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.8) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three to four of the parts (Part 2.1 through Part 2.8) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include five to seven of the parts (Part 2.1 through Part 2.8) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.8) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring. OR, The Balancing Authority did not have a documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring. |
| <p>For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission | The Transmission Operator did not distribute its specification to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and | The Transmission Operator did not distribute its specification to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and | The Transmission Operator did not distribute its specification to four or more entities, or more than 15% of the entities that have data and information required by the Transmission |

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|--|--------|--|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to four or more entities, or more than 15% of the entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use one of the criteria in Requirement R1 (Parts 1.5 – 1.8) or Requirement R2 (Parts 2.5 – 2.8). | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use two of the criteria in Requirement R1 (Parts 1.5 – 1.8) or Requirement R2 (Parts 2.5 – 2.8). | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use three or more of the criteria in Requirement R1 (Parts 1.5 – 1.8) or Requirement R2 (Parts 2.5 – 2.8). | The responsible entity receiving a specification in Requirement R3 or R4 did not satisfy the documented specification. |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP- 003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |
| 4 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order | |
| 4 | August 24, 2021 | April 1, 2023 | Effective Date |
| 6 | | TBD | Revised under project 2021-06 |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the first draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
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| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|-----------------------------|
| 45-day formal comment period with additional ballot | February 22 – April 3, 2023 |
| 10-day final ballot | April 17 – April 27, 2023 |
| Board adoption | May 2023 |

A. Introduction

1. **Title:** ~~Operational Reliability~~Transmission Operator and Balancing Authority Data and Information Specification and Collection
2. **Number:** TOP-003-65
3. **Purpose:** To ensure that the Transmission Operator and Balancing Authority have the data and information it need~~see~~ to plan, monitor, and assess the fulfill their operational of its Transmission Operator Area or Balancing Authority Area and ~~planning responsibilities.~~
4. **Applicability:**
 - 4.1. Transmission Operator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Owner
 - 4.6. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2019-06.

B. Requirements and Measures

- R1. Each Transmission Operator shall maintain a documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
 - 1.1. A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, and external network data and information, and identification of the applicable entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2. Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3. Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1. Operating limitations based on:
 - 1.3.1.1. capability and availability;
 - 1.3.1.2. fuel supply and inventory concerns;
 - 1.3.1.3. fuel switching capabilities; and

- 1.3.1.4. environmental constraints
 - 1.3.2. Generating unit(s) minimum:
 - 1.3.2.1. design temperature; or
 - 1.3.2.2. historical operating temperature; or
 - 1.3.2.3. current cold weather performance temperature determined by an engineering analysis.
 - 1.4. ~~App~~Provision~~periodicity~~ for the identification of providing any data and information where the responsible respondent identified in Part 1.1 will utilize an applicable entity as an intermediary to pass through the data and information unaltered from the entities that originated the data and information.
 - 1.5. ~~The deadline by which the respondent is to~~Protocols for the responsible respondent identified in Part 1.1 to provide the indicated data and information that includes, but is not limited to-:
 - 1.5.1. Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2. Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3. Provisions to update or correct data and information, as applicable or necessary.
 - 1.6. Identification of the mutually agreed upon format.
 - 1.7. Identification of the mutually agreed upon process for resolving conflicts between the Transmission Operator, the responsible respondent identified in Part 1.1 that has the required data and information, and where applicable, the intermediary.
 - ~~1.5.~~ Identification of the mutually agreed upon security protocol or method for securely transferring data and information.
 - 1.8.
- M1.** Each Transmission Operator shall make available its dated, current, in force documented specification for data and information.
- R2.** Each Balancing Authority shall maintain a documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 2.1. A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-BES data and information, and external network data and information, as deemed necessary by the Balancing Authority. The list shall include, but is not limited

to, identification of the applicable entity responsible for responding to the specification.

2.2. Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.

2.3. Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:

2.3.1. Operating limitations based on:

2.3.1.1. capability and availability;

2.3.1.2. fuel supply and inventory concerns;

2.3.1.3. fuel switching capabilities; and

2.3.1.4. environmental constraints.

2.3.2. Generating unit(s) minimum:

2.3.2.1. design temperature; or

2.3.2.2. historical operating temperature; or

2.3.2.3. current cold weather performance temperature determined by an engineering analysis.

2.4. Provisions for the identification of any ~~A~~ periodicity for providing data and information where the responsible respondent identified in Part 2.1 will utilize an applicable entity as an intermediary to pass through the data and information unaltered from the entities that originated the data and information.

2.5. Protocols for the responsible respondent identified in Part 2.1 to provide data and information that includes, but is not limited to:

2.5.1. Specific deadlines or periodicity in which data and information is to be provided;

2.5.2. Performance criteria for the availability and accuracy of data and information, as applicable;

2.5.3. Provisions to update or correct data and information, as applicable or necessary.

2.6. Identification of the mutually agreed upon format.

2.7. Identification of the mutually agreed upon process in resolving conflicts between the Balancing Authority, the responsible respondent identified in Part 2.1 that has the required data and information, and if necessary, the intermediary.

~~**2.4.2.8.** Identification of the mutually agreed upon security protocol or method for securely transferring data and information.~~

~~The deadline by which the respondent is to provide the indicated data.~~

- M2.** Each Balancing Authority shall make available its dated, current, in force documented specification for data and information.
- R3.** Each Transmission Operator shall distribute its data and information specification to entities that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.
[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

M3. Each Transmission Operator shall make available evidence that it has distributed its ~~data~~ specification to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

R4. Each Balancing Authority shall distribute its data and information specification to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

M4. Each Balancing Authority shall make available evidence that it has distributed its data specification to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.

R5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall satisfy the ~~obligations of the~~ documented specifications using the criteria established in Parts 1.5 through 1.8 or Parts 2.5 through 2.8, as applicable. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*

~~5.1. A mutually agreeable format~~

~~5.2. A mutually agreeable process for resolving data conflicts~~

~~5.3. A mutually agreeable security protocol~~

M5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specifications using the specified criteria. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its data specification to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its data specification to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R5 and Measurement M5.

1.3. Compliance Monitoring and Enforcement Program: As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|---------------------|-------|--|--|--|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include two or fewer of the parts (Part 1.1 through Part 1.85) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three <u>to four</u> of the parts (Part 1.1 through Part 1.85) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include <u>five to seven</u> of the parts (Part 1.1 through Part 1.85) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.85) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, |

TOP-003-5 — Operational Reliability Data

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|---------------------|-------|---|---|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | | | The Transmission Operator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.85) of the documented specification for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three <u>to four</u> of the parts (Part 2.1 through Part 2.58) of the documented specification for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include <u>five to seven</u> of of the parts (Part 2.1 through Part 2.58) of the documented specification for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.58) of the documented specification for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. |

TOP-003-5 — Operational Reliability Data

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|---|--|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | | | OR, The Balancing Authority did not have a documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its data specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data specification to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time | The Transmission Operator did not distribute its data specification to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time | The Transmission Operator did not distribute its data specification to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

TOP-003-5 — Operational Reliability Data

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|--|--------|---|---|--|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | monitoring, and Real-time Assessments. | monitoring, and Real-time Assessments. | |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its data specification to one entity, or 5% or less of the entities, whichever is greater, that have <u>data and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its data specification to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have <u>data and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its data specification to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have <u>data and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its data specification to four or more entities, or more than 15% of the entities that have <u>Data and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a data specification in Requirement R3 or R4 satisfied the obligations in the data specification but <u>failed to use did not meet</u> one of the criteria shown in Requirement R51 (Parts 51.54 – 51.83) <u>or Requirement R2 (Parts 2.5 – 2.8).</u> | The responsible entity receiving a data specification in Requirement R3 or R4 satisfied the obligations in the data specification but <u>failed to use did not meet</u> two of the criteria shown in Requirement R51 (Parts 15.54 – 15.83) <u>or Requirement R2 (Parts 2.5 – 2.8).</u> | The responsible entity receiving a data specification in Requirement R3 or R4 satisfied the obligations in the data specification but <u>failed to use did not meet</u> three <u>or more</u> of the criteria shown in Requirement R51 (Parts 51.54 – 15.83) <u>or Requirement R2 (Parts</u> | The responsible entity receiving a data specification in Requirement R3 or R4 did not satisfy the obligations of the documented specifications <u>for data.</u> |

TOP-003-5 — Operational Reliability Data

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|--------------|-----|---------------------------|--------------|------------------|------------|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | | <u>2.5 – 2.8</u> | |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP-003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |

| | | | |
|----------|-----------------|---|--------------------------------------|
| 4 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order | |
| 4 | August 24, 2021 | April 1, 2023 | Effective Date |
| <u>5</u> | | <u>TBD</u> | <u>Revised under project 2021-06</u> |

Implementation Plan

Reliability Standards IRO-010-5 and TOP-003-6

Project 2021-06 Modifications to IRO-010 and TOP-003

Applicable Standard(s)

- Reliability Standard IRO-010-5 – Reliability Coordinator Data and Information Specification and Collection
- Reliability Standard TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection

Requested Retirements

- Reliability Standard IRO-010-4- Reliability Coordinator Data Specification and Collection
- Reliability Standard TOP-003-5 – Operational Reliability Data

Applicable Entities

- See subject standards.

Background

The primary purpose of this project is to simplify administrative burdens and mitigate potential zero defects expectations associated with the current IRO-010-4 and TOP-003-5 standards, while ensuring that Registered Entities with operational responsibilities continue to request and receive the data necessary to support Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

General Considerations

This implementation plan reflects consideration that responsible entities will need time to develop revised data and information specifications under Reliability Standards IRO-010-5 and TOP-003-6, including: (i) developing new protocols for submission periodicity, performance criteria, and provisions to update information as needed; (ii) developing provisions for using intermediary entities to provide data; and (iii) codifying in the data and information specification the mutually agreed upon formats, process for resolving conflicts, and security protocols to use for data and information exchange. This implementation plan also reflects consideration of the time that responsible entities will need to distribute the revised data and information specifications to the reporting entities, and that the reporting entities will need to comply with the revised data and information specifications.

Effective Date

Reliability Standards IRO-010-5 and TOP-003-6

Where approval by an applicable governmental authority is required, the standards shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the effective date of the applicable governmental authority's order approving the standard, or as otherwise provided for by the applicable governmental authority.

Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction.

Retirement Date

Reliability Standards IRO-010-4 and TOP-003-5

Reliability Standards IRO-010-4 and TOP-003-5 shall be retired immediately prior to the effective date of Reliability Standards IRO-010-5 and TOP-003-6 in the particular jurisdiction in which the revised standards are becoming effective.

Unofficial Comment Form

Project 2021-06 Modifications to IRO-010 and TOP-003

Do not use this form for submitting comments. Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments on **2021-06 Modifications to IRO-010 and TOP-003**. Comments must be submitted by **8 p.m. Eastern, Thursday, December 15, 2022**.

Additional information is available on the [project page](#). If you have questions, contact Standards Developer, [Josh Blume](#) (email), or at 404-446-2593.

Background Information

The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IRO-010-5 and TOP-003-6 standards and limit unnecessary data requirements that do not contribute to BES reliability and resiliency. As written the standards create a zero-defect expectation for each registered entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the registered entity to demonstrate compliance, including excessive data retention. If instead a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

The secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The standard drafting team (SDT) would need to evaluate those requirements after proposed changes to the IRO-010-5 and TOP-003-6 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010-5 and TOP-003-6. This may require enhancing the standards to allow each registered entity with responsibilities to perform the tasks identified in IRO-010-5 and TOP-003-6 the ability to request and receive any information it needs from other Registered Entities to perform those tasks.

Questions

1. To address third party participation in data exchanges, the SDT added a provision in both IRO-010-5 and TOP-003-6 that recognizes that an applicable entity that is required to respond to the data specification may identify data and information that will be provided by a third-party intermediary. However, this provision does not shift the responsibility to respond to the data request from the applicable entity to the intermediary. Rather, the provision recognizes that an applicable entity may utilize an intermediary to pass through data and information unaltered from the entities that originated the data and information. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Yes

No

Comments:

2. To mitigate potential zero defect assumptions and decrease administrative burdens, the SDT revised the data specification requirements in both IRO-010-5 and TOP-003-6 to include more specificity to the protocols for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

- Yes
 No

Comments:

3. To improve administration of data and information for the applicable entities, the SDT modified IRO-010-5 and TOP-003-6 to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information. Do you agree with these modifications? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

- Yes
 No

Comments:

4. IRO-010-5 and TOP-003-6 require general data specifications to allow the Reliability Coordinator, Transmission Operator, and Balancing Authority to perform its Operational Planning Analysis, Real Time Assessment, Real-time monitoring (undefined term), and BA analysis functions (undefined term). The SDT focused on data and information generally rather than prescriptive requirements. Do you believe that all data and information needed by the RC, TOP, and BA to perform these reliability tasks (for example, PMU streaming, outage coordination, distribution, generator fuel information, etc.) is available pursuant to the proposed standards or is additional clarification needed that is more prescriptive?

- Yes
 No

Comments:

5. To support the proposed modifications, the SDT revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

- Yes
 No

Comments:

6. The SDT reviewed the other standards listed in the SAR’s Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6 or create efficiencies reflective of the principle established by the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in these collateral standards, the SDT determined there is insufficient justifications for the retirement of these requirements and, therefore, the SDT is not proposing changes to these standards. Do you agree with this assessment? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

- Yes
- No

Comments:

7. The SDT is proposing an 18-month implementation plan. Would this proposed timeframe give enough time to implement the proposed modifications in IRO-010-5 and TOP-003-6? If you think an alternate timeframe is needed, please propose an alternate implementation plan and time period, and provide a detailed explanation of actions planned to meet the implementation deadline.

- Yes
- No

Comments:

8. Provide additional comments regarding IRO-010-5 for the SDT to consider.

Comments:

9. Provide additional comments regarding TOP-003-6 for the SDT to consider.

Comments:

10. Provide any additional comments for the SDT to consider, if desired.

Comments:

Technical Rationale for Reliability Standard IRO-010-5

October 2022

IRO-010-5 – Reliability Coordinator Data and Information Specification and Collection

Rationale:

The primary purpose of this project is to reduce unnecessary administrative overhead and reduce potential zero defect expectations associated with the current IRO-010-4 and TOP-003-5 standards, while ensuring that Registered Entities request and receive the data and information necessary to support the core reliability tasks required to perform Operational Planning Analysis, Real-time Assessments, and Real-time monitoring, and Balancing Authority analysis functions.

The core reliability tasks for Reliability Coordinators identified in IRO-010 are identified as Operational Planning Analysis, Real-time Assessments, and Real-time monitoring.

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-4 and TOP-003-5. The SDT also reviewed the results of the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in (standards listed in the SAR's Detailed Description), the SDT determined there is insufficient justification(s) for the retirement of these requirements and are not proposing changes to the reviewed standards.

The data specification requirements in IRO-010-5 and TOP-003-6 are substantively similar, if not functionally identical therefore the SDT has revised both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements.

The SDT has drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability.

Proposed revisions include Title, Purpose, and Requirements sections.

Rationale for Title

The proposed Title change from “Reliability Coordinator Data Specification and Collection” to “Reliability Coordinator Data and Information Specification and Collection” acknowledges that the specifications are for the collection of both Data and Information.

Rationale for Purpose

The proposed changes to IRO-010-5 purpose is to align with the purpose of TOP-003. Throughout the standard, the SDT used the terms “data” and “information” to clarify that specifications include both “data and information.” The intent is to include data and information necessary for Reliability Coordinators to perform their core reliability tasks. The revision clarifies that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.

In addition to monitoring and assessing stated in the previous version of the standard, both data and information are necessary for satisfying all of the identified core reliability tasks. The tasks include planning activities, therefore the purpose has been clarified by including planning, monitoring, and assessing operations.

Rationale for Requirement R1

R1 is revised to clarify that specifications include both data and information that a Reliability Coordinator requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R1.1

R1 is revised to include not only the list of data and Information that the requestor needs for the core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R1.4

R1.4 is revised to address the use of intermediaries in the data provision processes. The previous content referring to periodicity is addressed in a revised R1.5

R1.4 addresses the use of an intermediary to forward data and information to the requestor from the applicable entity. An entity that is required to respond to the data and information request in R1.1 can use an intermediary to pass through the data and information unaltered from the entities that originated the data and information.

Using an applicable entity as an intermediary reduces the burden to maintain data and information exchanges with multiple entities, however an intermediary is not responsible to ensure the specification integrity or availability of such data or information. The intermediary party does not assume compliance risk for its participation in passing the data and information. The use of an intermediary does not remove the responsibility of the respondent (identified in R1.1) to provide the data and information, and the identified respondent remains ultimately responsible to fulfill the provision of data and information.

Rationale for Subpart R1.5

R1.5 identifies that Specifications should include protocols to address periodicity, to address, performance criterion, to provide update and correction mechanisms.

- R1.5.1 is revised to include Deadlines and Periodicity (as previously included in R1.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R1.5.2 is revised to address Performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R1.5.3 is revised to address Provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.

R1.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Subpart R1.6, R1.7, R1.8

Identification of the mutually agreed upon format is removed from R3.1 and placed in R1.6. Similarly, processes for resolving conflicts, and the identification of security protocols have been removed from R3.2 and 3.3 and included in the specification in R1.7 and R1.8.

R1.6 moves part R3.1 into the specification; as a requirement of the specification itself.

R1.7 identifies a requirement for a mutually agreed upon process for resolving conflicts between the Reliability Coordinator and the respondent, and if necessary, the intermediary. Placement of this sub part under R1, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, Requestors would be expected to establish processes directly with the responding parties, to improve upon requests and responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor's authority to request data it needs. Respondents would be expected to engage the requestor about the respondent's concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or for the establishment of data correction protocols.

R1.8 has included both security protocol and method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both.

Rationale for Requirement R2

R2 is revised to add the term “and Information” for consistency.

Rationale for Requirement R3

R3 is revised to require the Respondents to satisfy the documented specification based on the criterion established in R1.5-1.8.

| Version 4 Requirement | Revision | Version 5 |
|-----------------------|-------------|-----------|
| R1.4 | Revised | R1.5.1 |
| | | |
| None | Newly added | R1.5 |
| | | |
| R3.1 | Moved | R1.6 |
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Technical Rationale for Reliability Standard TOP-003-6

October 2022

TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection

Rationale:

The primary purpose of this project is to reduce unnecessary administrative overhead and reduce potential zero defects expectations associated with the current IRO-010-4 and TOP-003-5 standards, while ensuring that Registered Entities request and receive the data and information necessary to support the four reliability tasks required to perform Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6. The SDT also reviewed the results of the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in (standards listed in the SAR's Detailed Description), the SDT determined there is insufficient justification(s) for the retirement of these requirements and are not proposing changes to the reviewed standards.

The data specification requirements in IRO-010-5 and TOP-003-6 are substantively similar, if not functionally identical therefore the SDT has revised both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements.

The SDT has drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability.

Proposed revisions include Title, Purpose, and Requirements sections.

Rationale for Title

The proposed Title change from "Operational Reliability Data" to "Transmission Operator and Balancing Authority Data and Information Specification and Collection" aligns with the Title section of IRO-010-5. This revision refers to the function of the standard whereas the previous title suggests a broader purpose than the four identified core reliability tasks.

Rationale for Purpose

Commented [A1]: Not sure if something should be under this heading. If not, please remove

The proposed changes to Purpose in TOP-003 align with the purpose of IRO-010-5. The two standards are companions, whereas the former applies to RC data specifications, this standard applies to TOP and BA specifications. Throughout the standard, the SDT used the terms “data” and “information” to clarify that specifications include both “data and information.” The intent is to include data and information necessary for Transmission Operators and Balancing Authorities to perform their core reliability tasks. The revision clarifies that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.

In addition to operational planning stated in the previous version of the standard, both data and information are necessary for satisfying the four identified core reliability tasks. The four tasks include monitoring and assessing activities, therefore the purpose has been clarified by including planning, monitoring, and assessing operations.

Rationale for Requirement R1

R1 is revised to clarify that specifications include both data and information that a Transmission Operator requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R1.1

R1 is revised to include not only the list of data and information that the requestor needs for the four core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R1.4

R1.4 is revised to address the use of intermediaries in the data provision processes. The previous content referring to periodicity is addressed in a revised R1.5

R1.4 addresses the use of an intermediary to forward data and information to the requestor from the applicable entity. An entity that is required to respond to the data and information request in R2.1 can use an intermediary to pass through the data and information unaltered from the entities that originated the data and information.

Using an applicable entity as an intermediary reduces the burden to maintain data and information exchanges with multiple entities, however an intermediary is not responsible to ensure the specification integrity or availability of such data or information. The intermediary party does not assume compliance risk for its participation in passing the data and information. The use of an intermediary does not remove the responsibility of the respondent (identified in R1.1) to provide the data and information, and the identified respondent remains ultimately responsible to fulfill the provision of data and information.

Rationale for Subpart R1.5

R1.5 identifies that Specifications should include protocols to address periodicity, to address, performance criterion, to provide update and correction mechanisms.

- R1.5.1 is revised to include Deadlines and Periodicity (as previously included in R1.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R1.5.2 is revised to address Performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R1.5.3 is revised to address Provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.

R1.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Subpart R1.6, R1.7, R1.8

Identification of the mutually agreed upon format is removed from R5.1 and placed in R1.6. Similarly, processes for resolving conflicts, and the identification of security protocols have been removed from R5.2 and 5.3 and included in the specification in R1.7 and R1.8.

R1.6 moves part R5.1 into the Transmission Operator data specification, as a requirement of the specification itself.

R1.7 identifies a requirement for a mutually agreed upon process for resolving conflicts between the Transmission Operator and the respondent, and if necessary, the intermediary. Placement of this sub part under R1, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, Requestors would be expected to establish processes directly with the responding parties, to improve upon requests and responses, and performance expectations. The provision will establish the process for resolving disagreements, while retaining the requestor's authority to request data it needs. Respondents would be expected to engage the requestor about the respondent's concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or for the establishment of data correction protocols.

R1.8 has included both security protocol and method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both.

Rationale for Requirement R2

R2 is revised to clarify that specifications include both data and information that a Balancing Authority requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R2.1

R2 is revised to include not only the list of data and information that the requestor needs for the core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R2.4

R2.4 is revised to address the use of intermediaries in the data provision processes. The previous content referring to periodicity is addressed in a revised R2.5.

R2.4 addresses the use of an intermediary to forward data and information to the requestor from the applicable entity. An entity that is required to respond to the data and information request in R2.1 can use an intermediary to pass through the data and information unaltered from the entities that originated the data and information.

Using an applicable entity as an intermediary reduces the burden to maintain data and information exchanges with multiple entities, however an intermediary is not responsible to ensure the specification integrity or availability of such data or information. The intermediary party does not assume compliance risk for its participation in passing the data and information. The use of an intermediary does not remove the responsibility of the respondent (identified in R2.1) to provide the data and information, and the identified respondent remains ultimately responsible to fulfill the provision of data and information.

Rationale for Subpart R2.5

R2.5 identifies that Specifications should include protocols to address periodicity, to address performance criterion, to provide update and correction mechanisms.

- R2.5.1 is revised to include Deadlines and Periodicity (as previously included in R2.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R2.5.2 is revised to address Performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R2.5.3 is revised to address Provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.

R2.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments,

processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Subpart R2.6, R2.7, R2.8

Identification of the mutually agreed upon format is removed from R5.1 and placed in R1.6. Similarly, processes for resolving Conflicts, and the identification of security protocols have been removed from R5.2 and R5.3 and included in the specification in R2.7 and R2.8

R2.6 moves part R5.1 into the data specification for Balancing Authority data specifications, as a requirement of the specification itself.

R2.7 identifies a requirement for a mutually agreed upon process for resolving conflicts between the Balancing Authority and the respondent, and if necessary, the intermediary. Placement of this sub part under R2, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, Requestors would be expected to establish processes directly with the responding parties, to improve upon requests and responses, and performance expectations. The provision will establish the process for resolving disagreements, while retaining the requestor's authority to request data it needs. Respondents would be expected to engage the requestor about the respondent's concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or for the establishment of data correction protocols.

R2.8 has included both security protocol and method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both.

Rationale for Requirement R3

R3 is revised to add the term "and Information" for consistency.

Rationale for Requirement R4

R4 is revised to add the term "and Information" for consistency.

Rationale for Requirement R5

R5 is revised to require the Respondents to satisfy the documented specification based on the criterion established in R1.5-1.8 for requests originating from Transmission Operator specifications.

R5 is revised to require the Respondents to satisfy the documented specification based on criterion established in R2.5-2.8 for requests originating from Balancing Authority specifications.

Violation Risk Factor and Violation Severity Level Justifications

2021-06 Modifications to IRO-010 and TOP-003

This document provides the standard drafting team's (SDT's) justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in [Project Number and Name or Standard Number]. Each requirement is assigned a VRF and a VSL. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the Electric Reliability Organizations (ERO) Sanction Guidelines. The SDT applied the following NERC criteria and FERC Guidelines when developing the VRFs and VSLs for the requirements.

NERC Criteria for Violation Risk Factors

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to Bulk Electric System instability, separation, or a cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to Bulk Electric System instability, separation, or a cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of a medium risk requirement is unlikely to lead to Bulk Electric System instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to Bulk Electric System instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System.

FERC Guidelines for Violation Risk Factors

Guideline (1) – Consistency with the Conclusions of the Final Blackout Report

FERC seeks to ensure that VRFs assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System. In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) – Consistency within a Reliability Standard

FERC expects a rational connection between the sub-Requirement VRF assignments and the main Requirement VRF assignment.

Guideline (3) – Consistency among Reliability Standards

FERC expects the assignment of VRFs corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) – Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular VRF level conforms to NERC’s definition of that risk level.

Guideline (5) – Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

NERC Criteria for Violation Severity Levels

VSLs define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

VSLs should be based on NERC’s overarching criteria shown in the table below:

| Lower VSL | Moderate VSL | High VSL | Severe VSL |
|--|--|--|--|
| The performance or product measured almost meets the full intent of the requirement. | The performance or product measured meets the majority of the intent of the requirement. | The performance or product measured does not meet the majority of the intent of the requirement, but does meet some of the intent. | The performance or product measured does not substantively meet the intent of the requirement. |

FERC Order of Violation Severity Levels

The FERC VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

Guideline (1) – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline (2) – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

Guideline (3) – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline (4) – Violation Severity Level Assignment Should Be Based on a Single Violation, Not on a Cumulative Number of Violations

Unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

IRO-010-5

VRF Justification for IRO-010-5, Requirement R1

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for IRO-010-5, Requirement R1

Please refer to the VSL table located below.

VRF Justification for IRO-010-5, Requirement R2

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to R2 were administrative in nature therefore the VRF remained a low.

VSL Justification for IRO-010-5, Requirement R2

Please refer to the VSL table located below.

VRF Justification for IRO-010-5, Requirement R3

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to Requirement R3 directly effect the electrical state or capability of the Bulk Electric system therefore the VRF remained a medium.

VSL Justification for IRO-010-5, Requirement R3

Please refer to the VSL table located below.

VSL Justifications for IRO-010-5, Requirement 1

| Lower | Moderate | High | Severe |
|---|--|--|---|
| <p>The Reliability Coordinator did not include two or fewer of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not include three to four of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not include five to seven of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> |

VSL Justifications for IRO-010-5, Requirement 1

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| <p>FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p> | <p>The requirement was modified by adding addition sub requirements to requirement R1. The purposed VSL was modified to reflect the addition sub requirement. It does not have an unintended consequence of lowering the level of compliance.</p> |
| <p>FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of</p> | <p>The requirement is for the responsible entity to maintain a document speciation for the data and information. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language.</p> |

VSL Justifications for IRO-010-5, Requirement 1

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| <p>Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for IRO-010-5, Requirement 2

| Lower | Moderate | High | Severe |
|--|--|---|--|
| The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

VSL Justifications for IRO-010-5, Requirement 2

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| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by add language for consistency purposes to requirement R2. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for IRO-010-5, Requirement 2

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| <p>Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for IRO-010-5, Requirement 3

| Lower | Moderate | High | Severe |
|---|---|---|---|
| The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use one of the criteria in Requirement R1 Parts 1.5 – 1.8. | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use two of the criteria in Requirement R1 Parts 1.5 – 1.8. | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use three or more of the criteria in Requirement R1 Parts 1.5 – 1.8. | The responsible entity receiving a specification in Requirement R2 did not satisfy the documented specifications. |

VSL Justifications for IRO-010-5, Requirement 3

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|--|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by deleting language for consistency purposes to requirement R3. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain Ambiguous Language | The requirement is for the responsible entity receiving a specification in Requirement R3 shall satisfy the documented specifications. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |
| FERC VSL G3 | The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent |

VSL Justifications for IRO-010-5, Requirement 3

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|---|---|
| <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

TOP-003-6

VRF Justification for TOP-003-6, Requirement R1

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R1

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R2

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R2 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R2

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R3

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R3

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R4

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R4

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R5

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to Requirement R3 directly effect the electrical state or capability of the Bulk Electric system therefore the VRF remained a medium.

VSL Justification for TOP-003-6, Requirement R5

Please refer to the VSL table located below.

| VSL Justifications for TOP-003-6, Requirement 1 | | | |
|--|---|---|--|
| Lower | Moderate | High | Severe |
| The Transmission Operator did not include two or fewer of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three to four of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include five to seven of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.8) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| VSL Justifications for TOP-003-6, Requirement 1 | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding additional sub requirements to requirement R1. The proposed VSL was modified to reflect the additional sub requirement. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 | The requirement is for the responsible entity to maintain a documented specification for the data and information. |

VSL Justifications for TOP-003-6, Requirement 1

| | |
|---|--|
| <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | <p>Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language.</p> |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for TOP-003-6, Requirement 2

| Lower | Moderate | High | Severe |
|--|---|---|---|
| <p>The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.8) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring.</p> | <p>The Balancing Authority did not include three to four of the parts (Part 2.1 through Part 2.8) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring.</p> | <p>The Balancing Authority did not include five to seven of the parts (Part 2.1 through Part 2.8) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring.</p> | <p>The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.8) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring.</p> <p>OR,</p> <p>The Balancing Authority did not have a documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring.</p> |

VSL Justifications for TOP-003-6 Requirement 2

| | |
|---|--|
| <p>FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p> | <p>The requirement was modified by adding additional language to requirement R2. The proposed VSL was modified to reflect the additional language. It does not have an unintended consequence of lowering the level of compliance.</p> |
| <p>FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category</p> | <p>The requirement is for the responsible entity to maintain a document specification for the data and information. Guideline 2a is not applicable as these VSLs are not binary. The VSLs do not contain ambiguous language.</p> |

VSL Justifications for TOP-003-6 Requirement 2

| | |
|--|--|
| <p>for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for TOP-003-6, Requirement 3

| Lower | Moderate | High | Severe |
|---|---|--|--|
| The Transmission Operator did not distribute its specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

VSL Justifications for TOP-003-6, Requirement 3

| | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by add language for consistency purposes to requirement R3. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 3

| | |
|--|--|
| <p>Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for TOP-003-6, Requirement 4

| Lower | Moderate | High | Severe |
|---|---|--|--|
| The Balancing Authority did not distribute its data specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its data specification to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its data specification to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its data specification to four or more entities, or more than 15% of the entities that have Data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. |

VSL Justifications for TOP-003-6, Requirement 4

| | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding language for consistency purposes to requirement R4. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is not applicable as these VSLs are not binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 4

| | |
|--|---|
| Ambiguous Language | |
| FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement | The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement. |
| FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations | Each VSL is based on a single violation and not cumulative violations. |

VSL Justifications for TOP-003-6, Requirement 5

| Lower | Moderate | High | Severe |
|---|---|---|--|
| The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use one of the criteria in Requirement R1 (Parts 1.5 – 1.8) or Requirement R2 (Parts 2.5 – 2.8). | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use two of the criteria in Requirement R1 (Parts 1.5 – 1.8) or Requirement R2 (Parts 2.5 – 2.8). | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use three or more of the criteria in Requirement R1 (Parts 1.5 – 1.8) or Requirement R2 (Parts 2.5 – 2.8). | The responsible entity receiving a specification in Requirement R3 or R4 did not satisfy the documented specification. |

VSL Justifications for TOP-003-6, Requirement 5

| | |
|--|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by deleting language for consistency purposes to requirement R5. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain Ambiguous Language | The requirement is for the responsible entity receiving a specification in Requirement R5 shall satisfy the documented specifications. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 5

| | |
|---|--|
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003

Formal Comment Period Open through December 15, 2022
Ballot Pools Forming through November 30, 2022

[Now Available](#)

A formal comment period is open through **8 p.m. Eastern, Thursday, December 15, 2022** for the following:

- IRO-010-5 – Reliability Coordinator Data Specification and Collection
- IRO-010-5 – Implementation Plan
- TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- TOP-003-6 – Implementation Plan

Commenting

Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments. Find an unofficial Word version of the comment form on the [project page](#).

Ballot Pools

Ballot pools are being formed through **8 p.m. Eastern, Wednesday, November 30, 2022**. Registered Ballot Body members can join the ballot pools [here](#).

- *Contact NERC IT support directly at <https://support.nerc.net/> (Monday–Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.*
- *Passwords expire every **6 months** and must be reset.*
- *The SBS is **not** supported for use on mobile devices.*
- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

Initial ballots for the standards and implementation plan, as well as non-binding polls of the associated Violation Risk Factors and Violation Severity Levels will be conducted **December 6-15, 2022**.

For information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003 observer list" in the Description Box.

North American Electric Reliability Corporation
3353 Peachtree Rd, NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

Comment Report

Project Name: 2021-06 Modifications to IRO-010 and TOP-003 | Draft 1
Comment Period Start Date: 10/25/2022
Comment Period End Date: 12/15/2022
Associated Ballots: 2021-06 Modifications to IRO-010 and TOP-003 Implementation Plan IN 1 OT
2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 IN 1 ST
2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 IN 1 ST

There were 65 sets of responses, including comments from approximately 176 different people from approximately 117 companies representing 10 of the Industry Segments as shown in the table on the following pages.

Questions

1. To address third party participation in data exchanges, the SDT added a provision in both IRO-010-5 and TOP-003-6 that recognizes that an applicable entity that is required to respond to the data specification may identify data and information that will be provided by a third-party intermediary. However, this provision does not shift the responsibility to respond to the data request from the applicable entity to the intermediary. Rather, the provision recognizes that an applicable entity may utilize an intermediary to pass through data and information unaltered from the entities that originated the data and information. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.
2. To mitigate potential zero defect assumptions and decrease administrative burdens, the SDT revised the data specification requirements in both IRO-010-5 and TOP-003-6 to include more specificity to the protocols for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.
3. To improve administration of data and information for the applicable entities, the SDT modified IRO-010-5 and TOP-003-6 to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information. Do you agree with these modifications? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.
4. IRO-010-5 and TOP-003-6 require general data specifications to allow the Reliability Coordinator, Transmission Operator, and Balancing Authority to perform its Operational Planning Analysis, Real Time Assessment, Real-time monitoring (undefined term), and BA analysis functions (undefined term). The SDT focused on data and information generally rather than prescriptive requirements. Do you believe that all data and information needed by the RC, TOP, and BA to perform these reliability tasks (for example, PMU streaming, outage coordination, distribution, generator fuel information, etc.) is available pursuant to the proposed standards or is additional clarification needed that is more prescriptive.
5. To support the proposed modifications, the SDT revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.
6. The SDT reviewed the other standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6 or create efficiencies reflective of the principle established by the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in these collateral standards, the SDT determined there is insufficient justifications for the retirement of these requirements and, therefore, the SDT is not proposing changes to these standards. Do you agree with this assessment? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.
7. The SDT is proposing an 18-month implementation plan. Would this proposed timeframe give enough time to implement the proposed modifications in IRO-010-5 and TOP-003-6? If you think an alternate timeframe is needed, please propose an alternate implementation plan and time period, and provide a detailed explanation of actions planned to meet the implementation deadline.

8. Provide additional comments regarding IRO-010-5 for the SDT to consider.

9. Provide additional comments regarding TOP-003-6 for the SDT to consider.

10. Provide additional comments for the SDT to consider, if desired.

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--|-----------------|------------|--------|-------------------------------|------------------------|--|-------------------------|---------------------|
| BC Hydro and Power Authority | Adrian Andreoiu | 1 | WECC | BC Hydro | Hootan Jarollahi | BC Hydro and Power Authority | 3 | WECC |
| | | | | | Helen Hamilton Harding | BC Hydro and Power Authority | 5 | WECC |
| | | | | | Adrian Andreoiu | BC Hydro and Power Authority | 1 | WECC |
| Santee Cooper | Chris Wagner | 1 | | Santee Cooper | Christine Pope | Santee Cooper | 1,3,5,6 | SERC |
| | | | | | Rene' Free | Santee Cooper | 1,3,5,6 | SERC |
| WEC Energy Group, Inc. | Christine Kane | 3 | | WEC Energy Group | Christine Kane | WEC Energy Group | 3 | RF |
| | | | | | Matthew Beilfuss | WEC Energy Group, Inc. | 4 | RF |
| | | | | | Clarice Zellmer | WEC Energy Group, Inc. | 5 | RF |
| | | | | | David Boeshaar | WEC Energy Group, Inc. | 6 | RF |
| Portland General Electric Co. | Daniel Mason | 6 | | Portland General Electric Co. | Brooke Jockin | Portland General Electric Co. | 1 | WECC |
| | | | | | Adam Menendez | Portland General Electric Co. | 3 | WECC |
| | | | | | Ryan Olson | Portland General Electric Co. | 5 | WECC |
| | | | | | Daniel Mason | Portland General Electric Co. | 6 | WECC |
| Public Utility District No. 1 of Chelan County | Diane E Landry | 1 | | CHPD | Meaghan Connell | Public Utility District No. 1 of Chelan County | 5 | WECC |
| | | | | | Joyce Gundry | Public Utility District No. 1 of Chelan County | 3 | WECC |

| | | | | | | | | |
|----------------------|---------------|-----------|---------------------------|--------------------|----------------|--|-----------|------|
| | | | | | Glen Pruitt | Public Utility District No. 1 of Chelan County | 6 | WECC |
| Jennie Wike | Jennie Wike | | WECC | Tacoma Power | Jennie Wike | Tacoma Public Utilities | 1,3,4,5,6 | WECC |
| | | | | | John Merrell | Tacoma Public Utilities (Tacoma, WA) | 1 | WECC |
| | | | | | Marc Donaldson | Tacoma Public Utilities (Tacoma, WA) | 3 | WECC |
| | | | | | Hien Ho | Tacoma Public Utilities (Tacoma, WA) | 4 | WECC |
| | | | | | Terry Gifford | Tacoma Public Utilities (Tacoma, WA) | 6 | WECC |
| | | | | | Ozan Ferrin | Tacoma Public Utilities (Tacoma, WA) | 5 | WECC |
| ACES Power Marketing | Jodirah Green | 1,3,4,5,6 | MRO,RF,SERC,Texas RE,WECC | ACES Collaborators | Bob Soloman | Hoosier Energy Electric Cooperative | 1 | RF |
| | | | | | Kevin Lyons | Central Iowa Power Cooperative | 1 | MRO |
| | | | | | Amber Skillern | East Kentucky Power Cooperative | 1 | SERC |
| | | | | | Ryan Strom | Buckeye Power, Inc. | 5 | RF |
| | | | | | David Hartman | Arizona G&T Cooperatives | 1 | WECC |
| Eversource Energy | Joshua London | 1 | | Eversource | Joshua London | Eversource Energy | 1 | NPCC |
| | | | | | Vicki O'Leary | Eversource Energy | 3 | NPCC |
| Entergy | Julie Hall | 6 | | Entergy | Oliver Burke | Entergy - Entergy Services, Inc. | 1 | SERC |
| | | | | | Jamie Prater | Entergy | 5 | SERC |

| | | | | | | | | |
|-------------------------------------|------------------|-------------|--------------------------|----------------------------------|-------------------|---|-----|------|
| DTE Energy - Detroit Edison Company | Karie Barczak | 3 | | DTE Energy - DTE Electric | Adrian Raducea | DTE Energy - Detroit Edison Company | 5 | RF |
| | | | | | Patricia Ireland | DTE Energy - DTE Electric | 4 | RF |
| | | | | | Karie Barczak | DTE Energy - DTE Electric | 3 | RF |
| ISO New England, Inc. | Kathleen Goodman | 2 | NA - Not Applicable,NPCC | Standards Review Committee (SRC) | Helen Lainis | IESO | 2 | NPCC |
| | | | | | Greg Campoli | NYISO | 2 | NPCC |
| | | | | | Kathleen Goodman | ISO-NE | 2 | NPCC |
| | | | | | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Mike Del Viscio | PJM | 2 | RF |
| | | | | | Charles Yeung | SPP | 2 | MRO |
| MRO | Kendra Buesgens | 1,2,3,4,5,6 | MRO | MRO NSRF | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Christopher Bills | City of Independence Power & Light | 3,5 | MRO |
| | | | | | Fred Meyer | Algonquin Power Co. | 3 | MRO |
| | | | | | Jamie Monette | Allete - Minnesota Power, Inc. | 1 | MRO |
| | | | | | Larry Heckert | Alliant Energy Corporation Services, Inc. | 4 | MRO |
| | | | | | Marc Gomez | Southwestern Power Administration | 1 | MRO |
| | | | | | Matthew Harward | Southwest Power Pool, Inc. | 2 | MRO |
| | | | | | LaTroy Brumfield | American Transmission Company, LLC | 1 | MRO |
| | | | | | Bryan Sherrow | Kansas City Board Of Public Utilities | 1 | MRO |
| | | | | | Terry Harbour | MidAmerican Energy | 1,3 | MRO |

| | | | | | | | | |
|--|----------------|---------|---------------------------|------------------|-------------------|--|-----------|------|
| | | | | | Jamison Cawley | Nebraska Public Power | 1,3,5 | MRO |
| | | | | | Seth Shoemaker | Muscatine Power & Water | 1,3,5,6 | MRO |
| | | | | | Michael Brytowski | Great River Energy | 1,3,5,6 | MRO |
| | | | | | David Heins | Omaha Public Power District | 1,3,5,6 | MRO |
| | | | | | George Brown | Acciona Energy North America | 5 | MRO |
| | | | | | Jaimin Patel | Saskatchewan Power Corporation | 1 | MRO |
| | | | | | Kimberly Bentley | Western Area Power Administration | 1,6 | MRO |
| FirstEnergy - FirstEnergy Corporation | Mark Garza | 4 | | FE Voter | Julie Severino | FirstEnergy - FirstEnergy Corporation | 1 | RF |
| | | | | | Aaron Ghodooshim | FirstEnergy - FirstEnergy Corporation | 3 | RF |
| | | | | | Robert Loy | FirstEnergy - FirstEnergy Solutions | 5 | RF |
| | | | | | Mark Garza | FirstEnergy-FirstEnergy | 1,3,4,5,6 | RF |
| | | | | | Stacey Sheehan | FirstEnergy - FirstEnergy Corporation | 6 | RF |
| Southern Company - Southern Company Services, Inc. | Pamela Frazier | 1,3,5,6 | MRO,RF,SERC,Texas RE,WECC | Southern Company | Matt Carden | Southern Company - Southern Company Services, Inc. | 1 | SERC |
| | | | | | Joel Dembowski | Southern Company - Alabama Power Company | 3 | SERC |
| | | | | | Jim Howell, Jr. | Southern Company - Southern | 5 | SERC |

| | | | | | | | | |
|------|-----------|----------------------|------|----------|-----------------------------------|--|----|------|
| | | | | | | Company Generation | | |
| | | | | | Ron Carlsen | Southern Company - Southern Company Generation | 6 | SERC |
| NPCC | Ruida Shu | 1,2,3,4,5,6,7,8,9,10 | NPCC | NPCC RSC | Gerry Dunbar | Northeast Power Coordinating Council | 10 | NPCC |
| | | | | | Sheraz Majid | Hydro One Networks, Inc. | 1 | NPCC |
| | | | | | Deidre Altobell | Con Edison | 1 | NPCC |
| | | | | | John Hastings | National Grid | 1 | NPCC |
| | | | | | Jeffrey Streifling | NB Power Corporation | 1 | NPCC |
| | | | | | Michele Tondalo | United Illuminating Co. | 1 | NPCC |
| | | | | | Chantal Mazza | Hydro Quebec | 1 | NPCC |
| | | | | | Stephanie Ullah-Mazzuca | Orange and Rockland | 1 | NPCC |
| | | | | | Quintin Lee | Eversource Energy | 1 | NPCC |
| | | | | | Michael Ridolfino | Central Hudson Gas & Electric Corp. | 1 | NPCC |
| | | | | | Dan Kopin | Vermont Electric Power Company | 1 | NPCC |
| | | | | | James Grant | NYISO | 2 | NPCC |
| | | | | | John Pearson | ISO New England, Inc. | 2 | NPCC |
| | | | | | Harishkumar Subramani Vijay Kumar | Independent Electricity System Operator | 2 | NPCC |
| | | | | | Nicolas Turcotte | Hydro-Quebec TransEnergie | 1 | NPCC |
| | | | | | Randy MacDonald | New Brunswick Power Corporation | 2 | NPCC |

| | | | | | | | | |
|---------------------|-------------|---|--|----------|--------------------|--|----|---------------------|
| | | | | | Dermot Smyth | Con Ed - Consolidated Edison Co. of New York | 1 | NPCC |
| | | | | | Michael Jones | National Grid | 3 | NPCC |
| | | | | | David Burke | Orange and Rockland | 3 | NPCC |
| | | | | | Peter Yost | Con Ed - Consolidated Edison Co. of New York | 3 | NPCC |
| | | | | | Salvatore Spagnolo | New York Power Authority | 1 | NPCC |
| | | | | | Sean Bodkin | Dominion - Dominion Resources, Inc. | 6 | NPCC |
| | | | | | David Kwan | Ontario Power Generation | 4 | NPCC |
| | | | | | Silvia Mitchell | NextEra Energy - Florida Power and Light Co. | 1 | NPCC |
| | | | | | Glen Smith | Entergy Services | 4 | NPCC |
| | | | | | Sean Cavote | PSEG | 4 | NPCC |
| | | | | | Jason Chandler | Con Edison | 5 | NPCC |
| | | | | | Tracy MacNicoll | Utility Services | 5 | NPCC |
| | | | | | Shivaz Chopra | New York Power Authority | 6 | NPCC |
| | | | | | Vijay Puran | New York State Department of Public Service | 6 | NPCC |
| | | | | | ALAN ADAMSON | New York State Reliability Council | 10 | NPCC |
| | | | | | David Kiguel | Independent | 7 | NPCC |
| | | | | | Joel Charlebois | AESI | 7 | NPCC |
| Dominion - Dominion | Sean Bodkin | 6 | | Dominion | Connie Lowe | Dominion - Dominion | 3 | NA - Not Applicable |

| | | | | | | | | |
|--|--------------|---|--|------|--------------------|--|---|------------------------|
| Resources, Inc. | | | | | | Resources, Inc. | | |
| | | | | | Lou Oberski | Dominion - Dominion Resources, Inc. | 5 | NA - Not Applicable |
| | | | | | Larry Nash | Dominion - Dominion Virginia Power | 1 | NA - Not Applicable |
| | | | | | Rachel Snead | Dominion - Dominion Resources, Inc. | 5 | NA - Not Applicable |
| Associated Electric Cooperative, Inc. | Todd Bennett | 3 | | AECI | Michael Bax | Central Electric Power Cooperative (Missouri) | 1 | SERC |
| | | | | | Adam Weber | Central Electric Power Cooperative (Missouri) | 3 | SERC |
| | | | | | Stephen Pogue | M and A Electric Power Cooperative | 3 | SERC |
| | | | | | William Price | M and A Electric Power Cooperative | 1 | SERC |
| | | | | | Peter Dawson | Sho-Me Power Electric Cooperative | 1 | SERC |
| | | | | | Mark Ramsey | N.W. Electric Power Cooperative, Inc. | 1 | NPCC |
| | | | | | John Stickley | NW Electric Power Cooperative, Inc. | 3 | SERC |
| | | | | | Tony Gott | KAMO Electric Cooperative | 3 | SERC |
| | | | | | Micah Breedlove | KAMO Electric Cooperative | 1 | SERC |
| | | | | | Kevin White | Northeast Missouri Electric Power Cooperative | 1 | SERC |

| | | | | | | | | |
|--|--|--|--|--|-----------------|---|---|------|
| | | | | | Skyler Wiegmann | Northeast Missouri Electric Power Cooperative | 3 | SERC |
| | | | | | Ryan Ziegler | Associated Electric Cooperative, Inc. | 1 | SERC |
| | | | | | Brian Ackermann | Associated Electric Cooperative, Inc. | 6 | SERC |
| | | | | | Brad Haralson | Associated Electric Cooperative, Inc. | 5 | SERC |

1. To address third party participation in data exchanges, the SDT added a provision in both IRO-010-5 and TOP-003-6 that recognizes that an applicable entity that is required to respond to the data specification may identify data and information that will be provided by a third-party intermediary. However, this provision does not shift the responsibility to respond to the data request from the applicable entity to the intermediary. Rather, the provision recognizes that an applicable entity may utilize an intermediary to pass through data and information unaltered from the entities that originated the data and information. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer No

Document Name

Comment

Dominion Energy is concerned over the requirement that an intermediate entity have performance responsibility for the accuracy of data from a third party as defined by the end user of the data. An entity does not have the ability to validate the accuracy or correct data it does not originate.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer No

Document Name

Comment

The MRO NSRF does not believe the additional language of “identification of an intermediary to pass through data and information unaltered from the entities.” Is related to the reliability tasks of: Operational Planning Analysis, Real-time Assessments, Real-time monitoring & Balancing Authority analysis functions. As stated in the ‘Detailed Description’ section of the Standards Authorization Request (SAR), “the Standard Drafting Team should not revise requirements that are not directly related to the four reliability tasks identified above.” The MRO NSRF does not believe that ‘identification of intermediaries’ is within the scope of the SAR.

In addition, the MRO NSRF does not see the value of the language:

{C}· Intermediary may not be a NERC Registered Entity, there is no reliability value in identifying whom this intermediary is from an administrative standpoint.

{C}o {C}Further, the intermediary would already be known to the RCs, TOPs & BAs, as the data received would be coming from this intermediary.

{C}· The data should always remain ‘unaltered’ if a responsible entity, whether NERC Registered Entity, is to meet compliance will the IRO-010-5 & TOP-003-6 data specification.

{C}· If an Intermediary is to be used, the contractual terms & conditions with the NERC Registered Entity, would ultimately specify who, what, where, when & how.

{C}· Identifying the intermediary could lead to miscommunications and reliability gaps if there ever was a problem with the data. The RCs, TOPs & BAs could contact the intermediary rather than the responsible entity to resolve/question data integrity issues.

| | |
|---------|--|
| Likes 2 | Lincoln Electric System, 1, Johnson Josh; Fuhrman Andy On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; |
|---------|--|

| | |
|------------|--|
| Dislikes 0 | |
|------------|--|

Response

LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF

| | |
|---------------|----|
| Answer | No |
|---------------|----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

Comment

ATC does not see the value in identifying an intermediary. The standard as currently written is silent on the topic of intermediaries and, therefore, does not prohibit or require the use of intermediaries. It is ultimately the responsibility of the NERC registered requestor and the entity that the requestor identified in R1.1 as having the necessary method to provide the data. The data path should not be considered. Having this requirement adds administrative burden to the standard, which is contrary to the objective of the revisions.

| | |
|---------|--|
| Likes 0 | |
|---------|--|

| | |
|------------|--|
| Dislikes 0 | |
|------------|--|

| | |
|---|----|
| Response | |
| | |
| Thomas Foltz - AEP - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>AEP is appreciative of the efforts of the Standards Drafting Team, and supports their overall efforts and proposed standard revisions. We believe that a majority of what they have proposed will indeed be beneficial and will improve the future state of these standards. We would however like to share one concern which has impacted our balloting. There will be instances where the Transmission Operator needs data from the Reliability Coordinator (including but not limited to unit commitment data, load information, generation and load forecasts, etc.), however the RC is not included as an Applicable Entity in TOP-003, nor is it specifically obligated under TOP-003 R5. AEP recommends that the RC be added as a Applicable Entity for TOP-003 and also included in the obligations of R5. Our decision to vote negatively on the proposed revision of TOP-003 is solely driven by this concern.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| | |
| Jamie Monette - Allete - Minnesota Power, Inc. - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>Minnesota Power agrees with EEI's comments.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| | |
| Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>WEC Energy Group supports EEI's comments.</p> | |
| Likes | 0 |

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

No

Document Name

Comment

AZPS agrees with the intent of the updated provisions but agrees with EEI that this does not meet the scope identified by the SER Phase 2 project. We support EEI's comments that there is insufficient reason to open these two standards based on the modification proposed.

Likes 0

Dislikes 0

Response

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

No

Document Name

Comment

BPA believes this is an additional administrative burden that does not increase reliability.

Likes 0

Dislikes 0

Response

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer

No

Document Name

Comment

CenterPoint Energy Houston Electric, LLC (CEHE) supports the comments as submitted by the Edison Electric Institute.

Likes 0

Dislikes 0

Response

Daniel Gacek - Exelon - 1

Answer No

Document Name

Comment

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC

Answer No

Document Name

Comment

Xcel Energy supports EEI comments.

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3

Answer No

Document Name

Comment

Exelon supports comments submitted by EEI.

Likes 0

Dislikes 0

Response

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

| | |
|--|----|
| Answer | No |
| Document Name | |
| Comment | |
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| James Baldwin - Lower Colorado River Authority - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| LCRA TSC does not see the need to identify an intermediary. The current version of the standard does not prohibit or require the use of intermediaries. We believe it is ultimately the responsibility of the NERC registered requestor and the entity that the requestor identified in R1.1 as having the necessary method to provide the data. The data path should not be considered. Having this requirement adds administrative burden to the standard, which is contrary to the objective of the revisions. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Carl Pineault - Hydro-Quebec Production - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| While the text proposed for R1.4 can simplify data handling for some entities, we agree with ATC comments that the current standard is silent – neither permitting nor prohibiting such transfers. Therefore, the added requirement – which is fundamentally administrative – is not necessary and potentially confusing. | |
| Also, the question and the technical rationale for R1.4 - though not normative – affirms that the compliance obligation remains with the originating entity even if an intermediary is used. We point out that the text of R1 does not currently explicitly require data and information needed by the RC to be communicated to the RC: that is, the recipient is not required to be specified in R1 for different information. When the specification published by the RC requires the transmission of information to an entity other than the RC, we believe the respondent (originating entity) meets its compliance obligation when it transfers the required information to the specified entity per the specification. The respondent is not responsible for the further transfer or processing of the information. It is possible, for example, for the specification to require the transfer of modelling information to a planning entity that then transfers it, after processing, to the RC. Other use cases are imaginable. Therefore, the rationale’s text that indicates compliance obligations stay | |

with the respondent (paragraph 3 of Technical Rationale for R1.4) applies only in the case where a respondent asks to use an intermediary, not when an RC requires the use of an intermediary. All this is already manageable within the existing requirement.

If R1.4 (or revision thereof) were to stay in, we think the rationale should distinguish between the two types of intermediaries. If an entity asks to use an intermediary, it is responsible for the eventual reception by the RC of the information; if the RC orders the use of an intermediary, it is responsible for collecting the data from the intermediary.

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer No

Document Name

Comment

MPC supports comments submitted by the MRO NERC Standards Review Forum.

Likes 0

Dislikes 0

Response

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

Answer No

Document Name

Comment

Santee Cooper believes that this will create additional administrative burdens and that it does not increase reliability. We also believe that 'identification of intermediaries' is NOT within the scope of the SAR and the current language appears to place the burden on the intermediary if the end-user specifies so in their protocol. Any protocols regarding accuracy and data correction should not place any responsibility on the intermediary who is only an information conduit.

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer No

| | |
|---|---|
| Document Name | |
| Comment | |
| <p>The MRO NSRF does not believe the additional language of “identification of an intermediary to pass through data and information unaltered from the entities” is needed to achieve the underlying purposes of the SAR: to mitigate zero defect expectations or reduce administrative burdens.</p> <p>The MRO NSRF does not see the value of the language:</p> <ul style="list-style-type: none"> • Intermediary may not be a NERC Registered Entity, there is no reliability value in identifying whom this intermediary is from an administrative standpoint. o Further, the intermediary would already be known to the RCs, TOPs & BAs, as the data received would be coming from this intermediary. • The data should always remain ‘unaltered’ if a responsible entity, whether NERC Registered Entity, is to meet compliance with the IRO-010-5 & TOP-003-6 data specification. • If an Intermediary is to be used, the contractual terms & conditions with the NERC Registered Entity, would ultimately specify who, what, where, when & how. • Identifying the intermediary could lead to miscommunications and reliability gaps if there ever was a problem with the data. The RCs, TOPs & BAs could contact the intermediary rather than the responsible entity to resolve/question data integrity issues. | |
| Likes | 0 |
| Dislikes | 0 |

Response

Nicolas Turcotte - Hydro-Québec TransEnergie - 1

| | |
|---------------|----|
| Answer | No |
|---------------|----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

| | |
|--|--|
| Comment | |
| <p>The standard as currently written is silent on the topic of intermediaries– neither permitting nor prohibiting such transfers and, therefore, does not prohibit or require the use of intermediaries. It is ultimately the responsibility of the NERC registered requestor and the entity that the requestor identified in R1.1 as having the necessary method to provide the data.</p> <p>If the intent behind “identification of the applicable entities” in R1.1 includes applicable entities that are not identified in the Applicability section of the standard, a clarification in the Technical Rationale and in the standard would be beneficial. For example, “identification of applicable entities in Section 4 or other not referred to in Section 4 responsible for responding to the specification ...”. For example, when the specification published by the RC requires the transmission of information to an entity other than the RC, we believe the respondent (originating entity) meets its compliance obligation when it transfers the required information to the specified entity per the specification. The respondent is not responsible for the further transfer or processing of the information. It is possible that modelling information be transferred to a planning entity that then transfers it, after processing, to the RC. Other use cases are imaginable. Therefore, the rationale’s text that indicates compliance obligations stay with the respondent (paragraph 3 of Technical Rationale for R1.4) applies only in the case where a respondent asks to use an intermediary, not when an RC requires the use of an intermediary. All this is already manageable within the existing requirement.</p> | |

If R1.4 were to stay we think the rationale should distinguish between the two types of intermediaries. If an entity asks to use an intermediary, it is responsible for the eventual reception by the RC of the information; if the RC orders the use of an intermediary, it is responsible for collecting the data from the intermediary.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

No

Document Name

Comment

While EEI would not be opposed to adding language in IRO-010-5 and TOP-003-6 to specifically address the use of third-party intermediaries, however, this issue is not a reliability gap and is not a sufficient reason to open these two Reliability Standards. The primary purpose of this project was to address issues identified under the SER Phase 2 project which identified evidence and data retention as the number one concern identified by entities that needed to be addressed. Our review of the changes indicates this was not addressed and there is insufficient reason to open these two standards and make the modifications proposed.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #1.

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer

No

Document Name

Comment

LCRA TSC does not see the need to identify an intermediary. The current version of the standard does not prohibit or require the use of intermediaries. We believe it is ultimately the responsibility of the NERC registered requestor and the entity that the requestor identified in R1.1 as having the necessary method to provide the data. The data path should not be considered. Having this requirement adds administrative burden to the standard, which is contrary to the objective of the revisions.

| | |
|-------|---|
| Likes | 0 |
|-------|---|

| | |
|----------|---|
| Dislikes | 0 |
|----------|---|

Response

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

| | |
|---------------|----|
| Answer | No |
|---------------|----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

Comment

The ISO/RTO Council Standards Review Committee (SRC) does not see a reliability need to have this provision (IRO-010, Part 1.4 and TOP-003, R1.4) in the standard. As entities are successfully able to utilize an intermediary today, we do not see the value in adding this commercial (contractual) provision to a mandatory reliability standard. Further, as this project was initiated pursuant to the Standards Efficiency Review (SER), the goal of this effort is to simplify (versus complicate) administrative burdens.

| | |
|-------|---|
| Likes | 0 |
|-------|---|

| | |
|----------|---|
| Dislikes | 0 |
|----------|---|

Response

Russell Noble - Cowlitz County PUD - 3

| | |
|---------------|----|
| Answer | No |
|---------------|----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

Comment

Cowlitz PUD fails to see any reliability objective being addressed by this additional requirement. Please note originating entities not party to the RC/TOP/BA specifications are likely not registered with NERC as this data can originate from non-BES systems. This would add unnecessary administrative burdens contrary to the SAR objective.

| | |
|-------|---|
| Likes | 0 |
|-------|---|

| | |
|----------|---|
| Dislikes | 0 |
|----------|---|

Response

Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3**Answer** No**Document Name****Comment**

Likes 0

Dislikes 0

Response**Dwanique Spiller - Berkshire Hathaway - NV Energy - 5****Answer** No**Document Name****Comment**

Likes 0

Dislikes 0

Response**Nazra Gladu - Manitoba Hydro - 1****Answer** Yes**Document Name****Comment**

No comment.

Likes 0

Dislikes 0

Response**Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF****Answer** Yes**Document Name****Comment**

None.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer Yes

Document Name

Comment

The NAGF supports the added provision in IRO-010-5 and TOP-003-6 to allow a third-party intermediary to provide data and information of the behalf of the responsible respondent/applicable entity.

Likes 0

Dislikes 0

Response

Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay

Answer Yes

Document Name

Comment

AES Clean Energy agrees with these added provisions.

Likes 0

Dislikes 0

Response

Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez

Answer Yes

Document Name

Comment

In addition, the same rules should apply to the intermediary as they too have certain control of the data and information.

Likes 0

Dislikes 0

Response

Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer

Yes

Document Name

Comment

Southern Indiana Gas and Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) has responded "yes" to question 1; however, SIGE would like the Standard Drafting Team to define and provide examples for the term "intermediary" in IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Yes

Document Name

Comment

We recommend the drafting team consider removing, or provide some clarifying statements for, "unaltered" in R1, Part 1.4 (both standards). Our assumption is that the intent here is to state that the integrity of the data remains true from the originator to the RC. As long as the integrity is intact, can it be reformatted as it is passed through? If the data is provided in one unit of measurement, can a different unit of measurement be calculated by the intermediary as part of the mutually agreed upon format?

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Yes

Document Name

Comment

Ameren agrees with and supports NAGF comments

Likes 0

Dislikes 0

Response

Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE

Answer

Yes

Document Name

Comment

PNMR agrees.

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6

Answer

Yes

Document Name

Comment

IID currently does not have a third-party intermediary providing information. If in the future IID has a third-party intermediary providing information, IID understands they will be responsible to respond to the data request from the applicable entity.

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer

Yes

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer

Yes

Document Name

Comment

Constellation has no additional comments

Kimberly Turco on behalf of Constellation Segement 5 and 6

Likes 0

Dislikes 0

Response

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Marc Sedor - Seminole Electric Cooperative, Inc. - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Melanie Wong - Seminole Electric Cooperative, Inc. - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ken Habgood - Seminole Electric Cooperative, Inc. - 4

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Lindsey Mannion - ReliabilityFirst - 10

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |

Dislikes 0

Response

Josh Combs - Black Hills Corporation - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mike Magruder - Avista - Avista Corporation - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Bryan Bennett - Sempra - San Diego Gas and Electric - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Yes

| | |
|---|-----|
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | |
| Document Name | |
| Comment | |
| <p>We are not opposed to adding language in IRO-010-5 and TOP-003-6 to address the use of third-party intermediaries, however, this issue is not reflective of the primary purpose of this project which was to address issues identified under the SER Phase 2 project which identified evidence and data retention as the number one concern identified by entities that needed to be addressed. This does not appear to have been addressed.</p> | |

Likes 0

Dislikes 0

Response

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer

Document Name

Comment

We support NPCC's comments:

We are not opposed to adding language in IRO-010-5 and TOP-003-6 to address the use of third-party intermediaries, however, this issue is not reflective of the primary purpose of this project which was to address issues identified under the SER Phase 2 project which identified evidence and data retention as the number one concern identified by entities that needed to be addressed. This does not appear to have been addressed.

Likes 0

Dislikes 0

Response

Sheraz Majid - Hydro One Networks, Inc. - 1

Answer

Document Name

Comment

Need more clarity on who are/could be intermediaries either in the standard or the technical rationale. Are these telecom provides (service and/or physical), RCs to TO/TOPs, TO/TOPs to RCs such as GO via RC (intermediary) to TO or GOs via TO (intermediary) to RCs etc.). Also, need to explanation on what is it trying to address.

+support comments submitted by NPCC RSC.

Likes 0

Dislikes 0

Response

2. To mitigate potential zero defect assumptions and decrease administrative burdens, the SDT revised the data specification requirements in both IRO-010-5 and TOP-003-6 to include more specificity to the protocols for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Russell Noble - Cowlitz County PUD - 3

Answer No

Document Name

Comment

Again, the proposed changes add complexity and administrative burden. Cowlitz PUD supports comments by others in this regard and will review SDT responses to these commentors.

Likes 0

Dislikes 0

Response

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

Answer No

Document Name

Comment

Although the SRC agrees with the SDT's intent to mitigate the potential for zero defect performance, we don't believe the proposed language addresses that concern. The SRC proposes that emphasis be placed on the dispute resolution process, whereby if the entity is not receiving the data necessary to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments, could tailor its approach according to the resultant risk the loss of information poses to reliably operating the BES.

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer No

Document Name

Comment

Tri-State agrees with EEI comments.

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer

No

Document Name

Comment

LCRA TSC believes these changes produce additional administrative burden without reducing potential zero-defect situations. Further defining the requirements around data sharing seems to increase risk of violation rather than decrease it. In addition, it isn't clear that defining accurate performance criteria for ICCP data would even be possible and tracking the availability and accuracy of that data would be burdensome.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #2.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

No

Document Name

Comment

EEL does not agree the problems entities have encountered with IRO-010-5 and TOP-003-6 are specific to data specifications received or the protocols for providing data and information. Instead, the concerns included the excessive costs associated with 1) storage of this data that outweighed the know risks, and 2) costs of managing, compiling and backing up data for the sole purpose of compliance monitoring and enforcement activities. Unfortunately, none of these concerns have been addressed in this first draft. Therefore, EEL does not support the proposed changes.

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer No

Document Name

Comment

The MRO NSRF believes the additional language is useful to eliminate 'zero defect' assumptions. Notwithstanding, the MRO NSRF has concerns with the addition of the performance criteria of 'availability' without appropriate bounding language or allowances for unavailability (equipment/component failure, maintenance, et cetera). A data requestor may request 100% availability, which would then create a 'zero defect' requirement. The MRO NSRF suggests the following language:

IRO-010 & TOP-003 1.5.2, TOP-003 2.5.2 Performance criteria for the availability and accuracy of data and information, as applicable;

IRO-010 & TOP-003 1.5.2.1, TOP-003 2.5.2.1 Performance criteria for the availability shall be a magnitude of less than 100%, as applicable,

New Requirement:

IRO-010 R4, TOP-003 R6. Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider, when the data and information is unavailable, as identified in Requirement R1, shall consult with the effected applicable entities to determine a mutually agreeable action, if any, as it relates to the unavailable data and information.

Finally, the NSRF recommends coordination between the drafting team and the CIP-12 team that is dealing with similar issues for data exchanged between control centers.

Likes 0

Dislikes 0

Response

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

Answer No

Document Name

Comment

Santee Cooper has concerns with the addition of the performance criteria of 'availability' without appropriate bounding language or allowances for unavailability (equipment/component failure, maintenance, et cetera). The development and validation of metrics pertaining to deadlines and performance criteria are amplified with this change in language. A data requestor may request 100% availability, which would then create a 'zero defect' requirement.

IRO-002-7 R2 and TOP-001-5 R20 and R22 already require RCs, TOPs and BAs, respectively, entities to have redundantly and diversely routed data exchange infrastructure which addresses the issues with data availability without additional language in the standard. There are requirements in place with IRO-018-1(i) R1 TOP-010-1(i) R1 and R2 to address the quality of the Real-time data used in Real-time Analysis and Real-time monitoring. The changes may create redundancy with data quality and accuracy of Real-time monitoring and analysis capability requirements in TOP-010(i).

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

No

Document Name

Comment

MPC supports comments submitted by the MRO NERC Standards Review Forum.

Likes 0

Dislikes 0

Response

James Baldwin - Lower Colorado River Authority - 1

Answer

No

Document Name

Comment

LCRA TSC believes these changes produce additional administrative burden without reducing potential zero-defect situations. Further defining the requirements around data sharing seems to increase risk of violation rather than decrease it. In addition, it isn't clear that defining accurate performance criteria for ICCP data would even be possible and tracking the availability and accuracy of that data would be burdensome.

Likes 0

Dislikes 0

Response

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer No

Document Name

Comment

Portland General Electric Company supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer No

Document Name

Comment

We believe the current standard language is adequate to provide for the timely transfer of data and information. Any issue with the transfer timeliness or quality of data and information is corrected on an event basis. While it is preferable there never be issues with data transfer or quality, we understand there are instances where there are issues, but those issues are currently being mitigated without the need for additional standard language.

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3

Answer No

Document Name

Comment

Exelon supports comments submitted by EEI.

Likes 0

Dislikes 0

Response

Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC**Answer** No**Document Name****Comment**

Xcel Energy supports EEI comments.

Likes 0

Dislikes 0

Response**Daniel Gacek - Exelon - 1****Answer** No**Document Name****Comment**

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response**Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE****Answer** No**Document Name****Comment**

CEHE supports the comments as submitted by the Edison Electric Institute.

Likes 0

Dislikes 0

Response**Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC****Answer** No

Document Name

Comment

BPA believes these changes produce additional administrative burden without reducing potential zero defect situations. Further defining the requirements around data sharing seems to increase risk of violation rather than decrease it. For example, now we run the risk of violation for failing to provide a piece of data *and for providing it late*. In addition, it isn't clear that defining accuracy performance criteria for ICCP data would even be possible.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

No

Document Name

Comment

AZPS does not agree with these provisions and supports EEIs comments that they do not address the concerns with the excessive costs associated with 1) storage of this data that outweighed the know risks, and 2) costs of managing, compiling and backing up data for the sole purpose of compliance monitoring and enforcement activities.

Likes 0

Dislikes 0

Response

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer

No

Document Name

Comment

WEC Energy Group supports EEI's comments.

Likes 0

Dislikes 0

Response

Jamie Monette - Allete - Minnesota Power, Inc. - 1

| | |
|--|----|
| Answer | No |
| Document Name | |
| Comment | |
| Minnesota Power agrees with EEI's comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | No |
| Document Name | |
| Comment | |
| The development and validation of metrics pertaining to deadlines and performance criteria are amplified with this change in language. Current practices are more than adequate when issues are identified and are currently resolved in an efficient and effective manner. Duke Energy seeks additional known defect assumptions that would require a modification to existing Requirements. IRO-002-7 R2 and TOP-001-5 R20 and R22 already require RCs, TOP's and BA's entities, respectively, to have a redundant and diverse routed data exchange infrastructure which addresses the issues with data availability without additional language in the standard. Duke Energy also disagree with the inclusion of the consideration of the "accuracy of data and information." There are requirements in place with IRO-018-1(i) R1 TOP-010-1(i) R1 and R2 to address the quality of the Real-time data used in Real-time Analysis and Real-time monitoring. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF | |
| Answer | No |
| Document Name | |
| Comment | |
| By adding more specific requirements, the standard would now force a zero-defect footing and then build from that, which means the requestor will need to track if the respondent is meeting the requirements with zero defects unless they are corrected under R1.5.3. This would add more administrative burden to the requestor. | |
| Likes 0 | |
| Dislikes 0 | |

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer No

Document Name

Comment

The MRO NSRF believes the additional language is useful to eliminate 'zero defect' assumptions. Notwithstanding, the MRO NSRF has concerns with the addition of the performance criteria of 'availability' without appropriate bounding language or allowances for unavailability (equipment/component failure, maintenance, et cetera). A data requestor may request 100% availability, which would then create a 'zero defect' requirement. The MRO NSRF suggests the following language:

IRO-010 & TOP-003 1.5.2, TOP-003 2.5.2 Performance criteria for the availability and accuracy of data and information, as applicable;

IRO-010 & TOP-003 1.5.2.1, TOP-003 2.5.2.1 Performance criteria for the availability shall be a magnitude of less than 100%, as applicable,

New Requirement:

IRO-010 R4, TOP-003 R6. Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider, when the data and information is unavailable, as identified in Requirement R1, shall consult with the effected applicable entities to determine a mutually agreeable action, if any, as it relates to the unavailable data and information.

Likes 1 Lincoln Electric System, 1, Johnson Josh

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer No

Document Name

Comment

As noted in the answer to Q1, the current language appears to place the burden on the intermediary if the end-user specifies so in their protocol. Any protocols regarding accuracy and data correction should not place any responsibility on the intermediary who is only an information conduit.

Likes 0

Dislikes 0

Response

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer No

Document Name

Comment

Agree only with the statement "...and provisions to allow a respondent entity to update or correct data and information as necessary." Adding more specificity regarding deadlines or periodicity, and performance criteria for availability and accuracy of data, may actually impose more restrictions stipulated in the standard (essentially adding to the zero-defect assumptions), and removes the ability for entities to determine those nuances between themselves to best fit their interactions.

Likes 0

Dislikes 0

Response

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer No

Document Name

Comment

Likes 0

Dislikes 0

Response

Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3

Answer No

Document Name

Comment

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer Yes

Document Name

Comment

Constellation has no additional comments

Kimberly Turco on behalf of Constellation Segement 5 and 6

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer Yes

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6**Answer** Yes**Document Name****Comment**

IID agrees with the standard language change, as long as all entities agree regarding specifications.

Likes 0

Dislikes 0

Response**Carl Pineault - Hydro-Qu?bec Production - 5****Answer** Yes**Document Name****Comment**

We support the addition of 1.5.2 as meeting one of the objectives of the current project. However, suggestions by other commenters to promote it to 1.6 in the numbering seem warranted. Also, we support Manitoba Hydro’s comment and suggestion (1.5.2 moved to 1.6 and reworded as “1.6 "Identification of a mutually agreed upon format and mutually agreed upon performance criteria for the availability or accuracy of data and information"). Giving the entity no say puts the criteria entirely in the RC’s hands with no oversight which could result in the same zero-default expectation that originated the current project. The possible concern that entities could use this mutual agreement provision to harm reliability is overblown. Were an RC and an entity to fundamentally disagree, there are regional forums for possible mediation and failing that, regulatory instances like reliability organizations that can settle such matters in a formal compliance oriented environment with reliability as the objective. The possibility of such oversight should be sufficient to forestall deadlocks over mutual agreement.

As to justifying the need for such mutual agreement, we consider that it insures a dialogue between the RC and the entities in its Area. For example, some information is available less reliably or not all from some older facilities. Such facilities – often integrated long ago with older grid integration requirements - still support reliable grid operations through alternative operations management.

Likes 0

Dislikes 0

Response**Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE****Answer** Yes**Document Name****Comment**

PNMR agrees.

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Yes

Document Name

Comment

Ameren agrees with and supports NAGF comments

Likes 0

Dislikes 0

Response

Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer

Yes

Document Name

Comment

SIGE believes that these changes create redundancy with data quality and accuracy of Real-time monitoring and analysis capability requirements in TOP-010(i). However, these revisions may add a benefit to data and information specifications that do not pertain only to real time requirements.

Likes 0

Dislikes 0

Response

Lindsey Mannion - ReliabilityFirst - 10

Answer

Yes

Document Name

Comment

The existing standards do not appear convey a zero-defect assumption, and the existing evidence retention periods do not appear to be overly burdensome. Revising the standard to require RC/TOP/BAs to document minimum performance requirements within specifications could lead to minimum common denominator behavior from some recipients of the specifications, so RC/TOP/BAs will need to be careful to ensure the minimum performance requirements are acceptable.

Likes 0

Dislikes 0

Response

Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay

Answer

Yes

Document Name

Comment

AES Clean Energy agrees with proposed changes and believes that more specificity to protocols for providing data and information will be extremely helpful.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Yes

Document Name

Comment

The NAGF agrees with proposed changes to provide more specificity to protocols for providing data and information.

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer

Yes

Document Name

Comment

While outside the scope of the current SAR, AEP would like to recommend that TOP-003 R1.3 and its subparts be deleted once the recent obligations associated with Project 2021-07 (Extreme Cold Weather) have become enforceable.

Likes 0

Dislikes 0

Response

Nazra Gladu - Manitoba Hydro - 1

Answer

Yes

Document Name

Comment

Manitoba Hydro agrees with the standard drafting team that more specificity is required for performance. Manitoba Hydro suggests that 1.5.2 be moved and re-worded from "Performance criteria for the availability or accuracy of data and information, as applicable" to section 1.6 "Identification of a mutually agreed upon format and mutually agreed upon performance criteria for the availability or accuracy of data and information".

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Bryan Bennett - Sempra - San Diego Gas and Electric - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Québec TransEnergie - 1

| | |
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| Answer | Yes |
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| Comment |
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| Likes 0 |
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| Dislikes 0 |
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| Response |
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Mike Magruder - Avista - Avista Corporation - 1

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| Answer | Yes |
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| Comment |
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| Likes 0 |
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| Dislikes 0 |
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| Response |
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Josh Combs - Black Hills Corporation - 3

| | |
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| Answer | Yes |
|---------------|-----|

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| Comment |
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| Likes 0 |
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| Dislikes 0 |
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| Response |
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Sheila Suurmeier - Black Hills Corporation - 5

| | |
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| Answer | Yes |
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| Document Name | |
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| Comment |
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Likes 0

Dislikes 0

Response

Claudine Bates - Black Hills Corporation - 6

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Micah Runner - Black Hills Corporation - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Ken Habgood - Seminole Electric Cooperative, Inc. - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Melanie Wong - Seminole Electric Cooperative, Inc. - 5

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE agrees with the including more specificity to the protocols for providing data and information. For IRO-010-5, Texas RE recommends that the mutually agreeable format as referenced in Requirement Part 1.6 include specifically that the mutually agreeable format is between the Reliability Coordinator and the entities that have data requirement by the RC's Operational Planning Analyses, Real-time monitoring and Real-time Assessments as noted in Requirement R2.

For TOP-003-6 Requirement Part 1.6, Texas RE Texas RE recommends that the mutually agreeable format as referenced in Requirement Parts 1.6 include specifically that the mutually agreeable format is between the Transmission Operator (TOP) and the entities that have data requirement by the TOP's Operational Planning Analyses, Real-time monitoring and Real-time Assessments as noted in Requirement R3.

For TOP-003-6 Requirement Part 2.6, include specifically that the mutually agreeable format is between the Balancing Authority (BA) and the entities that have data requirement by the BA's analysis functions and Real-time monitoring.

Likes 0

Dislikes 0

Response

3. To improve administration of data and information for the applicable entities, the SDT modified IRO-010-5 and TOP-003-6 to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information. Do you agree with these modifications? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer No

Document Name

Comment

If a responding entity is not sure what the format is, they should be reaching out to the requesting party, and requesting party should clarify. Conflict resolutions, which at times this issue could fall under, should already be specified in the requesting party's data specs. If any questions regarding that, the requesting and responding parties should communicate. Resolution should be described as well in the data specs, and if it's not and the responding party has no issue, the Standard does not need to stipulate that. If the Standard stipulates these items, that might make it more prescriptive and potentially increase administrative burdens if the stipulation in the standard does not fit what works best for the requesting/responding parties.

Likes 0

Dislikes 0

Response

Nazra Gladu - Manitoba Hydro - 1

Answer No

Document Name

Comment

Security requirements should reside in CIP-012 as it pertains to the transfer of secure data between control centers. With similar requirements in IRO-010 and TOP-003 as well as CIP-012, entities are placed in a situation where multiple standards provide overlapping mandates.

The NERC standard should not be in the process of conflict resolution. Instead, this should be part of contractual obligations agreed upon between entities.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response**Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO**

Answer

No

Document Name

Comment

The MRO NSRF is concerned about 'securely transferring data or information':

{C}· Potential NERC CIP-012 double jeopardy

{C}· Security requirement should reside in the CIP suite of standards.

The MRO NSRF suggests removing 'securely' from Requirement IRO-010 & TOP-003 R1.8 and TOP-003 R2.8.

It is not advisable to have a NERC Reliability Standard address a conflict resolution processes between two Registered Entities. To the extent that one or both entities seek such a process, it should be outside of a compliance requirement. The MRO NSRF suggests removing Requirement IRO-010 & TOP-003 R1.7 and TOP-003 R2.7.

Likes 1

Lincoln Electric System, 1, Johnson Josh

Dislikes 0

Response**LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF**

Answer

No

Document Name

Comment

The proposed changes appear to match the old requirements in TOP-003-5 R5. However, it is unclear why the original language was insufficient so it is not clear any change is needed.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer No

Document Name

Comment

Current industry practices and Standards (IRO-010-3 R3 and TOP-003-4 R5) already have proven and effective practices and methods in place regarding the data specification. Modification and additional documentation of these practices and methods would cause confusion and pose an undue burden on processes that already work well without adding additional reliability to the BES.

Likes 0

Dislikes 0

Response

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer No

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer No

Document Name

Comment

WEC Energy Group supports EEI's comments.

Likes 0

Dislikes 0

Response

Lindsey Mannion - ReliabilityFirst - 10

Answer No

Document Name

Comment

There may be difficulties with the creator of a specification being made responsible for determining "mutually agreed upon" data formats, security protocols, and conflict resolution processes. Demonstrating compliance with such a requirement would require the creator of the specification to maintain evidence that each recipient of the specification has agreed with those "mutually agreed upon" criteria.

Removing the "mutually agreed upon" language would make these requirements more feasible for the RC/TOP/BA. If the "mutually agreed upon" language is removed from the RC/TOP/BA requirement, provisions may need to be made for recipients of the specification to use either the defined criteria or a "mutually agreed upon" alternative in complying with the recipient requirement.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer No

Document Name

Comment

AZPS does not agree that the modifications represent a substantial change to the currently existing IRO-010 and TOP-003 language.

Likes 0

Dislikes 0

Response

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer No

Document Name

Comment

BPA believes this is additional administrative burden without a corresponding reliability improvement.

Likes 0

Dislikes 0

Response

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer No

Document Name

Comment

CEHE supports the comments as submitted by the Edison Electric Institute.

Likes 0

Dislikes 0

Response

Daniel Gacek - Exelon - 1

Answer No

Document Name

Comment

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC

Answer No

Document Name

Comment

Xcel Energy supports EEI comments.

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3**Answer** No**Document Name****Comment**

Exelon supports comments submitted by EEI.

Likes 0

Dislikes 0

Response**Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.****Answer** No**Document Name****Comment**

Portland General Electric Company supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response**James Baldwin - Lower Colorado River Authority - 1****Answer** No**Document Name****Comment**

LCRA TSC believes security requirements should reside in CIP-012 as it pertains to the transfer of secure data between control centers. With similar requirements in IRO-010 and TOP-003 as well as CIP-012, entities are placed in a situation where multiple standards provide overlapping mandates.

Likes 0

Dislikes 0

Response**Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman****Answer** No

| | |
|--|----|
| Document Name | |
| Comment | |
| MPC supports comments submitted by the MRO NERC Standards Review Forum. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper | |
| Answer | No |
| Document Name | |
| Comment | |
| Current industry practices and Standards (IRO-010-3 R3 and TOP-003-4 R5) already have proven and effective practices and methods in place regarding the data specification. Modification and additional documentation of these practices and methods would cause confusion and pose an undue burden on processes that already work well without adding additional reliability to the BES. Also, security requirement should reside in the CIP suite of standards to avoid the potential for NERC CIP-012 double jeopardy. The NERC standard should not be in the process of conflict resolution. Instead, this should be part of contractual obligations agreed upon between entities. Santee Cooper also believes this is additional administrative burden without a corresponding reliability improvement. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>The MRO NSRF is concerned about 'securely transferring data or information:</p> <ul style="list-style-type: none"> &bull; Potential NERC CIP-012 double jeopardy &bull; Security requirement should reside in the CIP suite of standards. <p>The MRO NSRF suggests removing 'securely' from Requirement IRO-010 & TOP-003 R1.8 and TOP-003 R2.8.</p> | |

It is not advisable to have a NERC Reliability Standard address a conflict resolution processes between two Registered Entities. To the extent that one or both entities seek such a process, it should be outside of a compliance requirement. The MRO NSRF suggests removing Requirement IRO-010 & TOP-003 R1.7 and TOP-003 R2.7.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

EEI does not agree that the changes made represent any substantive improvement over what currently exists within IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institue (EEI) for question #3.

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer No

Document Name

Comment

LCRA TSC believes security requirements should reside in CIP-012 as it pertains to the transfer of secure data between control centers. With similar requirements in IRO-010 and TOP-003 as well as CIP-012, entities are placed in a situation where multiple standards provide overlapping mandates.

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

No

Document Name

Comment

Tri-State is concerned about using the word "securely" in R1 1.8 and recommends removing it. This could be possible double jeopardy with CIP-012.0

Likes 0

Dislikes 0

Response

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

Answer

No

Document Name

Comment

The SRC disagrees with the inclusion of the intermediary in Part 1.7. As stated above, entities are successfully able to utilize an intermediary today. We do not see value in adding this commercial (contractual) provision to a mandatory reliability standard. Further, as this project was initiated pursuant to the Standards Efficiency Review (SER), the goal of this effort is to simplify (versus complicate) administrative burdens for entities issuing the data specification to keep track of intermediaries. We do not agree that the relocation of R5 requirements into R1 would benefit or reduce administrative burdens to the TOP, BA, or RC.

Likes 0

Dislikes 0

Response

Russell Noble - Cowlitz County PUD - 3

Answer

No

Document Name

Comment

Cowlitz PUD supports negative comments by others in this regard and will review SDT responses to these commentors.

Likes 0

Dislikes 0

Response

Joshua London - Eversource Energy - 1, Group Name Eversource

Answer

No

Document Name

Comment

We do not believe the changes made represent any substantive improvement over what currently exists within IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer Yes

Document Name

Comment

The NAGF agrees with the proposed modifications to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information.

Likes 0

Dislikes 0

Response

Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay

Answer Yes

Document Name

Comment

AES Clean Energy agrees with the proposed modifications and believes that they will provide much needed guidance.

Likes 0

Dislikes 0

Response

Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez

Answer Yes

Document Name

Comment

Section TOP-003-6 R1.8 in referenced redline document is blank. Agree with rational document comments regarding agreed upon method for secure transfer.

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Yes

Document Name

Comment

Ameren agrees with and supports NAGF comments

Likes 0

Dislikes 0

Response

Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE

Answer

Yes

Document Name

Comment

PNMR agrees.

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6

Answer

Yes

Document Name

Comment

No comment

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer Yes

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer Yes

Document Name

Comment

Constellation has no additional comments

Kimberly Turco on behalf of Constellation Segement 5 and 6

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Marc Sedor - Seminole Electric Cooperative, Inc. - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Melanie Wong - Seminole Electric Cooperative, Inc. - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ken Habgood - Seminole Electric Cooperative, Inc. - 4

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Micah Runner - Black Hills Corporation - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Claudine Bates - Black Hills Corporation - 6

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Sheila Suurmeier - Black Hills Corporation - 5

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

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| Comment |
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| |
|---------|
| Likes 0 |
|---------|

| |
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| Dislikes 0 |
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| |
|-----------------|
| Response |
|-----------------|

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

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| Document Name | |
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| Comment |
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| |
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| Likes 0 |
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| Dislikes 0 |
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| |
|-----------------|
| Response |
|-----------------|

Josh Combs - Black Hills Corporation - 3

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
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| Document Name | |
|----------------------|--|

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|----------------|
| Comment |
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| |
|---------|
| Likes 0 |
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| Dislikes 0 |
|------------|

| |
|-----------------|
| Response |
|-----------------|

Carl Pineault - Hydro-Quebec Production - 5

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

| |
|----------------|
| Comment |
|----------------|

Likes 0

Dislikes 0

Response

Mike Magruder - Avista - Avista Corporation - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Bryan Bennett - Sempra - San Diego Gas and Electric - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | |
| Document Name | |
| Comment | |
| <p>BC Hydro appreciates the opportunity to comment and thanks the drafting team for their efforts.</p> <p>BC Hydro notes that currently effective IRO-010 and TOP-003 versions use “mutually agreeable” wording as an inference of an industry acceptable solution. The proposed drafts use “mutually agreed upon” (e.g. within Requirement R1 Part 1.6 and Part 1.8 in case of proposed IRO-010-5), which will set a compliance expectation that an agreement on format be reached before its inclusion in the documented specification mandated under R1.</p> <p>BC Hydro recommends considering changing “mutually agreed upon” to “mutually agreeable”. This will reduce the changes from the existing version and the additional compliance expectation implied by “agreed upon”.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Please see Texas RE’s answer to #2.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer

Document Name

Comment

We support NPCC's comments:

We do not believe the changes made represent any substantive improvement over what currently exists within IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer

Document Name

Comment

We do not believe the changes made represent any substantive improvement over what currently exists within IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Sheraz Majid - Hydro One Networks, Inc. - 1

Answer

Document Name

Comment

Support comments by NPCC RSC.

Likes 0

Dislikes 0

Response

4. IRO-010-5 and TOP-003-6 require general data specifications to allow the Reliability Coordinator, Transmission Operator, and Balancing Authority to perform its Operational Planning Analysis, Real Time Assessment, Real-time monitoring (undefined term), and BA analysis functions (undefined term). The SDT focused on data and information generally rather than prescriptive requirements. Do you believe that all data and information needed by the RC, TOP, and BA to perform these reliability tasks (for example, PMU streaming, outage coordination, distribution, generator fuel information, etc.) is available pursuant to the proposed standards or is additional clarification needed that is more prescriptive.

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

Answer No

Document Name

Comment

The SRC strongly believes that more prescriptive standards result in less flexibility. It is easier for an entity to change the details within its specification than to change the details of a mandatory requirement once established in a NERC standard. Therefore, the SRC advocates for the retention of flexibility and less prescriptive requirements.

To the extent a need for additional data (that is necessary for an entity to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments) arises, entities already have the ability under the current standards to define additional “mutually agreed upon” data and the format the data is to be provided in.

To the extent an entity is unable to obtain the data necessary to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments, the SRC proposes that emphasis be placed on the dispute resolution process and the level of risk the lack of the data poses to reliably operating the BES.

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer No

Document Name

Comment

LCRA TSC believes all data and information needed to perform the described reliability tasks are available pursuant to the proposed standard.

LCRA TSC does not believe additional clarification is needed that is more prescriptive.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #4.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

EEI does not support more prescriptive requirements for IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

Answer No

Document Name

Comment

Santee Cooper feels the industry is better served by performance-based standards rather than prescriptive data requirements and that data requirements are sufficient for the RC, TOP, and neighboring BAs to perform their functions. Again, providing prescriptive information would defeat the purpose of simplifying administrative burdens and does not add a reliability benefit; therefore, distribution of this information is not needed.

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6**Answer** No**Document Name****Comment**

No, for smaller entities it would be difficult to obtain data.

Likes 0

Dislikes 0

Response**Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman****Answer** No**Document Name****Comment**

MPC supports comments submitted by the MRO NERC Standards Review Forum.

Likes 0

Dislikes 0

Response**James Baldwin - Lower Colorado River Authority - 1****Answer** No**Document Name****Comment**

LCRA TSC believes all data and information needed to perform the described reliability tasks are available pursuant to the proposed standard.

LCRA TSC does not believe additional clarification is needed that is more prescriptive.

Likes 0

Dislikes 0

Response**Daniel Mason - Portland General Electric Co. - 6, Group Name** Portland General Electric Co.

| | |
|--|----|
| Answer | No |
| Document Name | |
| Comment | |
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI | |
| Answer | No |
| Document Name | |

Comment

AECI supports the SDT focus on data and information generally rather than prescriptive requirements. However, entities can not be expected to provide information that may not be available to them or within their purview such as fuel supplier or local distribution system information.

The proposed TOP-003-6 R2.1 and IRO-010-5 R1.1 detail a list of data and information needed by the BA, RC, and TOP to perform OPA, Real-time monitoring, and Real-time assessment; inclusive of non-BES data and information. These revisions are not supported by the associated technical rational documents provided on the project page and seem over-reaching as the NERC Standards apply to Bulk Electric System (BES) facilities. The following excerpts from the NERC ROP are supportive of this comment:

- "Bulk Power System" means, depending on the context: (i) (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy [++]. (Note that the terms "Bulk-Power System" or "Bulk Power System" shall have the same meaning.) (ii) Solely for purposes of Appendix 4E, Bulk Electric System.
- Reliability Coordinator - The entity that is the highest level of authority who is responsible for the Reliable Operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator vision.

Secondly the "Project 2014-03 Revisions to TOP and IRO Standards" SDT refer to FERC NOPR Issued November 21, 2013 (RM13-12-000), specifically paragraph 68 as the basis for the inclusion of sub-BES facilities in IRO-010-2. This action is not consistent with the facilities detailed in the NERC ROP and NERC Glossary Reliability Coordinator defined term as it specifically references BES facilities.

| | |
|-------|---|
| Likes | 0 |
|-------|---|

| | |
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| Dislikes | 0 |
|----------|---|

Response

Daniel Gacek - Exelon - 1

| | |
|---------------|----|
| Answer | No |
|---------------|----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

Comment

Exelon supports the comments submitted by EEI.

| | |
|-------|---|
| Likes | 0 |
|-------|---|

| | |
|----------|---|
| Dislikes | 0 |
|----------|---|

Response

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

| | |
|---------------|----|
| Answer | No |
|---------------|----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

| Comment | |
|---|----|
| CEHE supports the comments as submitted by the Edison Electric Institute. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | No |
| Document Name | |
| Comment | |
| AZPS does not support more prescriptive requirements for IRO-010 and TOP-003. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| | |
| Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez | |
| Answer | No |
| Document Name | |
| Comment | |
| Data provided has been sufficient to perform studies and we feel that the example data exceeds what is necessary for the RC, TOP, and neighboring BAs to perform their functions. Providing prescriptive information would defeat the purpose of simplifying administrative burdens. Specifically, Generator fuel information is considered proprietary, and in most cases, distribution of this information is not needed. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| | |
| Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group | |
| Answer | No |
| Document Name | |

Comment

WEC Energy Group supports EEI's comments.

Likes 0

Dislikes 0

Response**Jamie Monette - Allete - Minnesota Power, Inc. - 1**

Answer

No

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

Response**Donald Lock - Talen Generation, LLC - 5**

Answer

No

Document Name

Comment

GO/GOPs have fuel information only as regards conditions at the plant, e.g. the number of days of coal on-hand. Problems at upstream facilities - natural gas wells, pipelines, compressor stations and the like - are not divulged by supplier companies prior to the time that they make a public announcement, to prevent giving any market participant an unfair competitive advantage (GOs trade contracts for fuel in addition to power).

Likes 0

Dislikes 0

Response**LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF**

Answer

No

Document Name

Comment

ATC thinks the data specification is general in nature to allow the applicable entities to identify their data and information needs and identify the correct NERC registered entities that have the data and information and the capability of data and information exchange. ATC is not currently experiencing any challenges in obtaining the data it needs to perform its real-time monitoring, RTA or OPA obligations. Note also that the industry continues to evolve more quickly than the NERC requirements are able to be modified. The industry is better served by performance-based standards rather than prescriptive data requirements.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Nazra Gladu - Manitoba Hydro - 1

Answer

No

Document Name

Comment

Manitoba Hydro feels that an exhaustive list within the standard is not necessary.

Likes 0

Dislikes 0

Response

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3

Answer No

Document Name

Comment

Likes 0

Dislikes 0

Response

Russell Noble - Cowlitz County PUD - 3

Answer Yes

Document Name

Comment

While Cowlitz PUD agrees with the SDT intent, the added requirements detract from this objective.

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer Yes

Document Name

Comment

Constellation has no additional comments

Kimberly Turco on behalf of Constellation Segement 5 and 6

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer

Yes

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1

Answer

Yes

Document Name

Comment

The identification of data and information needed by the RC, BA, TOP shall be left to their discretion. So, a standard focused on general data and information, and which is less prescriptive is preferred.

Likes 0

Dislikes 0

Response

Carl Pineault - Hydro-Qu?bec Production - 5

Answer

Yes

Document Name

Comment

While past specifications in our Reliability Area actually went beyond OPA, RTA, Real-time Monitoring and BA analysis functions, over time, revisions to the specification have been focusing the specifications on those specific reliability functions. Within those functions, the specifications have been pretty comprehensive. Prescriptive requirements go against NERC's standard development principles to be more performance oriented than prescriptive. We continue to support performance oriented requirements.

Likes 0

Dislikes 0

Response

Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE

Answer

Yes

Document Name

Comment

PNMR agrees.

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Yes

Document Name

Comment

Ameren agrees with and supports NAGF comments

Likes 0

Dislikes 0

Response

Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer

Yes

Document Name

Comment

To the degree that SIGE understands the question correctly, we agree that the standard does not need to be more prescriptive regarding the data and information specification requirements. More prescriptive requirements do not add a reliability benefit.

Likes 0

Dislikes 0

Response

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

Yes

Document Name

Comment

BPA believes data and information needed is available today.

Likes 0

Dislikes 0

Response

Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay

Answer

Yes

Document Name

Comment

AES Clean Energy supports the SDT focus on data and information generally rather than prescriptive requirements.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Yes

Document Name

Comment

The NAGF supports the SDT focus on data and information generally rather than prescriptive requirements. However, GO/GOPs can not be expected to provide information that is not available to them or within their purview such as fuel supplier or local distribution system information.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Yes

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer

Yes

Document Name

Comment

While AEP agrees with the concept of an agreed-upon approach rather than a prescriptive one, we believe as previously stated in the response to Question 1, that there will be instances where the Transmission Operator needs data from the Reliability Coordinator (i.e. load information, generation and load forecasts, etc.). Once again, the RC is not included as an Applicable Entity in TOP-003, nor is it obligated under TOP-003 R5. AEP recommends that the RC be added as a Applicable Entity for TOP-003 and also included in the obligations of R5.

Likes 0

Dislikes 0

Response

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer

Yes

Document Name

Comment

Should be up to the entities to communicate and come to an agreement if additional clarification is needed. More prescriptive Requirements could increase burdens and “one-size-fits-all” does not necessarily work with TOP-003 or IRO-010 (therein lies the bulk of the administrative burden). Possibly providing definitions for “Real-time monitoring” and “BA analysis functions” would be helpful to keep consistency across universal tasks/functions and lowering ambiguity with those overarching data spec terms.

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Bryan Bennett - Sempra - San Diego Gas and Electric - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mike Magruder - Avista - Avista Corporation - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Josh Combs - Black Hills Corporation - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Sheila Suurmeier - Black Hills Corporation - 5

Answer

Yes

| | |
|--|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Lindsey Mannion - ReliabilityFirst - 10

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ken Habgood - Seminole Electric Cooperative, Inc. - 4

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response**Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Melanie Wong - Seminole Electric Cooperative, Inc. - 5****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Marc Sedor - Seminole Electric Cooperative, Inc. - 3****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Sheraz Majid - Hydro One Networks, Inc. - 1

Answer

Document Name

Comment

Need clarity on what is "information", e.g. weather, news, notifications received via email, etc.? Request clarity from SDT on this.

+support comments by NPCC RSC.

Likes 0

Dislikes 0

Response

Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer

Document Name

Comment

We do not support more prescriptive requirements for IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer

Document Name

Comment

We do not support more prescriptive requirements for IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

General data specifications within the Standard are acceptable, however, Texas RE suggests that, rather than putting more prescriptive language in the requirements, the data specification document from the RC, TOP, and BA be required to be more specific. That way, the RC, TOP, and BA can determine which specific data is needed to be effective to perform their OPA, RTA, and Real-time monitoring.

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

Because there are two questions being asked in question four, the actual 'Yes / No' answer is found in the following prose.

Yes, the MRO NSRF feels the proposed language, as it relates to the actual data and information needed by the RC, TOP, and BA to perform these reliability tasks, is available pursuant to the proposed standards. No additional clarification is required, as it relates to the actual data and information needed by the RC, TOP, and BA to perform these reliability tasks.

Likes 0

Dislikes 0

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer

Document Name

Comment

Because there are two questions being asked in question four, the actual 'Yes / No' answer is found in the following prose.

Yes, the MRO NSRF feels the proposed language, as it relates to the actual data and information needed by the RC, TOP, and BA to perform these reliability tasks, is available pursuant to the proposed standards. No additional clarification is required, as it relates to the actual data and information needed by the RC, TOP, and BA to perform these reliability tasks.

Likes 1

Lincoln Electric System, 1, Johnson Josh

Dislikes 0

Response

5. To support the proposed modifications, the SDT revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer No

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer No

Document Name

Comment

WEC Energy Group supports EEI's comments.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer No

Document Name

Comment

AZPS agrees with EEI's concerns that the primary purpose of the project was not met in this draft and therefore cannot comment on the proposed VSLs.

Likes 0

Dislikes 0

Response

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer No

Document Name

Comment

The primary purpose of this project was to reduce the unnecessary compliance burdens associated with evidence and data retention that was the key justification for opening this project. Until this is done, CEHE cannot comment on the appropriateness of the proposed changes to the VSLs.

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECl

Answer No

Document Name

Comment

AECl is not fully supportive of the proposed TOP-003-6 R2.1 and IRO-010-5 R1.1 draft language, which is reflected in the VSLs for the corresponding requirements.

Likes 0

Dislikes 0

| | |
|---|----|
| Response | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | No |
| Document Name | |
| Comment | |
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Carl Pineault - Hydro-Quebec Production - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>Despite FERC accepting the VRF for the previous version of this standard, the VRF for R1 (low) seems to us inconsistent with respect to the VRF for R3 (medium). The requirement for an RC (in IRO-010) to identify information essential to reliability (R1.1) cannot logically be less important than an entity's communication of that same information to the RC. Indeed, since an RC's obligation applies to potentially many entities in its Area, it is more impactful for the RC Area's reliability that the RC correctly identify the information needed to satisfy its own reliability obligations than for a single respondent to fail to communicate the information. The VRF for R1 should be moved to Medium or the VRF for R3 should be lowered to Low.</p> | |

The same inconsistency holds for the proposed VSL. As proposed, the VSL for R3 attributes a severe VSL to any violation of elements 1.1 through 1.4. Meanwhile, a failure to identify an information per 1.1, 1.2 or 1.3 does not trigger the VSL which requires that at least two sub-requirements must be violated to qualify for VSL-low, and more subrequirements to have more serious VSL.

So, for example, a failure to report information asked for in the specification as per R1.1 or R1.2 or R1.3 is potentially a VRF-medium, VSL-severe violation of R3, whereas the failure to identify that same information under R1 would be a VRF-low, VSL-none violation. Since the VSL is not even low, the latter is arguably not a violation at all!

We consider that an identification violation of R1.1, R1.2 or R1.3 individually should be at least as severe as a reporting violation of the same sub-requirements for a non-RC entity via R3. That is, identification violations of R1.1, R1.2 or R1.3 should be “severe”.

Finally, as noted earlier, if R1.4 is kept, it should be lumped in with 1.5 through 1.8 in the violation levels low, medium, high as equivalently administrative in nature and not core to the specification’s reliability content per R1.1, R1.2, and R1.3.

Likes 0

Dislikes 0

Response

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

Answer No

Document Name

Comment

The key justification for opening this project was to reduce the unnecessary compliance burdens associated with evidence and data retention; Santee Cooper has concerns that the purpose was not met in this draft and therefore cannot comment on the proposed VSLs.

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1

Answer No

Document Name

Comment

Despite FERC accepting the VRF for the previous version of this standard, the VRF for R1 (low) seems to us inconsistent with respect to the VRF for R3 (medium). The requirement for an RC or TOP to identify information essential to reliability (R1.1 in both IRO-010 and TOP-003) cannot logically be less important than an entity’s communication of that same information to the RC or TOP. The same inconsistency holds for the proposed VSL.

So, for example, a failure to report information asked for in the specification as per R1.1 or R1.2 or R1.3 is potentially a VRF-medium, VSL-severe violation of R3 in IRO-010, whereas the failure to identify that same information under R1 would be a a VRF-low, VSL-none violation. Since the VSL is not even low, the latter is arguably not a violation at all.

Finally, as noted earlier, if R1.4 is kept, it should be lumped in with 1.5 through 1.8 in the violation levels as equivalently administrative in nature and not core to the specification's reliability content per R1.1, R1.2, and R1.3.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

No

Document Name

Comment

EEl does not support the changes made to the VSLs. The primary purpose of this project was to reduce the unnecessary compliance burdens associated with evidence and data retention that was the key justification for opening this project. Until this is done, we cannot comment on the appropriateness of the proposed changes to the VSLs.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institue (EEI) for question #5.

Likes 0

Dislikes 0

Response

Russell Noble - Cowlitz County PUD - 3

Answer

No

| | |
|---|-----|
| Document Name | |
| Comment | |
| Unable to evaluate until above concerns are addressed. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |

Agree if the Standards end up being revised as shown in redlines. That said, there may not be any benefit to have the Requirements and Parts drilled down with more specificity as shown in the modified Standards, and as commented on in this form.

Likes 0

Dislikes 0

Response

Nazra Gladu - Manitoba Hydro - 1

Answer

Yes

Document Name

Comment

No comment.

Likes 0

Dislikes 0

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer

Yes

Document Name

Comment

No comments & no concerns.

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer

Yes

Document Name

Comment

AEP agrees with the SDT recommendation to change "did not meet" to instead state "failed to use." We believe this wording more accurately captures the spirit of the obligation itself.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Yes

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Yes

Document Name

Comment

The NAGF supports the revised VSLs as proposed.

Likes 0

Dislikes 0

Response

Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay

Answer

Yes

Document Name

Comment

AES Clean Energy supports the revised VSLs in both IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Daniel Gacek - Exelon - 1

Answer Yes

Document Name

Comment

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3

Answer Yes

Document Name

Comment

Exelon supports comments submitted by EEI.

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer Yes

Document Name

Comment

Ameren agrees with and supports NAGF comments

Likes 0

Dislikes 0

Response

Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE

Answer Yes

Document Name

Comment

PNMR agrees.

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6

Answer Yes

Document Name

Comment

No comment

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer Yes

Document Name

Comment

No comments & no concerns.

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5**Answer** Yes**Document Name****Comment**

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response**Kimberly Turco - Constellation - 6****Answer** Yes**Document Name****Comment**

Constellation has no additional comments

Kimberly Turco on behalf of Constellation Segement 5 and 6

Likes 0

Dislikes 0

Response**Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)****Answer** Yes**Document Name****Comment**

The SRC agrees that is necessary for the SDT to adjust the VSLs so that they align with the provisions of the revised standards.

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Marc Sedor - Seminole Electric Cooperative, Inc. - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Melanie Wong - Seminole Electric Cooperative, Inc. - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response**Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name** CHPD**Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Julie Hall - Entergy - 6, Group Name** Entergy**Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ken Habgood - Seminole Electric Cooperative, Inc. - 4

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Lindsey Mannion - ReliabilityFirst - 10

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Micah Runner - Black Hills Corporation - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Claudine Bates - Black Hills Corporation - 6

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Sheila Suurmeier - Black Hills Corporation - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Josh Combs - Black Hills Corporation - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

James Baldwin - Lower Colorado River Authority - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mike Magruder - Avista - Avista Corporation - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Bryan Bennett - Sempra - San Diego Gas and Electric - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

6. The SDT reviewed the other standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6 or create efficiencies reflective of the principle established by the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in these collateral standards, the SDT determined there is insufficient justifications for the retirement of these requirements and, therefore, the SDT is not proposing changes to these standards. Do you agree with this assessment? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Russell Noble - Cowlitz County PUD - 3

Answer No

Document Name

Comment

Need to see a SDT report justifying this conclusion.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #6.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

In order for EEI to support the SDT's conclusions, the SDT will need to publish their analysis and findings regarding the other identified Requirements contained in the other 7 proposed Reliability Standards identified in the Project SAR and the SER Phase 2 white paper.

Likes 0

Dislikes 0

Response

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer No

Document Name

Comment

Portland General Electric Company supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3

Answer No

Document Name

Comment

Exelon supports comments submitted by EEI.

Likes 0

Dislikes 0

Response

Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC

Answer No

Document Name

Comment

Xcel Energy supports EEI comments.

Likes 0

Dislikes 0

Response

Daniel Gacek - Exelon - 1

Answer No

Document Name

Comment

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer No

Document Name

Comment

CEHE recommends that the SDT consider adding TOP-010-1(i) – Real-time Reliability Monitoring and Analysis Capabilities to the list of possibly affected standards due to the requirements around data quality and accuracy of Real-time monitoring and analysis capability.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer No

Document Name

Comment

AZPS agrees with EEIs comments that in order to support the SDT’s conclusions, the SDT needs to publish their analysis and findings regarding the other identified Requirements contained in the other 7 proposed Reliability Standards identified in the Project SAR and the SER Phase 2 white paper.

Likes 0

Dislikes 0

Response

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer No

Document Name

Comment

WEC Energy Group supports EEI's comments.

Likes 0

Dislikes 0

Response

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer No

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Nazra Gladu - Manitoba Hydro - 1

| | |
|---|----|
| Answer | No |
| Document Name | |
| Comment | |
| To streamline the requirements of these standards, duplications should be removed as stated in the SAR. As commented in question 3 above, CIP-12 should look after security protocols. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Would agree if the Requirements identified in the collateral standards would include a footnote, or other type of identifier/cross-reference, indicating that they are Requirements that fall under umbrella of IRO-010 and/or TOP-003 (or list the cross-reference to collateral standards in IRO-010 and TOP-003 Standards, possibly in a table/attachment?). The redundancy between the data specs and these Standards is key contributor of administrative burdens. Clear identification within the standards from NERC's end of the crossover/redundancy would be helpful. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3 | |
| Answer | No |

| | |
|---|-----|
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Kimberly Turco - Constellation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Alison MacKellar - Constellation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | Yes |

| | |
|---|-----|
| Document Name | |
| Comment | |
| <i>No comments & no concerns.</i> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| No comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |

Ameren agrees with and supports NAGF comments

Likes 0

Dislikes 0

Response

Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer

Yes

Document Name

Comment

SIGE recommends that the SDT consider adding TOP-010(i) - Real-time Reliability Monitoring and Analysis Capabilities to the list of possibly affected standards due to the requirements around data quality and accuracy of Real-time monitoring and analysis capability.

Likes 0

Dislikes 0

Response

Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay

Answer

Yes

Document Name

Comment

AES Clean Energy agrees with the SDT assessment to not change other existing Standards.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Yes

Document Name

Comment

The NAGF agrees with the SDT decision not to change other existing standards as referenced in the approved SAR.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Yes

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer

Yes

Document Name

Comment

No comments & no concerns.

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response**Bryan Bennett - Sempra - San Diego Gas and Electric - 3****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Mike Magruder - Avista - Avista Corporation - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Carl Pineault - Hydro-Qu?bec Production - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

James Baldwin - Lower Colorado River Authority - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Josh Combs - Black Hills Corporation - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Sheila Suurmeier - Black Hills Corporation - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Claudine Bates - Black Hills Corporation - 6

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
|----------------------|--|
| Document Name | |
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|----------------|
| Comment |
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| |
|---------|
| Likes 0 |
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|------------|
| Dislikes 0 |
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|-----------------|
| Response |
|-----------------|

Micah Runner - Black Hills Corporation - 1

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

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|----------------------|--|
| Document Name | |
|----------------------|--|

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|----------------|
| Comment |
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| |
|---------|
| Likes 0 |
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| |
|------------|
| Dislikes 0 |
|------------|

| |
|-----------------|
| Response |
|-----------------|

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

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|----------------|
| Comment |
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| |
|---------|
| Likes 0 |
|---------|

| |
|------------|
| Dislikes 0 |
|------------|

| |
|-----------------|
| Response |
|-----------------|

Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

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|----------------------|--|
| Document Name | |
|----------------------|--|

| |
|----------------|
| Comment |
|----------------|

Likes 0

Dislikes 0

Response

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Lindsey Mannion - ReliabilityFirst - 10**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Ken Habgood - Seminole Electric Cooperative, Inc. - 4****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Thomas Foltz - AEP - 5****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Donald Lock - Talen Generation, LLC - 5****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response

LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Melanie Wong - Seminole Electric Cooperative, Inc. - 5

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |

Likes 0

Dislikes 0

Response

Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer

Document Name

Comment

We need the SDT to share their analysis and findings regarding the other identified Requirements contained in the other proposed Reliability Standards identified in the Project SAR and the SER Phase 2 white paper.

Likes 0

Dislikes 0

Response

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer

Document Name

Comment

We support NPCC's comments : We need the SDT to share their analysis and findings regarding the other identified Requirements contained in the other proposed Reliability Standards identified in the Project SAR and the SER Phase 2 white paper.

Likes 0

Dislikes 0

Response

7. The SDT is proposing an 18-month implementation plan. Would this proposed timeframe give enough time to implement the proposed modifications in IRO-010-5 and TOP-003-6? If you think an alternate timeframe is needed, please propose an alternate implementation plan and time period, and provide a detailed explanation of actions planned to meet the implementation deadline.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer No

Document Name

Comment

Due to the concerns caused by the uncertainty of the potential impacts of the quality and availability performance metrics, it is difficult to determine what the proper implementation time should be.

Likes 0

Dislikes 0

Response

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer No

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

| | |
|---|----|
| Response | |
| Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group | |
| Answer | No |
| Document Name | |
| Comment | |
| WEC Energy Group supports EEI's comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | No |
| Document Name | |
| Comment | |
| AZPS does not support the proposed changes and cannot comment on the proposed implementation plan timeframe. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | No |
| Document Name | |
| Comment | |
| CEHE does not support the proposed changes made to IRO-010-5 and TOP-003-6, and therefore cannot comment on the sufficiency of the proposed 18-month implementation plan. | |
| Likes | 0 |
| Dislikes | 0 |

Response

Daniel Gacek - Exelon - 1

Answer No

Document Name

Comment

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC

Answer No

Document Name

Comment

Xcel Energy supports EEI comments.

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3

Answer No

Document Name

Comment

Exelon supports comments submitted by EEI.

Likes 0

Dislikes 0

Response

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer No

Document Name

Comment

Portland General Electric Company supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

Answer No

Document Name

Comment

Due to the concerns caused by the uncertainty of the potential impacts of the quality and availability performance metrics, it is difficult to determine what the proper implementation time should be.

Likes 0

Dislikes 0

Response

Bryan Bennett - Sempra - San Diego Gas and Electric - 3

Answer No

Document Name

Comment

With the addition of an agreed upon security method, a 24 month time frame would be more reasonable. This will need to trickle down from the RC/BA to the TOP. Any change to security will need to be approved, vetted, and may need to be a capital project.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

| | |
|--|----|
| Answer | No |
| Document Name | |
| Comment | |
| EEl does not support the proposed changes made to IRO-010-5 and TOP-003-6, and therefore cannot comment on the sufficiency of the proposed 18-month implementation plan. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster | |
| Answer | No |
| Document Name | |
| Comment | |
| Evergy supports and incorporates by reference the comments of the Edison Electric Institue (EEI) for question #7. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Alison MacKellar - Constellation - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| Suggest a 24-month implementation as not sure of the impact to implement a process for question 2 criteria. "... for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary." | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |

Kimberly Turco - Constellation - 6**Answer** No**Document Name****Comment**

Suggest a 24-month implementation as not sure of the impact to implement a process for question 2 criteria. "... for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary."

Kimberly Turco on behalf of Constellation Segement 5 and 6

Likes 0

Dislikes 0

Response**Russell Noble - Cowlitz County PUD - 3****Answer** No**Document Name****Comment**

Cowlitz PUD questions the need for an implementation plan if the standard revisions are focused on a risk-based approach and "to simplify administrative burdens" as stated in the approved SAR. The SAR did not point to any reliability deficiencies, and the SDT should avoid adding to the current requirements.

Likes 0

Dislikes 0

Response**Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3****Answer** No**Document Name****Comment**

Likes 0

Dislikes 0

Response

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Nazra Gladu - Manitoba Hydro - 1

Answer

Yes

Document Name

Comment

No concerns on timeline for Manitoba Hydro.

Likes 0

Dislikes 0

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer

Yes

Document Name

Comment

No comments & no concerns.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer Yes

Document Name

Comment

The NAGF supports the proposed 18-month implementation plan.

Likes 0

Dislikes 0

Response

Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay

Answer Yes

Document Name

Comment

AES Clean Energy supports the proposed 18-month implementation plan.

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer Yes

Document Name

Comment

Ameren agrees with and supports NAGF comments

Likes 0

Dislikes 0

Response

Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Carl Pineault - Hydro-Quebec Production - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The time frame seems appropriate. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| No comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | Yes |
| Document Name | |

Comment

No comments & no concerns.

Likes 0

Dislikes 0

Response

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

Answer Yes

Document Name

Comment

As mentioned above, this project was initiated pursuant to the Standards Efficiency Review (SER) and the goal of this effort is to simplify (versus complicate) administrative burdens. Therefore, to the extent an 18-month implementation plan is insufficient, indicates the project has strayed from its initial objective.

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer Yes

Document Name

Comment

These changes are most impactful to RC, BA, and TOP's. However, it is our opinion that that the updated requirements found herein are, by and large, standard practice across the industry. Codifying these practices in the new revisions provides greater clarity and guidance surrounding data specifications.

Likes 0

Dislikes 0

Response

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer Yes

Document Name

| | |
|--|-----|
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

Response

Marc Sedor - Seminole Electric Cooperative, Inc. - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Melanie Wong - Seminole Electric Cooperative, Inc. - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response**LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Donald Lock - Talen Generation, LLC - 5****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Thomas Foltz - AEP - 5****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Ken Habgood - Seminole Electric Cooperative, Inc. - 4

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response**Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Micah Runner - Black Hills Corporation - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Claudine Bates - Black Hills Corporation - 6

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Sheila Suurmeier - Black Hills Corporation - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Josh Combs - Black Hills Corporation - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

James Baldwin - Lower Colorado River Authority - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mike Magruder - Avista - Avista Corporation - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

8. Provide additional comments regarding IRO-010-5 for the SDT to consider.

Russell Noble - Cowlitz County PUD - 3

Answer

Document Name

Comment

Please note that the RC may only seek data from BA and TOP entities if it is assured DP/GO/TO data will be addressed under TOP-006. This is necessary to reduce undue burden of tracking 100's of entities.

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer

Document Name

Comment

Constellation has no additional comments

Kimberly Turco on behalf of Constellation Segement 5 and 6

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer

Document Name

Comment

None at this time.

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1

Answer

Document Name

Comment

- We consider the use of the word “criteria” in R3 “receiving a specification in Requirement R2 shall satisfy the documented specifications using the criteria established in Requirement Parts 1.5 through 1.8” to be misleading, since only 1.5.2 identifies criteria. Furthermore, 1.4 is more in line with 1.5 through 1.8 than with 1.1 through 1.3. So the text should refer to “1.4 through 1.8”. That said, since all these elements (1.1 through 1.8) are all required in the specification, it seems to us simpler and sufficient to write “Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R2 shall satisfy its requirements established per R1.”

- Title in header of document needs to be modified to reflect changes to the title in Section 1.

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

The MRO NSRF provides the following:

1: We suggest adding verbiage to the technical rationale of both standards (or just the one if they are combined) to clarify if and when a Registered Entity is required to submit a data specification sheet to those other entities that it is already receiving real-time information from via network links.

2: The changes to the standard title and purpose (A1 and A3), specifically, the added phrase “and information” after every mention of the word “data,” add little to no value and should be undone unless the drafting team provides further clarification on the difference between data and information. For example, the team could by putting the words “electronic SCADA” in from of the word data. Additionally, the drafting team should consider using the vernacular “data or information” rather than “data and information” as the language implies these are separate.

Likes 0

Dislikes 0

Response

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

Answer

Document Name

Comment

Santee Cooper believes this is additional administrative burden without a corresponding reliability improvement and does not meet the objective of simplifying the Reliability Standards that facilitate the exchange of information and data necessary to plan and operate the BES.

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

Document Name

Comment

MPC supports comments submitted by the MRO NERC Standards Review Forum.

Likes 0

Dislikes 0

Response

Carl Pineault - Hydro-Qu?bec Production - 5

Answer

Document Name

Comment

We consider the use of the word "criteria" in R3 "receiving a specification in Requirement R2 shall satisfy the documented specifications using the criteria established in Requirement Parts 1.5 through 1.8" to be misleading, since only 1.5.2 identifies criteria. Furthermore, 1.4 is more in line with 1.5 through 1.8 than with 1.1 through 1.3. So the text should refer to "1.4 through 1.8". That said, since all these elements (1.1 through 1.8) are all required in the specification, it seems to us simpler and sufficient to write:

"Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R2 shall satisfy its requirements established per R1."

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

| | |
|---|--|
| Answer | |
| Document Name | |
| Comment | |
| Ameren has no additional comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |
| Answer | |
| Document Name | |
| Comment | |
| Draft 1 of IRO-010-5 reflects a change to the standard title in Section A.1, but not in the header. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | |
| Document Name | |

Comment

CEHE would like the SDT to define and provide examples for the term "intermediary" in IRO-010 and TOP-003.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

Document Name

Comment

AZPS has no additional comments at this time.

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay

Answer

Document Name

Comment

No additional comments.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Document Name

Comment

The NAGF has no additional comments.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer

Document Name

Comment

M3 of IRO-010-5 and M5 of TOP-003-6 accept as evidence, "electronic or hard copies of data transmittals or attestations of receiving entities," but only the latter option is feasible. The information sent to RCs, BAs and TOPs includes telemetered signals that are continually changing, accumulations of thousands of daily reports, and inputs to portal systems that swallow the data without a trace, making it impossible to provide for an audit a full collection

of what was sent. The only real proof of data transmittal adequacy is meanwhile that the RC, BA and TOP are satisfied, so IRO-010-5 and TOP-003-6 should require the receiving entities to issue an OK/Not OK attestation annually, rather than making this just an option, and for Not OK incidents the RC, BA and TOP should identify the deficiencies that occurred and the notifications that were sent to the transmitting entities.

IRO-010-5 and TOP-003-3 should also require RCs, BAs and TOPs to explicitly state their NERC data specifications in a single, publicly available location. Some receiving entities list a portion of their data requirements in widely scattered places in their online manuals and protocols, while other mandatory inputs are in market data reporting systems, outage scheduling software and the like. In some cases we have nothing more than an email saying, "What you're sending now is OK." It is consequently difficult to impossible at times for a GO/GOP to identify just what the IRO-010/TOP-003 data specification is.

Likes 0

Dislikes 0

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer

Document Name

Comment

The MRO NSRF provides the following:

1: We suggest adding verbiage to the technical rationale of both standards (or just the one if they are combined) to clarify if and when a Registered Entity is required to submit a data specification sheet to those other entities that it is already receiving real-time information from via network links.

2: The changes to the standard title and purpose (A1 and A3), specifically, the added phrase "and information" after every mention of the word "data," add little to no value and should be undone.

Likes 1

Lincoln Electric System, 1, Johnson Josh

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

Answer

Document Name

Comment

Nothing further at this time

Likes 0

Dislikes 0

Response

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer

Document Name

Comment

No additional comments at this time.

Likes 0

Dislikes 0

Response

9. Provide additional comments regarding TOP-003-6 for the SDT to consider.

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer

Document Name

Comment

No additional comments at this time.

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

Answer

Document Name

Comment

Nothing further at this time

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer

Document Name

Comment

The MRO NSRF provides the following:

1: We suggest adding verbiage to the technical rationale of both standards (or just the one if they are combined) to clarify if and when a Registered Entity is required to submit a data specification sheet to those other entities that it is already receiving real-time information from via network links.

2: The changes to the standard title and purpose (A1 and A3), specifically, the added phrase “and information” after every mention of the word “data,” add little to no value and should be undone.

Likes 1

Lincoln Electric System, 1, Johnson Josh

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer

Document Name

Comment

M3 of IRO-010-5 and M5 of TOP-003-6 accept as evidence, “electronic or hard copies of data transmittals or attestations of receiving entities,” but only the latter option is feasible. The information sent to RCs, BAs and TOPs includes telemetered signals that are continually changing, accumulations of thousands of daily reports, and inputs to portal systems that swallow the data without a trace, making it impossible to provide for an audit a full collection of what was sent. The only real proof of data transmittal adequacy is meanwhile that the RC, BA and TOP are satisfied, so IRO-010-5 and TOP-003-6 should require the receiving entities to issue an OK/Not OK attestation annually, rather than making this just an option, and for Not OK incidents the RC, BA and TOP should identify the deficiencies that occurred and the notifications that were sent to the transmitting entities.

IRO-010-5 and TOP-003-3 should also require RCs, BAs and TOPs to explicitly state their NERC data specifications in a single, publicly available location. Some receiving entities list a portion of their data requirements in widely scattered places in their online manuals and protocols, while other mandatory inputs are in market data reporting systems, outage scheduling software and the like. In some cases we have nothing more than an email saying, “What you’re sending now is OK.” It is consequently difficult to impossible at times for a GO/GOP to identify just what the IRO-010/TOP-003 data specification is.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer

Document Name

Comment

AEP believes that the Technical Rationale document for TOP-003 could benefit from clarity regarding the intermediaries that may be used for data pass-through. Perhaps examples could be given regarding who these entities might be, and what services they might provide. It might also be beneficial to provide insight regarding how data conflicts might be resolved when an intermediary is serving as the pass-through. Not all of these intermediaries will be registered as Function Entities, so we believe the Technical Rationale document would be the most appropriate document for this insight.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Document Name

Comment

The NAGF has no additional comments.

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

Document Name

Comment

AZPS has no additional comments at this time.

Likes 0

Dislikes 0

Response

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer

Document Name

Comment

CEHE would like the SDT to define and provide examples for the term “intermediary” in IRO-010 and TOP-003.

Likes 0

Dislikes 0

Response

Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC

| | |
|---|--|
| Answer | |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| Ameren has no additional comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | |
| Document Name | |
| Comment | |
| MPC supports comments submitted by the MRO NERC Standards Review Forum. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | |
| Document Name | |

Comment

None

Likes 0

Dislikes 0

Response**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF****Answer****Document Name****Comment**

The MRO NSRF provides the following:

1: We suggest adding verbiage to the technical rationale of both standards (or just the one if they are combined) to clarify if and when a Registered Entity is required to submit a data specification sheet to those other entities that it is already receiving real-time information from via network links.

2: See Comment #2 for Q8.

Likes 0

Dislikes 0

Response**Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1****Answer****Document Name****Comment**

Version history is incomplete for TOP-003-5 (Cold Weaehar Project 2019-06 (not 221-06))

Likes 0

Dislikes 0

Response**Teresa Krabe - Lower Colorado River Authority - 5**

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| None at this time. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Alison MacKellar - Constellation - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Kimberly Turco - Constellation - 6 | |
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Russell Noble - Cowlitz County PUD - 3

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer

Document Name

Comment

Version history is incomplete for TOP-003-5.

Likes 0

Dislikes 0

Response

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer

| | |
|--|---|
| Document Name | |
| Comment | |
| Version history is incomplete for TOP-003-5. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| | |

10. Provide additional comments for the SDT to consider, if desired.

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

Answer

Document Name

Comment

During SRC's review of the IRO-010-5/TOP-003-6 draft Standards, the SRC identified an inefficiency inherent in the IRO/TOP family of Standards. Unlike other Standards, the IRO/TOP set are divided by functional entity rather than reliability outcome.

The SRC suggests IRO-010-5 and TOP-003-6 be merged into a single standard that could be located under a new family of Standards, e.g. "Data (DAT)," whereby the individual Requirements in the standard would indicate the Responsible Entity, similar to what is done with other Standards (i.e. MOD, PRC, TPL, COM, BAL, VAR).

The SRC further suggests consideration be given to consolidating other relevant IRO/TOP Standards when they come up for review.

Likes 0

Dislikes 0

Response

Russell Noble - Cowlitz County PUD - 3

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Document Name

Comment

Thank you for the effort and due diligence of the SDT in proposing the new revisions and for providing us the opportunity to comment.

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer

Document Name

Comment

Constellation has no additional comments

Kimberly Turco on behalf of Constellation Segement 5 and 6

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

Document Name

Comment

Tri-State appreciates the opportunity to provide additional comments. Tri-State would like to see a better defined technical directive under IRO-010-5 R2. Under R2 it states the Reliability Coordinator is to "distribute" its data and information specification to entities that have data required by the Reliability Coordinator's Operational Planning Analyses, etc.. Tri-State would like to recommend that the SDT determine "reasonable" methods for distribution. The current distribution methods are varied in nature and are often posted in protected environments that all applicable recipients do not have access to. For example, a GO, GOP, or DP may not have authorization to an RC/BA/TOP protected reliability website and therefore do not receive "distribution" of IRO-010 or TOP-003 data requests per R2. Additionally, recipients that do have access may not be aware of new postings in these environments unless they check them consistently.

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer

| | |
|---|--|
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Teresa Krabe - Lower Colorado River Authority - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| None at this time. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster | |
| Answer | |
| Document Name | |
| Comment | |
| Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #10. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable | |
| Answer | |
| Document Name | |

Comment

EEl was and continues to be supportive of the good work done by the SER Phase 2 Project Team and support their recommendations to address the Evidence and Retention issues in IRO-010 and TOP-003. We are also concerned that decisions were made to not consider the possible revisions to the other identified Reliability Standards in this SAR, and by the SER Phase 2 Project Team, without any documented technical justification that describes why no work can be done to address evidence, retention or overlapping requirements within those Reliability Standards. We would encourage the SDT to reconsider the proposed changes made in this first draft and we look forward to a second draft that more closely aligns with the recommendations made by the SER Phase 2 Project Team.

Likes 0

Dislikes 0

Response**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF****Answer****Document Name****Comment**

The MRO NSRF feels that NERC Reliability Standard IRO-010-5 & TOP-003-6 are substantially the same and duplicative of each other. Due to this, there is enough overlap to justify combining them into one standard. The MRO NSRF believes this new standard should be housed in the Communication (COM) suite of standards.

Likes 0

Dislikes 0

Response**Diana Torres - Imperial Irrigation District - 6****Answer****Document Name****Comment**

None

Likes 0

Dislikes 0

Response**Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman**

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| MPC supports comments submitted by the MRO NERC Standards Review Forum. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| Ameren has no additional comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI | |
| Answer | |
| Document Name | |

Comment

AECI appreciates the diligence of the SDT, their consideration of industry comment, and the opportunity to provide substantive comment.

Likes 0

Dislikes 0

Response**Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE****Answer****Document Name****Comment**

To reiterate the comments above, the initial draft appears to be heading in the opposite direction of the issues identified by the SER. CEHE does not feel that the current IRO-010 and TOP-003 drafts are addressing the issues raised by the [Standards Efficiency Review White Paper \(from 11/14/2019\)](#) that originated the Project 2021-06. Instead of simplifying administrative burdens or eliminating them altogether, these revisions are adding an administrative burden that do not have a clear benefit to reliability. Additionally, CEHE believes that these changes create redundancy with the data quality and accuracy of Real-time monitoring and analysis capability requirements in TOP-010-1(i).

Likes 0

Dislikes 0

Response**Marcus Bortman - APS - Arizona Public Service Co. - 6****Answer****Document Name****Comment**

AZPS has no additional comments at this time.

Likes 0

Dislikes 0

Response**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter****Answer****Document Name**

Comment

N/A

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Document Name

Comment

The NAGF has no additional comments.

Likes 0

Dislikes 0

Response

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer

Document Name

Comment

Minnesota Power agrees with MRO's NERC Standards Review Forum's (NSRF) comments.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF

Answer

Document Name

Comment

Though we disagree with some of the proposed changes as noted above, we appreciate the SDT's efforts to support system reliability through possible improvements to these standards.

Likes 0

Dislikes 0

Response

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer

Document Name

Comment

The MRO NSRF feels that NERC Reliability Standard IRO-010-5 & TOP-003-6 are substantially the same and duplicative of each other. Due to this, there is enough overlap to justify combining them into one standard. The MRO NSRF believes this new standard should be housed in the Communication (COM) suite of standards.

Likes 1

Lincoln Electric System, 1, Johnson Josh

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

In the initial stage of this project, Southern raised concerns that the proposed SAR could lead to more prescriptive Data Specification standards. We argued that attempting to specify or determine what data is necessary to reliably operate the Bulk Electric System for all regions would create difficulties for requesting entities (i.e., RC, TOP, and BA) to respond quickly to changing system conditions and would not resolve the compliance issues the SAR was intending to address.

The Standard Drafting Team responded to our concerns with proposed revisions (draft 1) to the standards and by clarifying that “the intent [of the SAR] is to not be overly prescriptive so that Registered Entities may continue, as under the current standards, to request and receive the data necessary to support the four tasks identified in the applicable standards.”

We appreciate the SDT’s efforts, however, we remain concerned with revisions that go beyond the administrative issues identified in the Standards Efficiency Review. EEL’s comments raise the concerns in greater detail. We appreciate the SDT’s careful review of these matters.

Likes 0

Dislikes 0

Response

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

Answer

Document Name

Comment

Nothing further at this time

Likes 0

Dislikes 0

Response

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer

Document Name

Comment

No additional comments at this time.

Likes 0

Dislikes 0

Response

Comments received from Steven Rueckert/WECC

1. To address third party participation in data exchanges, the SDT added a provision in both IRO-010-5 and TOP-003-6 that recognizes that an applicable entity that is required to respond to the data specification may identify data and information that will be provided by a third-party intermediary. However, this provision does not shift the responsibility to respond to the data request from the applicable entity to the intermediary. Rather, the provision recognizes that an applicable entity may utilize an intermediary to pass through data and information unaltered from the entities that originated the data and information. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Yes

No

Comments: The introduction of roles or the use of an intermediate party that is not responsible by the standard for compliance seems to add ambiguity rather than clarifying the standard. The standard language does not provide enough clarity on responsibility for providing the data/information.

R1.1 states the RC/TOP/BA *must* provide provisions (in their documented specification) including identification of applicable entities responsible for responding.

R1.4 uses the words “responsible respondent” identified in part 1.1, but those words are not used in part 1.1. This could be viewed as defining an “applicable entity” as an intermediary. If responsible entity does not use an intermediary is the “responsible entity” considered an “applicable entity” and which entity is being addressed in Part 1.1.

R2 requires distribution of the data/info specification but does not use either of the terms in R1.1 and requires distribution to “entities that have data” Is this the “responsible entity” or the “applicable entity” or both?

R3 is applicable to registered functions receiving a specification per R2. It is not clear whether the intermediary party would even receive the specification from the requestor or would operate by directive of the entity which has the source data. If a GOP has the source data are they allowed to direct a TOP to provide their data to an RC?

To summarize, there is no current prohibition on any third party providing data to a requestor. But because they are not mentioned there is also no confusion over which party is ultimately responsible. It is not necessary to establish a formal requirement for intermediaries. This seems to add unnecessary ambiguity.

These proposed revisions would require all RCs/TOPs/BAs to modify their data specifications documents and place an additional administrative obligation on the entity requesting the data/information.

At a minimum, the standard requirements need to be very clear on which registered entity is responsible and use the same terminology throughout the standard.

While we do not believe intermediaries need to be addressed a possible recommendation for language might be:

- 1.1 A list of data and information needed by the Reliability Coordinator (or TOP or BA) to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessment, including non-BES data and information, external network data and information, and identification of the **applicable** registered entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator (or TOP/BA).

1.4. Delete

R3. Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider **identified as an entity responsible for responding to the data and information specification in Part 1.1 receiving a specification in Requirement R2** shall satisfy the documented specifications **either directly or through use of an intermediary as agreed to by the RC (or TOP/BA)** using the criteria established in Requirement Parts 1.5 through 1.8.

2. To mitigate potential zero defect assumptions and decrease administrative burdens, the SDT revised the data specification requirements in both IRO-010-5 and TOP-003-6 to include more specificity to the protocols for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Yes

No

Comments: WECC agrees with the objective to minimize the impact of zero defect compliance. However, the standard revisions as proposed do not satisfy this objective because they require the requestor to include within the specification: Specific deadlines and periodicity, and specify performance criteria for availability. The requestor's obligation to conduct Real Time Assessments could make them reluctant to publish more relaxed performance criteria for some data elements and the task of identifying the performance requirements for each type of data or information element would be onerous to the requestor.

Suggested improvement

1.5. Protocols for the responsible respondent identified in Part 1.1 to provide data and information that includes, but is not limited to:

1.5.1 **Target Specific** deadlines and periodicity in which data and information is to be provided;

1.5.2 **Criteria for communications and resolution during periods when data exchange is interrupted, source data is not available or to address known inaccuracies.**
~~interruption Performance criteria for the availability and accuracy of data and information, as applicable;~~

1.5.3 Provisions to update or correct data and information, as applicable or necessary.

3. To improve administration of data and information for the applicable entities, the SDT modified IRO-010-5 and TOP-003-6 to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information. Do you agree with these modifications? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Yes

No

Comments: It is unclear how a mutually agreed upon format, conflict resolution process and security protocols could be included in a Data specification prior to it being distributed to the entities responsible for responding? That does not seem like it would be "mutually agreeable." It appears that it would be developed and directed by the requestor. The current standards IRO-010 and TOP-003 correctly include the provisions of mutual agreeable formats, conflict resolution and security protocols in requirements for the responding entity as part of their response obligations. Such that each entity may coordinate with the requestor as needed. WECC believes a modification to address these items is unnecessary.

However, if the desire is to move this into the area of responsibility of the requestor a possible suggestion is:

1.6 Identification of a *preferred* format.

1.7. Identification of a *preferred* process for resolving conflicts between the Reliability Coordinator, the entity responsible for responding identified in Part 1.1

1.8. Identification of the *preferred* security protocol or method for securely transferring data and information.

1.9 The preferred elements in Part 1.6, 1.7, and 1.8 may be modified though documented mutual agreement between the data requestor and the entity responsible for responding.

4. IRO-010-5 and TOP-003-6 require general data specifications to allow the Reliability Coordinator, Transmission Operator, and Balancing Authority to perform its Operational Planning Analysis, Real Time Assessment, Real-time monitoring (undefined term), and BA analysis functions (undefined term). The SDT focused on data and information generally rather than prescriptive requirements. Do you believe that all data and information needed by the RC, TOP, and BA to perform these reliability tasks (for example, PMU streaming, outage coordination, distribution, generator fuel information, etc.) is available pursuant to the proposed standards or

is additional clarification needed that is more prescriptive?

Yes

No

Comments: While R1 and Part 1.1 as written appear to satisfy the intent of a generic data request, Part 1.2 and 1.3 are inconsistent with this idea by making requirements for very specific data.

WECC believes a preferable process would be to remove specific data items and allow R1 and R1.1 to stand alone. An even better approach may be to consider allowing the requestor to request ANY planning and operational data needed for it to monitor its area to maintain reliability during normal and abnormal conditions and not restrict it to data associated with OPA, RT monitoring and RTA.

5. To support the proposed modifications, the SDT revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Yes

No

Comments: No comment

6. The SDT reviewed the other standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6 or create efficiencies reflective of the principle established by the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in these collateral standards, the SDT determined there is insufficient justifications for the retirement of these requirements and, therefore, the SDT is not proposing changes to these standards. Do you agree with this assessment? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Yes

No

Comments: However, if redundancies in data delivery exist it does establish the possibility of having more than one non-compliance for the same issue. This could be identified and resolved with Enforcement Discretion as needed.

7. The SDT is proposing an 18-month implementation plan. Would this proposed timeframe give enough time to implement the proposed modifications in IRO-010-5 and TOP-003-6? If you think an alternate timeframe is needed, please propose an alternate implementation plan and time period, and provide a detailed explanation of actions planned to meet the implementation deadline.

Yes

No

Comments: No Comment. WECC believes the entities responsible for implementing any revisions are best suited to comment on the length of the implementation plan.

8. Provide additional comments regarding IRO-010-5 for the SDT to consider.

Comments: Please see response to question 10

9. Provide additional comments regarding TOP-003-6 for the SDT to consider.

Comments: Please see response to question 10

10. Provide any additional comments for the SDT to consider, if desired.

Comments: WECC questions if it is really necessary to mandate that the entity that needs operational data create a and maintain a formal document?

If it is truly desired to reduce administrative burden, then WECC suggests having IRO-010 and TOP-003 focus on giving the requestors (RC/TOP/BA) the “Authority” to request and collect the data and information in the frequency and format needed.

Since the data needed can vary widely based on the needs of the requestor, the only enforceable requirement for the requestor should be that they formally make the requests to the entity that has the data.

It should not be necessary to provide and maintain single large data specification primarily for audit purposes. This seems to add administrative burden

The standard could be simplified to two simple requirements.

R1 specify requestor has clear authority to request data and is *required* to communicate those requests to the providers of the data/info.

Measurement would include records of the request.

It could be optional to the requestor based on its needs if they wished to maintain and send a formal catalog of requested data to everyone or provide a simple request for specific data via email or other communication to an entity. Their request could provide any or all of the elements in the subparts of R1 at the discretion of the requestor as needed to get the data/info they need.

R2 would be the requirement for entities to comply with the data/information request.

Measurement would be documentation the request was complied with.

There would be little need to perform periodic audits of this requirement. Other Standards that measure performance of the data requestor would demonstrate if the entities received the data they needed by satisfactory performance of other standards that depend on the data. Failure to comply by the entity receiving the request could be addressed through the CMEP complaint process.

These suggestions are provided in an attempt to clarify the wording of the standards and reduce administrative burden. WECC thanks the drafting team for the opportunity to provide comments and suggestions.

Consideration of Comments

| | |
|-----------------------------------|--|
| Project Name: | 2021-06 Modifications to IRO-010 and TOP-003 Draft 1 |
| Comment Period Start Date: | 10/25/2022 |
| Comment Period End Date: | 12/15/2022 |
| Associated Ballot(s): | 2021-06 Modifications to IRO-010 and TOP-003 Implementation Plan IN 1 OT 2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 IN 1 ST 2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 IN 1 ST |

There were 65 sets of responses, including comments from approximately 176 different people from approximately 117 companies representing 10 of the Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the [project page](#).

If you feel that your comment has been overlooked, let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, contact Vice President of Engineering and Standards [Howard Gugel](#) (via email) or at (404) 446-9693.

Questions

1. To address third party participation in data exchanges, the SDT added a provision in both IRO-010-5 and TOP-003-6 that recognizes that an applicable entity that is required to respond to the data specification may identify data and information that will be provided by a third-party intermediary. However, this provision does not shift the responsibility to respond to the data request from the applicable entity to the intermediary. Rather, the provision recognizes that an applicable entity may utilize an intermediary to pass through data and information unaltered from the entities that originated the data and information. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.
2. To mitigate potential zero defect assumptions and decrease administrative burdens, the SDT revised the data specification requirements in both IRO-010-5 and TOP-003-6 to include more specificity to the protocols for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.
3. To improve administration of data and information for the applicable entities, the SDT modified IRO-010-5 and TOP-003-6 to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information. Do you agree with these modifications? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.
4. IRO-010-5 and TOP-003-6 require general data specifications to allow the Reliability Coordinator, Transmission Operator, and Balancing Authority to perform its Operational Planning Analysis, Real Time Assessment, Real-time monitoring (undefined term), and BA analysis functions (undefined term). The SDT focused on data and information generally rather than prescriptive requirements. Do you believe that all data and information needed by the RC, TOP, and BA to perform these reliability tasks (for example, PMU streaming, outage coordination, distribution, generator fuel information, etc.) is available pursuant to the proposed standards or is additional clarification needed that is more prescriptive.
5. To support the proposed modifications, the SDT revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Questions

6. The SDT reviewed the other standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6 or create efficiencies reflective of the principle established by the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in these collateral standards, the SDT determined there is insufficient justifications for the retirement of these requirements and, therefore, the SDT is not proposing changes to these standards. Do you agree with this assessment? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

7. The SDT is proposing an 18-month implementation plan. Would this proposed timeframe give enough time to implement the proposed modifications in IRO-010-5 and TOP-003-6? If you think an alternate timeframe is needed, please propose an alternate implementation plan and time period, and provide a detailed explanation of actions planned to meet the implementation deadline.

8. Provide additional comments regarding IRO-010-5 for the SDT to consider.

9. Provide additional comments regarding TOP-003-6 for the SDT to consider.

10. Provide additional comments for the SDT to consider, if desired.

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------------------|-----------------|------------|--------|-------------------------------|------------------------|-------------------------------|-------------------------|---------------------|
| BC Hydro and Power Authority | Adrian Andreoiu | 1 | WECC | BC Hydro | Hootan Jarollahi | BC Hydro and Power Authority | 3 | WECC |
| | | | | | Helen Hamilton Harding | BC Hydro and Power Authority | 5 | WECC |
| | | | | | Adrian Andreoiu | BC Hydro and Power Authority | 1 | WECC |
| Santee Cooper | Chris Wagner | 1 | | Santee Cooper | Christine Pope | Santee Cooper | 1,3,5,6 | SERC |
| | | | | | Rene' Free | Santee Cooper | 1,3,5,6 | SERC |
| WEC Energy Group, Inc. | Christine Kane | 3 | | WEC Energy Group | Christine Kane | WEC Energy Group | 3 | RF |
| | | | | | Matthew Beilfuss | WEC Energy Group, Inc. | 4 | RF |
| | | | | | Clarice Zellmer | WEC Energy Group, Inc. | 5 | RF |
| | | | | | David Boeshaar | WEC Energy Group, Inc. | 6 | RF |
| Portland General Electric Co. | Daniel Mason | 6 | | Portland General Electric Co. | Brooke Jockin | Portland General Electric Co. | 1 | WECC |
| | | | | | Adam Menendez | Portland General Electric Co. | 3 | WECC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--|----------------|------------|--------|--------------|-------------------|--|-------------------------|---------------------|
| | | | | | Ryan Olson | Portland General Electric Co. | 5 | WECC |
| | | | | | Daniel Mason | Portland General Electric Co | 6 | WECC |
| Public Utility District No. 1 of Chelan County | Diane E Landry | 1 | | CHPD | Meaghan Connell | Public Utility District No. 1 of Chelan County | 5 | WECC |
| | | | | | Joyce Gundry | Public Utility District No. 1 of Chelan County | 3 | WECC |
| | | | | | Glen Pruitt | Public Utility District No. 1 of Chelan County | 6 | WECC |
| Jennie Wike | Jennie Wike | | WECC | Tacoma Power | Jennie Wike | Tacoma Public Utilities | 1,3,4,5,6 | WECC |
| | | | | | John Merrell | Tacoma Public Utilities (Tacoma, WA) | 1 | WECC |
| | | | | | Marc Donaldson | Tacoma Public Utilities (Tacoma, WA) | 3 | WECC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|----------------------|---------------|------------|---------------------------|--------------------|-------------------|--------------------------------------|-------------------------|---------------------|
| | | | | | Hien Ho | Tacoma Public Utilities (Tacoma, WA) | 4 | WECC |
| | | | | | Terry Gifford | Tacoma Public Utilities (Tacoma, WA) | 6 | WECC |
| | | | | | Ozan Ferrin | Tacoma Public Utilities (Tacoma, WA) | 5 | WECC |
| ACES Power Marketing | Jodirah Green | 1,3,4,5,6 | MRO,RF,SERC,Texas RE,WECC | ACES Collaborators | Bob Soloman | Hoosier Energy Electric Cooperative | 1 | RF |
| | | | | | Kevin Lyons | Central Iowa Power Cooperative | 1 | MRO |
| | | | | | Amber Skillern | East Kentucky Power Cooperative | 1 | SERC |
| | | | | | Ryan Strom | Buckeye Power, Inc. | 5 | RF |
| | | | | | David Hartman | Arizona G&T Cooperatives | 1 | WECC |
| Eversource Energy | Joshua London | 1 | | Eversource | Joshua London | Eversource Energy | 1 | NPCC |
| | | | | | Vicki O'Leary | Eversource Energy | 3 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------------------------|------------------|-------------|---------------------------|----------------------------------|-------------------|-------------------------------------|-------------------------|---------------------|
| Entergy | Julie Hall | 6 | | Entergy | Oliver Burke | Entergy - Entergy Services, Inc. | 1 | SERC |
| | | | | | Jamie Prater | Entergy | 5 | SERC |
| DTE Energy - Detroit Edison Company | Karie Barczak | 3 | | DTE Energy - DTE Electric | Adrian Raducea | DTE Energy - Detroit Edison Company | 5 | RF |
| | | | | | Patricia Ireland | DTE Energy - DTE Electric | 4 | RF |
| | | | | | Karie Barczak | DTE Energy - DTE Electric | 3 | RF |
| ISO New England, Inc. | Kathleen Goodman | 2 | NA - Not Applicable, NPCC | Standards Review Committee (SRC) | Helen Lainis | IESO | 2 | NPCC |
| | | | | | Greg Campoli | NYISO | 2 | NPCC |
| | | | | | Kathleen Goodman | ISO-NE | 2 | NPCC |
| | | | | | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Mike Del Viscio | PJM | 2 | RF |
| | | | | | Charles Yeung | SPP | 2 | MRO |
| MRO | Kendra Buesgens | 1,2,3,4,5,6 | MRO | MRO NSRF | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Christopher Bills | City of Independence Power & Light | 3,5 | MRO |
| | | | | | Fred Meyer | Algonquin Power Co. | 3 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|---|-------------------------|---------------------|
| | | | | | Jamie Monette | Allete - Minnesota Power, Inc. | 1 | MRO |
| | | | | | Larry Heckert | Alliant Energy Corporation Services, Inc. | 4 | MRO |
| | | | | | Marc Gomez | Southwestern Power Administration | 1 | MRO |
| | | | | | Matthew Harward | Southwest Power Pool, Inc. | 2 | MRO |
| | | | | | LaTroy Brumfield | American Transmission Company, LLC | 1 | MRO |
| | | | | | Bryan Sherrow | Kansas City Board Of Public Utilities | 1 | MRO |
| | | | | | Terry Harbour | MidAmerican Energy | 1,3 | MRO |
| | | | | | Jamison Cawley | Nebraska Public Power | 1,3,5 | MRO |
| | | | | | Seth Shoemaker | Muscatine Power & Water | 1,3,5,6 | MRO |
| | | | | | Michael Brytowski | Great River Energy | 1,3,5,6 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|---------------------------------------|----------------|------------|---------------------------|------------------|-------------------|---------------------------------------|-------------------------|---------------------|
| | | | | | David Heins | Omaha Public Power District | 1,3,5,6 | MRO |
| | | | | | George Brown | Acciona Energy North America | 5 | MRO |
| | | | | | Jaimin Patel | Saskatchewan Power Corporation | 1 | MRO |
| | | | | | Kimberly Bentley | Western Area Power Administration | 1,6 | MRO |
| FirstEnergy - FirstEnergy Corporation | Mark Garza | 4 | | FE Voter | Julie Severino | FirstEnergy - FirstEnergy Corporation | 1 | RF |
| | | | | | Aaron Ghodooshim | FirstEnergy - FirstEnergy Corporation | 3 | RF |
| | | | | | Robert Loy | FirstEnergy - FirstEnergy Solutions | 5 | RF |
| | | | | | Mark Garza | FirstEnergy-FirstEnergy | 1,3,4,5,6 | RF |
| | | | | | Stacey Sheehan | FirstEnergy - FirstEnergy Corporation | 6 | RF |
| Southern Company - Southern | Pamela Frazier | 1,3,5,6 | MRO,RF,SERC,Texas RE,WECC | Southern Company | Matt Carden | Southern Company - Southern | 1 | SERC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|------------------------|-----------|----------------------|--------|------------|--------------------|--|-------------------------|---------------------|
| Company Services, Inc. | | | | | | Company Services, Inc. | | |
| | | | | | Joel Dembowski | Southern Company - Alabama Power Company | 3 | SERC |
| | | | | | Jim Howell, Jr. | Southern Company - Southern Company Generation | 5 | SERC |
| | | | | | Ron Carlsen | Southern Company - Southern Company Generation | 6 | SERC |
| NPCC | Ruida Shu | 1,2,3,4,5,6,7,8,9,10 | NPCC | NPCC RSC | Gerry Dunbar | Northeast Power Coordinating Council | 10 | NPCC |
| | | | | | Sheraz Majid | Hydro One Networks, Inc. | 1 | NPCC |
| | | | | | Deidre Altobell | Con Edison | 1 | NPCC |
| | | | | | John Hastings | National Grid | 1 | NPCC |
| | | | | | Jeffrey Streifling | NB Power Corporation | 1 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-----------------------------------|---|-------------------------|---------------------|
| | | | | | Michele Tondalo | United Illuminating Co. | 1 | NPCC |
| | | | | | Chantal Mazza | Hydro Quebec | 1 | NPCC |
| | | | | | Stephanie Ullah-Mazzuca | Orange and Rockland | 1 | NPCC |
| | | | | | Quintin Lee | Eversource Energy | 1 | NPCC |
| | | | | | Michael Ridolfino | Central Hudson Gas & Electric Corp. | 1 | NPCC |
| | | | | | Dan Kopin | Vermont Electric Power Company | 1 | NPCC |
| | | | | | James Grant | NYISO | 2 | NPCC |
| | | | | | John Pearson | ISO New England, Inc. | 2 | NPCC |
| | | | | | Harishkumar Subramani Vijay Kumar | Independent Electricity System Operator | 2 | NPCC |
| | | | | | Nicolas Turcotte | Hydro-Quebec TransEnergie | 1 | NPCC |
| | | | | | Randy MacDonald | New Brunswick Power Corporation | 2 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|--------------------|--|-------------------------|---------------------|
| | | | | | Dermot Smyth | Con Ed - Consolidated Edison Co. of New York | 1 | NPCC |
| | | | | | Michael Jones | National Grid | 3 | NPCC |
| | | | | | David Burke | Orange and Rockland | 3 | NPCC |
| | | | | | Peter Yost | Con Ed - Consolidated Edison Co. of New York | 3 | NPCC |
| | | | | | Salvatore Spagnolo | New York Power Authority | 1 | NPCC |
| | | | | | Sean Bodkin | Dominion - Dominion Resources, Inc. | 6 | NPCC |
| | | | | | David Kwan | Ontario Power Generation | 4 | NPCC |
| | | | | | Silvia Mitchell | NextEra Energy - Florida Power and Light Co. | 1 | NPCC |
| | | | | | Glen Smith | Entergy Services | 4 | NPCC |
| | | | | | Sean Cavote | PSEG | 4 | NPCC |
| | | | | | Jason Chandler | Con Edison | 5 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------------------------|-------------|------------|--------|------------|-------------------|---|-------------------------|---------------------|
| | | | | | Tracy MacNicoll | Utility Services | 5 | NPCC |
| | | | | | Shivaz Chopra | New York Power Authority | 6 | NPCC |
| | | | | | Vijay Puran | New York State Department of Public Service | 6 | NPCC |
| | | | | | ALAN ADAMSON | New York State Reliability Council | 10 | NPCC |
| | | | | | David Kiguel | Independent | 7 | NPCC |
| | | | | | Joel Charlebois | AESI | 7 | NPCC |
| Dominion - Dominion Resources, Inc. | Sean Bodkin | 6 | | Dominion | Connie Lowe | Dominion - Dominion Resources, Inc. | 3 | NA - Not Applicable |
| | | | | | Lou Oberski | Dominion - Dominion Resources, Inc. | 5 | NA - Not Applicable |
| | | | | | Larry Nash | Dominion - Dominion Virginia Power | 1 | NA - Not Applicable |
| | | | | | Rachel Snead | Dominion - Dominion | 5 | NA - Not Applicable |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|---------------------------------------|--------------|------------|--------|------------|-------------------|---|-------------------------|---------------------|
| | | | | | | Resources, Inc. | | |
| Associated Electric Cooperative, Inc. | Todd Bennett | 3 | | AECI | Michael Bax | Central Electric Power Cooperative (Missouri) | 1 | SERC |
| | | | | | Adam Weber | Central Electric Power Cooperative (Missouri) | 3 | SERC |
| | | | | | Stephen Pogue | M and A Electric Power Cooperative | 3 | SERC |
| | | | | | William Price | M and A Electric Power Cooperative | 1 | SERC |
| | | | | | Peter Dawson | Sho-Me Power Electric Cooperative | 1 | SERC |
| | | | | | Mark Ramsey | N.W. Electric Power Cooperative, Inc. | 1 | NPCC |
| | | | | | John Stickley | NW Electric Power Cooperative, Inc. | 3 | SERC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|---|-------------------------|---------------------|
| | | | | | Tony Gott | KAMO Electric Cooperative | 3 | SERC |
| | | | | | Micah Breedlove | KAMO Electric Cooperative | 1 | SERC |
| | | | | | Kevin White | Northeast Missouri Electric Power Cooperative | 1 | SERC |
| | | | | | Skyler Wiegmann | Northeast Missouri Electric Power Cooperative | 3 | SERC |
| | | | | | Ryan Ziegler | Associated Electric Cooperative, Inc. | 1 | SERC |
| | | | | | Brian Ackermann | Associated Electric Cooperative, Inc. | 6 | SERC |
| | | | | | Brad Haralson | Associated Electric Cooperative, Inc. | 5 | SERC |

1. To address third party participation in data exchanges, the SDT added a provision in both IRO-010-5 and TOP-003-6 that recognizes that an applicable entity that is required to respond to the data specification may identify data and information that will be provided by a third-party intermediary. However, this provision does not shift the responsibility to respond to the data request from the applicable entity to the intermediary. Rather, the provision recognizes that an applicable entity may utilize an intermediary to pass through data and information unaltered from the entities that originated the data and information. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer No

Document Name

Comment

Dominion Energy is concerned over the requirement that an intermediate entity have performance responsibility for the accuracy of data from a third party as defined by the end user of the data. An entity does not have the ability to validate the accuracy or correct data it does not originate.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision and recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP-003-6 based on feedback from stakeholders.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

| | |
|--|----|
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>The MRO NSRF does not believe the additional language of “identification of an intermediary to pass through data and information unaltered from the entities.” Is related to the reliability tasks of: Operational Planning Analysis, Real-time Assessments, Real-time monitoring & Balancing Authority analysis functions. As stated in the ‘Detailed Description’ section of the Standards Authorization Request (SAR), “the Standard Drafting Team should not revise requirements that are not directly related to the four reliability tasks identified above.” The MRO NSRF does not believe that ‘identification of intermediaries’ is within the scope of the SAR.</p> <p>In addition, the MRO NSRF does not see the value of the language:</p> <p>{C}· Intermediary may not be a NERC Registered Entity, there is no reliability value in identifying whom this intermediary is from an administrative standpoint.</p> <p>{C}o</p> <p>{C}Further, the intermediary would already be known to the RCs, TOPs & BAs, as the data received would be coming from this intermediary.</p> <p>{C}· The data should always remain ‘unaltered’ if a responsible entity, whether NERC Registered Entity, is to meet compliance will the IRO-010-5 & TOP-003-6 data specification.</p> <p>{C}· If an Intermediary is to be used, the contractual terms & conditions with the NERC Registered Entity, would ultimately specify who, what, where, when & how.</p> <p>{C}· Identifying the intermediary could lead to miscommunications and reliability gaps if there ever was a problem with the data. The RCs, TOPs & BAs could contact the intermediary rather than the responsible entity to resolve/question data integrity issues.</p> | |

| | |
|--|--|
| Likes 2 | Lincoln Electric System, 1, Johnson Josh; Fuhrman Andy On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF | |
| Answer | No |
| Document Name | |
| Comment | |
| ATC does not see the value in identifying an intermediary. The standard as currently written is silent on the topic of intermediaries and, therefore, does not prohibit or require the use of intermediaries. It is ultimately the responsibility of the NERC registered requestor and the entity that the requestor identified in R1.1 as having the necessary method to provide the data. The data path should not be considered. Having this requirement adds administrative burden to the standard, which is contrary to the objective of the revisions. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Thomas Foltz - AEP - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| AEP is appreciative of the efforts of the Standards Drafting Team, and supports their overall efforts and proposed standard revisions. We believe that a majority of what they have proposed will indeed be beneficial and will improve the future state of these standards. We would however like to share one concern which has impacted our balloting. There will be instances where the Transmission Operator needs data from the Reliability Coordinator | |

(including but not limited to unit commitment data, load information, generation and load forecasts, etc.), however the RC is not included as an Applicable Entity in TOP-003, nor is it specifically obligated under TOP-003 R5. AEP recommends that the RC be added as a Applicable Entity for TOP-003 and also included in the obligations of R5. Our decision to vote negatively on the proposed revision of TOP-003 is solely driven by this concern.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. The SDT noted the concerns from AEP. The SDT notes that the data cited (unit commitment data, load information, generation and load forecasts appears to be Balancing Authority data. The SDT believes that a TOP can request this data from a BA under TOP-003 similar to how an RC acquires this data through its data specification via its IRO-010 data specification.

Jamie Monette - Allele - Minnesota Power, Inc. - 1

Answer

No

Document Name

Comment

Minnesota Power agrees with EEI’s comments.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer

No

Document Name

Comment

| | |
|--|----|
| WEC Energy Group supports EEI's comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | No |
| Document Name | |
| Comment | |
| AZPS agrees with the intent of the updated provisions but agrees with EEI that this does not meet the scope identified by the SER Phase 2 project. We support EEI's comments that there is insufficient reason to open these two standards based on the modification proposed. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| BPA believes this is an additional administrative burden that does not increase reliability. | |
| Likes 0 | |

| | |
|--|----|
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | No |
| Document Name | |
| Comment | |
| CenterPoint Energy Houston Electric, LLC (CEHE) supports the comments as submitted by the Edison Electric Institute. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Daniel Gacek - Exelon - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |

| | |
|--|----|
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | No |
| Document Name | |

| Comment | |
|---|----|
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| James Baldwin - Lower Colorado River Authority - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| LCRA TSC does not see the need to identify an intermediary. The current version of the standard does not prohibit or require the use of intermediaries. We believe it is ultimately the responsibility of the NERC registered requestor and the entity that the requestor identified in R1.1 as having the necessary method to provide the data. The data path should not be considered. Having this requirement adds administrative burden to the standard, which is contrary to the objective of the revisions. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Carl Pineault - Hydro-Quebec Production - 5 | |
| Answer | No |
| Document Name | |
| Comment | |

While the text proposed for R1.4 can simplify data handling for some entities, we agree with ATC comments that the current standard is silent – neither permitting nor prohibiting such transfers. Therefore, the added requirement – which is fundamentally administrative – is not necessary and potentially confusing.

Also, the question and the technical rationale for R1.4 - though not normative – affirms that the compliance obligation remains with the originating entity even if an intermediary is used. We point out that the text of R1 does not currently explicitly require data and information needed by the RC to be communicated to the RC: that is, the recipient is not required to be specified in R1 for different information. When the specification published by the RC requires the transmission of information to an entity other than the RC, we believe the respondent (originating entity) meets its compliance obligation when it transfers the required information to the specified entity per the specification. The respondent is not responsible for the further transfer or processing of the information. It is possible, for example, for the specification to require the transfer of modelling information to a planning entity that then transfers it, after processing, to the RC. Other use cases are imaginable. Therefore, the rationale’s text that indicates compliance obligations stay with the respondent (paragraph 3 of Technical Rationale for R1.4) applies only in the case where a respondent asks to use an intermediary, not when an RC requires the use of an intermediary. All this is already manageable within the existing requirement.

If R1.4 (or revision thereof) were to stay in, we think the rationale should distinguish between the two types of intermediaries. If an entity asks to use an intermediary, it is responsible for the eventual reception by the RC of the information; if the RC orders the use of an intermediary, it is responsible for collecting the data from the intermediary.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

No

Document Name

Comment

MPC supports comments submitted by the MRO NERC Standards Review Forum.

Likes 0

| | |
|--|----|
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper | |
| Answer | No |
| Document Name | |
| Comment | |
| Santee Cooper believes that this will create additional administrative burdens and that it does not increase reliability. We also believe that ‘identification of intermediaries’ is NOT within the scope of the SAR and the current language appears to place the burden on the intermediary if the end-user specifies so in their protocol. Any protocols regarding accuracy and data correction should not place any responsibility on the intermediary who is only an information conduit. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | No |
| Document Name | |
| Comment | |
| The MRO NSRF does not believe the additional language of “identification of an intermediary to pass through data and information unaltered from the entities” is needed to achieve the underlying purposes of the SAR: to mitigate zero defect expectations or reduce administrative burdens. | |
| The MRO NSRF does not see the value of the language: | |

• Intermediary may not be a NERC Registered Entity, there is no reliability value in identifying whom this intermediary is from an administrative standpoint.

o Further, the intermediary would already be known to the RCs, TOPs & BAs, as the data received would be coming from this intermediary.

• The data should always remain ‘unaltered’ if a responsible entity, whether NERC Registered Entity, is to meet compliance with the IRO-010-5 & TOP-003-6 data specification.

• If an Intermediary is to be used, the contractual terms & conditions with the NERC Registered Entity, would ultimately specify who, what, where, when & how.

• Identifying the intermediary could lead to miscommunications and reliability gaps if there ever was a problem with the data. The RCs, TOPs & BAs could contact the intermediary rather than the responsible entity to resolve/question data integrity issues.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.

Nicolas Turcotte - Hydro-Québec TransEnergie - 1

Answer

No

Document Name

Comment

The standard as currently written is silent on the topic of intermediaries– neither permitting nor prohibiting such transfers and, therefore, does not prohibit or require the use of intermediaries. It is ultimately the responsibility of the NERC registered requestor and the entity that the requestor identified in R1.1 as having the necessary method to provide the data.

If the intent behind “identification of the applicable entities” in R1.1 includes applicable entities that are not identified in the Applicability section of the standard, a clarification in the Technical Rational and in the standard would be beneficial. For example, “identification of applicable entities in Section 4 or other not referred to in Section 4 responsible for responding to the specification ...”. For example, when the specification published by the RC requires the transmission of information to an entity other than the RC, we believe the respondent (originating entity) meets its compliance obligation when it transfers the required information to the specified entity per the specification. The respondent is not responsible for the further

transfer or processing of the information. It is possible that modelling information be transferred to a planning entity that then transfers it, after processing, to the RC. Other use cases are imaginable. Therefore, the rationale’s text that indicates compliance obligations stay with the respondent (paragraph 3 of Technical Rationale for R1.4) applies only in the case where a respondent asks to use an intermediary, not when an RC requires the use of an intermediary. All this is already manageable within the existing requirement.

If R1.4 were to stay we think the rationale should distinguish between the two types of intermediaries. If an entity asks to use an intermediary, it is responsible for the eventual reception by the RC of the information; if the RC orders the use of an intermediary, it is responsible for collecting the data from the intermediary.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

While EEI would not be opposed to adding language in IRO-010-5 and TOP-003-6 to specifically address the use of third-party intermediaries, however, this issue is not a reliability gap and is not a sufficient reason to open these two Reliability Standards. The primary purpose of this project was to address issues identified under the SER Phase 2 project which identified evidence and data retention as the number one concern identified by entities that needed to be addressed. Our review of the changes indicates this was not addressed and there is insufficient reason to open these two standards and make the modifications proposed.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. The SDT has provided additional documentation and rationale with justification for retaining the existing requirements that were flagged for review by SER Phase 2.

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #1.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.

Teresa Krabe - Lower Colorado River Authority - 5

Answer No

Document Name

Comment

LCRA TSC does not see the need to identify an intermediary. The current version of the standard does not prohibit or require the use of intermediaries. We believe it is ultimately the responsibility of the NERC registered requestor and the entity that the requestor identified in R1.1 as having the necessary method to provide the data. The data path should not be considered. Having this requirement adds administrative burden to the standard, which is contrary to the objective of the revisions.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

| | |
|---|----|
| Answer | No |
| Document Name | |
| Comment | |
| <p>The ISO/RTO Council Standards Review Committee (SRC) does not see a reliability need to have this provision (IRO-010, Part 1.4 and TOP-003, R1.4) in the standard. As entities are successfully able to utilize an intermediary today, we do not see the value in adding this commercial (contractual) provision to a mandatory reliability standard. Further, as this project was initiated pursuant to the Standards Efficiency Review (SER), the goal of this effort is to simplify (versus complicate) administrative burdens.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.</p> | |
| Russell Noble - Cowlitz County PUD - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>Cowlitz PUD fails to see any reliability objective being addressed by this additional requirement. Please note originating entities not party to the RC/TOP/BA specifications are likely not registered with NERC as this data can originate from non-BES systems. This would add unnecessary administrative burdens contrary to the SAR objective.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.</p> | |
| Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3 | |

| | |
|--|-----|
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Nazra Gladu - Manitoba Hydro - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| No comment. | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|--|-----|
| Response | |
| The SDT thanks you for your response. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| None. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The NAGF supports the added provision in IRO-010-5 and TOP-003-6 to allow a third-party intermediary to provide data and information of the behalf of the responsible respondent/applicable entity. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay | |

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| AES Clean Energy agrees with these added provisions. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez | |
| Answer | Yes |
| Document Name | |
| Comment | |
| In addition, the same rules should apply to the intermediary as they too have certain control of the data and information. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF | |
| Answer | Yes |
| Document Name | |
| Comment | |

Southern Indiana Gas and Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) has responded "yes" to question 1; however, SIGE would like the Standard Drafting Team to define and provide examples for the term "intermediary" in IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer Yes

Document Name

Comment

We recommend the drafting team consider removing, or provide some clarifying statements for, “unaltered” in R1, Part 1.4 (both standards). Our assumption is that the intent here is to state that the integrity of the data remains true from the originator to the RC. As long as the integrity is intact, can it be reformatted as it is passed through? If the data is provided in one unit of measurement, can a different unit of measurement be calculated by the intermediary as part of the mutually agreed upon format?

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders.

David Jendras Sr - Ameren - Ameren Services - 3

Answer Yes

Document Name

Comment

| | |
|--|-----|
| Ameren agrees with and supports NAGF comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| IID currently does not have a third-party intermediary providing information. If in the future IID has a third-party intermediary providing information, IID understands they will be responsible to respond to the data request from the applicable entity. | |
| Likes 0 | |

| | |
|--|-----|
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |

| | |
|--|-----|
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |

| Comment | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Melanie Wong - Seminole Electric Cooperative, Inc. - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD | |

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|--|-----|
| The SDT thanks you for your response. | |
| Ken Habgood - Seminole Electric Cooperative, Inc. - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. | |
| Lindsey Mannion - ReliabilityFirst - 10 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |

| | |
|--|-----|
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Josh Combs - Black Hills Corporation - 3 | |
| Answer | Yes |

| | |
|--|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Mike Magruder - Avista - Avista Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Bryan Bennett - Sempra - San Diego Gas and Electric - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |

| | |
|--|-----|
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|--|--|
| Response | |
| The SDT thanks you for your response. | |
| Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | |
| Document Name | |
| Comment | |
| We are not opposed to adding language in IRO-010-5 and TOP-003-6 to address the use of third-party intermediaries, however, this issue is not reflective of the primary purpose of this project which was to address issues identified under the SER Phase 2 project which identified evidence and data retention as the number one concern identified by entities that needed to be addressed. This does not appear to have been addressed. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2 | |
| Answer | |
| Document Name | |
| Comment | |
| We support NPCC's comments: | |
| We are not opposed to adding language in IRO-010-5 and TOP-003-6 to address the use of third-party intermediaries, however, this issue is not reflective of the primary purpose of this project which was to address issues identified under the SER Phase 2 project which identified evidence and data retention as the number one concern identified by entities that needed to be addressed. This does not appear to have been addressed. | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|--|--|
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |
| Sheraz Majid - Hydro One Networks, Inc. - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| Need more clarity on who are/could be intermediaries either in the standard or the technical rationale. Are these telecom provides (service and/or physical), RCs to TO/TOPs, TO/TOPs to RCs such as GO via RC (intermediary) to TO or GOs via TO (intermediary) to RCs etc.). Also,need to explanation on what is it trying to address. | |
| +support comments submitted by NPCC RSC. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT has removed the provision recognizing a “data intermediary” from the proposed revisions for IRO-010-5 and TOP 003-6 based on feedback from stakeholders. | |

2. To mitigate potential zero defect assumptions and decrease administrative burdens, the SDT revised the data specification requirements in both IRO-010-5 and TOP-003-6 to include more specificity to the protocols for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Russell Noble - Cowlitz County PUD - 3

Answer No

Document Name

Comment

Again, the proposed changes add complexity and administrative burden. Cowlitz PUD supports comments by others in this regard and will review SDT responses to these commentors.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC)

Answer No

Document Name

Comment

Although the SRC agrees with the SDT’s intent to mitigate the potential for zero defect performance, we don’t believe the proposed language addresses that concern. The SRC proposes that emphasis be placed on the dispute resolution process, whereby if the entity is not receiving the data necessary to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments, could tailor its approach according to the resultant risk the loss of information poses to reliably operating the BES.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.) and allows entities the ability to focus on dispute resolution within their processes.

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer No

Document Name

Comment

Tri-State agrees with EEI comments.

Likes 0

Dislikes 0

Response

Thank you for the comment please see response to EEI’s comment.

Teresa Krabe - Lower Colorado River Authority - 5

Answer No

Document Name

Comment

LCRA TSC believes these changes produce additional administrative burden without reducing potential zero-defect situations. Further defining the requirements around data sharing seems to increase risk of violation rather than decrease it. In addition, it isn't clear that defining accurate performance criteria for ICCP data would even be possible and tracking the availability and accuracy of that data would be burdensome.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT's focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around "process" which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective "process" to share information among each function (BA, TOP, RC, etc.).

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #2.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT's focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around "process" which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective "process" to share information among each function (BA, TOP, RC, etc.).

| | |
|--|----|
| Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>EI does not agree the problems entities have encountered with IRO-010-5 and TOP-003-6 are specific to data specifications received or the protocols for providing data and information. Instead, the concerns included the excessive costs associated with 1) storage of this data that outweighed the know risks, and 2) costs of managing, compiling and backing up data for the sole purpose of compliance monitoring and enforcement activities. Unfortunately, none of these concerns have been addressed in this first draft. Therefore, EEI does not support the proposed changes.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).</p> | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>The MRO NSRF believes the additional language is useful to eliminate ‘zero defect’ assumptions. Notwithstanding, the MRO NSRF has concerns with the addition of the performance criteria of ‘availability’ without appropriate bounding language or allowances for unavailability (equipment/component failure, maintenance, et cetera). A data requestor may request 100% availability, which would then create a ‘zero defect’ requirement. The MRO NSRF suggests the following language:</p> <p>IRO-010 & TOP-003 1.5.2, TOP-003 2.5.2 Performance criteria for the availability and accuracy of data and information, as applicable;</p> | |

IRO-010 & TOP-003 1.5.2.1, TOP-003 2.5.2.1 Performance criteria for the availability shall be a magnitude of less than 100%, as applicable,

New Requirement:

IRO-010 R4, TOP-003 R6. Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider, when the data and information is unavailable, as identified in Requirement R1, shall consult with the effected applicable entities to determine a mutually agreeable action, if any, as it relates to the unavailable data and information.

Finally, the NSRF recommends coordination between the drafting team and the CIP-12 team that is dealing with similar issues for data exchanged between control centers.

| | |
|-------|---|
| Likes | 0 |
|-------|---|

| | |
|----------|---|
| Dislikes | 0 |
|----------|---|

Response

Thank you for your comments. The SDT considered language in context of CIP-012he SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

| | |
|---------------|----|
| Answer | No |
|---------------|----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

Comment

Santee Cooper has concerns with the addition of the performance criteria of ‘availability’ without appropriate bounding language or allowances for unavailability (equipment/component failure, maintenance, et cetera). The development and validation of metrics pertaining to deadlines and performance criteria are amplified with this change in language. A data requestor may request 100% availability, which would then create a ‘zero defect’ requirement.

IRO-002-7 R2 and TOP-001-5 R20 and R22 already require RCs, TOPs and BAs, respectively, entities to have redundantly and diversely routed data exchange infrastructure which addresses the issues with data availability without additional language in the standard. There are requirements in place

with IRO-018-1(i) R1 TOP-010-1(i) R1 and R2 to address the quality of the Real-time data used in Real-time Analysis and Real-time monitoring. The changes may create redundancy with data quality and accuracy of Real-time monitoring and analysis capability requirements in TOP-010(i).

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT’s focus was to develop language around “process” which allows the entities to determine their most efficient method for sharing data or information – including availability and the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

No

Document Name

Comment

MPC supports comments submitted by the MRO NERC Standards Review Forum.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

James Baldwin - Lower Colorado River Authority - 1

Answer

No

Document Name

Comment

LCRA TSC believes these changes produce additional administrative burden without reducing potential zero-defect situations. Further defining the requirements around data sharing seems to increase risk of violation rather than decrease it. In addition, it isn't clear that defining accurate performance criteria for ICCP data would even be possible and tracking the availability and accuracy of that data would be burdensome.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT's focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around "process" which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective "process" to share information among each function (BA, TOP, RC, etc.).

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer No

Document Name

Comment

Portland General Electric Company supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT's focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around "process" which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective "process" to share information among each function (BA, TOP, RC, etc.).

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer No

| | |
|---|----|
| Document Name | |
| Comment | |
| We believe the current standard language is adequate to provide for the timely transfer of data and information. Any issue with the transfer timeliness or quality of data and information is corrected on an event basis. While it is preferable there never be issues with data transfer or quality, we understand there are instances where there are issues, but those issues are currently being mitigated without the need for additional standard language. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments. | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.). | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |

| | |
|---|----|
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.). | |
| Daniel Gacek - Exelon - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.). | |
| Gordon Jonic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |

| | |
|---|----|
| Answer | No |
| Document Name | |
| Comment | |
| CEHE supports the comments as submitted by the Edison Electric Institute. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.). | |
| Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| BPA believes these changes produce additional administrative burden without reducing potential zero defect situations. Further defining the requirements around data sharing seems to increase risk of violation rather than decrease it. For example, now we run the risk of violation for failing to provide a piece of data <i>and for providing it late</i> . In addition, it isn’t clear that defining accuracy performance criteria for ICCP data would even be possible. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational | |

structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer No

Document Name

Comment

AZPS does not agree with these provisions and supports EEI's comments that they do not address the concerns with the excessive costs associated with 1) storage of this data that outweighed the know risks, and 2) costs of managing, compiling and backing up data for the sole purpose of compliance monitoring and enforcement activities.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer No

Document Name

Comment

WEC Energy Group supports EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer No

Document Name

Comment

Minnesota Power agrees with EEI’s comments.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer No

Document Name

Comment

The development and validation of metrics pertaining to deadlines and performance criteria are amplified with this change in language. Current practices are more than adequate when issues are identified and are currently resolved in an efficient and effective manner. Duke Energy seeks additional known defect assumptions that would require a modification to existing Requirements. IRO-002-7 R2 and TOP-001-5 R20 and R22 already

require RCs, TOP's and BA's entities, respectively, to have a redundant and diverse routed data exchange infrastructure which addresses the issues with data availability without additional language in the standard. Duke Energy also disagree with the inclusion of the consideration of the "accuracy of data and information." There are requirements in place with IRO-018-1(i) R1 TOP-010-1(i) R1 and R2 to address the quality of the Real-time data used in Real-time Analysis and Real-time monitoring.

Likes 0

Dislikes 0

Response

Thank you for the comment the team took this comment into consideration when re-drafting the standards.

LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF

Answer No

Document Name

Comment

By adding more specific requirements, the standard would now force a zero-defect footing and then build from that, which means the requestor will need to track if the respondent is meeting the requirements with zero defects unless they are corrected under R1.5.3. This would add more administrative burden to the requestor.

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT's focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around "process" which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective "process" to share information among each function (BA, TOP, RC, etc.).

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer No

Document Name

Comment

The MRO NSRF believes the additional language is useful to eliminate ‘zero defect’ assumptions. Notwithstanding, the MRO NSRF has concerns with the addition of the performance criteria of ‘availability’ without appropriate bounding language or allowances for unavailability (equipment/component failure, maintenance, et cetera). A data requestor may request 100% availability, which would then create a ‘zero defect’ requirement. The MRO NSRF suggests the following language:

IRO-010 & TOP-003 1.5.2, TOP-003 2.5.2 Performance criteria for the availability and accuracy of data and information, as applicable;

IRO-010 & TOP-003 1.5.2.1, TOP-003 2.5.2.1 Performance criteria for the availability shall be a magnitude of less than 100%, as applicable,

New Requirement:

IRO-010 R4, TOP-003 R6. Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider, when the data and information is unavailable, as identified in Requirement R1, shall consult with the effected applicable entities to determine a mutually agreeable action, if any, as it relates to the unavailable data and information.

| | |
|---------|--|
| Likes 1 | Lincoln Electric System, 1, Johnson Josh |
|---------|--|

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|------------|--|
| Dislikes 0 | |
|------------|--|

Response

Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

| | |
|--------|----|
| Answer | No |
|--------|----|

| | |
|---------------|--|
| Document Name | |
|---------------|--|

Comment

| | |
|---|----|
| Southern Company endorses EEI comments which support the above response. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.). | |
| Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion | |
| Answer | No |
| Document Name | |
| Comment | |
| As noted in the answer to Q1, the current language appears to place the burden on the intermediary if the end-user specifies so in their protocol. Any protocols regarding accuracy and data correction should not place any responsibility on the intermediary who is only an information conduit. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including the what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.). | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | No |

| | |
|--|----|
| Document Name | |
| Comment | |
| <p>Agree only with the statement "...and provisions to allow a respondent entity to update or correct data and information as necessary." Adding more specificity regarding deadlines or periodicity, and performance criteria for availability and accuracy of data, may actually impose more restrictions stipulated in the standard (essentially adding to the zero-defect assumptions), and removes the ability for entities to determine those nuances between themselves to best fit their interactions.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>Thank you for your comments. The intent of the SDT work is to let the entity define the process for data sharing vs the regulations.</p> | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>Thank you for your comment.</p> | |
| Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| Likes 0 | |

| | |
|--|-----|
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your feedback and comment. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|-----|
| Thank you for your feedback and comment. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| IID agrees with the standard language change, as long as all entities agree regarding specifications. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your feedback and comment. | |
| Carl Pineault - Hydro-Quebec Production - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>We support the addition of 1.5.2 as meeting one of the objectives of the current project. However, suggestions by other commenters to promote it to 1.6 in the numbering seem warranted. Also, we support Manitoba Hydro’s comment and suggestion (1.5.2 moved to 1.6 and reworded as “1.6 "Identification of a mutually agreed upon format and mutually agreed upon performance criteria for the availability or accuracy of data and information"). Giving the entity no say puts the criteria entirely in the RC’s hands with no oversight which could result in the same zero-default expectation that originated the current project. The possible concern that entities could use this mutual agreement provision to harm reliability is overblown. Were an RC and an entity to fundamentally disagree, there are regional forums for possible mediation and failing that, regulatory instances like reliability organizations that can settle such matters in a formal compliance oriented environment with reliability as the objective. The possibility of such oversight should be sufficient to forestall deadlocks over mutual agreement.</p> <p>As to justifying the need for such mutual agreement, we consider that it insures a dialogue between the RC and the entities in its Area. For example, some information is available less reliably or not all from some older facilities. Such facilities – often integrated long ago with older grid integration requirements - still support reliable grid operations through alternative operations management.</p> | |

| | |
|--|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations. | |
| Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Ameren agrees with and supports NAGF comments | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations. | |
| Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF | |

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>SIGE believes that these changes create redundancy with data quality and accuracy of Real-time monitoring and analysis capability requirements in TOP-010(j). However, these revisions may add a benefit to data and information specifications that do not pertain only to real time requirements.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations.</p> | |
| Lindsey Mannion - ReliabilityFirst - 10 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>The existing standards do not appear convey a zero-defect assumption, and the existing evidence retention periods do not appear to be overly burdensome. Revising the standard to require RC/TOP/BAs to document minimum performance requirements within specifications could lead to minimum common denominator behavior from some recipients of the specifications, so RC/TOP/BAs will need to be careful to ensure the minimum performance requirements are acceptable.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations.</p> | |
| Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay | |
| Answer | Yes |
| Document Name | |

| Comment | |
|---|-----|
| AES Clean Energy agrees with proposed changes and believes that more specificity to protocols for providing data and information will be extremely helpful. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The NAGF agrees with proposed changes to provide more specificity to protocols for providing data and information. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations. | |
| Thomas Foltz - AEP - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| While outside the scope of the current SAR, AEP would like to recommend that TOP-003 R1.3 and its subparts be deleted once the recent obligations associated with Project 2021-07 (Extreme Cold Weather) have become enforceable. | |

| | |
|---|-----|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations. | |
| Nazra Gladu - Manitoba Hydro - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Manitoba Hydro agrees with the standard drafting team that more specificity is required for performance. Manitoba Hydro suggests that 1.5.2 be moved and re-worded from "Performance criteria for the availability or accuracy of data and information, as applicable" to section 1.6 "Identification of a mutually agreed upon format and mutually agreed upon performance criteria for the availability or accuracy of data and information". | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you. The SDT worked to allow the entities to define the process based on differing footprints, operating technologies and organizations. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |

| | |
|--|-----|
| Bryan Bennett - Sempra - San Diego Gas and Electric - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Nicolas Turcotte - Hydro-Quebec TransEnergie - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Mike Magruder - Avista - Avista Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|---|-----|
| Response | |
| Thank you for your comment. | |
| Josh Combs - Black Hills Corporation - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

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|--|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |

| Comment | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |

| | |
|--|-----|
| Ken Habgood - Seminole Electric Cooperative, Inc. - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|---|-----|
| Response | |
| Thank you for your comment. | |
| Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Melanie Wong - Seminole Electric Cooperative, Inc. - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|--|-----|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |
| Answer | |

| | |
|--|---|
| Document Name | |
| Comment | |
| <p>Texas RE agrees with the including more specificity to the protocols for providing data and information. For IRO-010-5, Texas RE recommends that the mutually agreeable format as referenced in Requirement Part 1.6 include specifically that the mutually agreeable format is between the Reliability Coordinator and the entities that have data requirement by the RC’s Operational Planning Analyses, Real-time monitoring and Real-time Assessments as noted in Requirement R2.</p> <p>For TOP-003-6 Requirement Part 1.6, Texas RE Texas RE recommends that the mutually agreeable format as referenced in Requirement Parts 1.6 include specifically that the mutually agreeable format is between the Transmission Operator (TOP) and the entities that have data requirement by the TOP’s Operational Planning Analyses, Real-time monitoring and Real-time Assessments as noted in Requirement R3.</p> <p>For TOP-003-6 Requirement Part 2.6, include specifically that the mutually agreeable format is between the Balancing Authority (BA) and the entities that have data requirement by the BA’s analysis functions and Real-time monitoring.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comments. The SDT’s focus was/is to address industry concerns regarding administrative and a zero-defect approach to data specifications. To do so, the SDT recognizes that entities have a variety of operating footprints, functions, technologies, processes and organizational structures. Therefore, the SDT developed language around “process” which allows the entities to determine their most efficient method for sharing data or information – including what, when and how in support of Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This allows entities to determine an efficient and effective “process” to share information among each function (BA, TOP, RC, etc.).</p> | |

3. To improve administration of data and information for the applicable entities, the SDT modified IRO-010-5 and TOP-003-6 to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information. Do you agree with these modifications? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer No

Document Name

Comment

If a responding entity is not sure what the format is, they should be reaching out to the requesting party, and requesting party should clarify. Conflict resolutions, which at times this issue could fall under, should already be specified in the requesting party's data specs. If any questions regarding that, the requesting and responding parties should communicate. Resolution should be described as well in the data specs, and if it's not and the responding party has no issue, the Standard does not need to stipulate that. If the Standard stipulates these items, that might make it more prescriptive and potentially increase administrative burdens if the stipulation in the standard does not fit what works best for the requesting/responding parties.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT has retained the underlying legacy requirement of data exchanges through "[a] mutually agreeable process for resolving data conflicts" through reframing the requirements as a "mutually agreeable process for resolving conflicts" to be included in the data specification itself and should be consistent with intent of your comment.

Nazra Gladu - Manitoba Hydro - 1

Answer No

Document Name

Comment

Security requirements should reside in CIP-012 as it pertains to the transfer of secure data between control centers. With similar requirements in IRO-010 and TOP-003 as well as CIP-012, entities are placed in a situation where multiple standards provide overlapping mandates.

The NERC standard should not be in the process of conflict resolution. Instead, this should be part of contractual obligations agreed upon between entities.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT understands security requirements governing assets classified as cybersecurity are rightly located in the CIP standards. The SDT is addressing the requirements of the SAR which focus on the four reliability tasks contained in IRO-010 and TOP-003 and involve data and information exchanged between parties for that purpose. The SDT did not see any potential double jeopardy or overlapping mandates with CIP-012 because it deals with separate issues. The SDT has retained the underlying legacy requirement of data exchanges through “[a] mutually agreeable process for resolving data conflicts” through reframing the requirements as a “mutually agreeable process for resolving conflicts” to be included in the data specification itself.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Thank you for the comment. Please see the response to EEI.

Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO

Answer No

Document Name

Comment

The MRO NSRF is concerned about ‘securely transferring data or information’:

{C}· Potential NERC CIP-012 double jeopardy

{C}· Security requirement should reside in the CIP suite of standards.

The MRO NSRF suggests removing ‘securely’ from Requirement IRO-010 & TOP-003 R1.8 and TOP-003 R2.8.

It is not advisable to have a NERC Reliability Standard address a conflict resolution processes between two Registered Entities. To the extent that one or both entities seek such a process, it should be outside of a compliance requirement. The MRO NSRF suggests removing Requirement IRO-010 & TOP-003 R1.7 and TOP-003 R2.7.

| | |
|---------|--|
| Likes 1 | Lincoln Electric System, 1, Johnson Josh |
|---------|--|

| | |
|------------|--|
| Dislikes 0 | |
|------------|--|

Response

Thank you for the comment. The SDT understands security requirements governing assets classified as cybersecurity are rightly located in the CIP standards. The SDT is addressing the requirements of the SAR which focus on the four reliability tasks contained in IRO-010 and TOP-003 and involve data and information exchanged between parties for that purpose. The SDT did not see any potential double jeopardy or overlapping mandates with CIP-012 because it deals with separate issues. The SDT has retained the underlying legacy requirement of data exchanges through “[a] mutually agreeable process for resolving data conflicts” through reframing the requirements as a “mutually agreeable process for resolving conflicts” to be included in the data specification itself.

LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF

| | |
|--------|----|
| Answer | No |
|--------|----|

| | |
|---------------|--|
| Document Name | |
|---------------|--|

Comment

The proposed changes appear to match the old requirements in TOP-003-5 R5. However, it is unclear why the original language was insufficient so it is not clear any change is needed.

| | |
|---------|--|
| Likes 0 | |
|---------|--|

| | |
|---|----|
| Dislikes | 0 |
| Response | |
| Thank you for the comment. The SDT is responding to the requirements of the approved SAR and the first comment period. Draft 2 will offer an opportunity for further comments and ballot. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | No |
| Document Name | |
| Comment | |
| Current industry practices and Standards (IRO-010-3 R3 and TOP-003-4 R5) already have proven and effective practices and methods in place regarding the data specification. Modification and additional documentation of these practices and methods would cause confusion and pose an undue burden on processes that already work well without adding additional reliability to the BES. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. The SDT is responding to the requirements of the approved SAR and the first comment period. Draft 2 will offer an opportunity for further comments and ballot. | |
| Jamie Monette - Allete - Minnesota Power, Inc. - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| Minnesota Power agrees with EEI's comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |

| | |
|--|----|
| Thank you for the comment. Please see response to EEI. | |
| Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group | |
| Answer | No |
| Document Name | |
| Comment | |
| WEC Energy Group supports EEI's comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please refer to EEI's comment response. | |
| Lindsey Mannion - ReliabilityFirst - 10 | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>There may be difficulties with the creator of a specification being made responsible for determining "mutually agreed upon" data formats, security protocols, and conflict resolution processes. Demonstrating compliance with such a requirement would require the creator of the specification to maintain evidence that each recipient of the specification has agreed with those "mutually agreed upon" criteria.</p> <p>Removing the "mutually agreed upon" language would make these requirements more feasible for the RC/TOP/BA. If the "mutually agreed upon" language is removed from the RC/TOP/BA requirement, provisions may need to be made for recipients of the specification to use either the defined criteria or a "mutually agreed upon" alternative in complying with the recipient requirement.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

Thank you for the comment. The SDT discussed the issue and notes that the legacy language includes “mutually agreeable” paradigms already, and, therefore, has decided to keep that vernacular.

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer No

Document Name

Comment

AZPS does not agree that the modifications represent a substantial change to the currently existing IRO-010 and TOP-003 language.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT is responding to the requirements of the approved SAR and the first comment period. Draft 2 will offer an opportunity for further comments and ballot.

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer No

Document Name

Comment

BPA believes this is additional administrative burden without a corresponding reliability improvement.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT is responding to the requirements of the approved SAR and the first comment period. Draft 2 will offer an opportunity for further comments and ballot.

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer No

| | |
|---|----|
| Document Name | |
| Comment | |
| CEHE supports the comments as submitted by the Edison Electric Institute. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to EEI. | |
| Daniel Gacek - Exelon - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to EEI. | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |

| | |
|---|----|
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to EEI comments. | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to EEI comments. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | No |
| Document Name | |
| Comment | |
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to EEI comments. | |
| James Baldwin - Lower Colorado River Authority - 1 | |
| Answer | No |

| | |
|---|----|
| Document Name | |
| Comment | |
| LCRA TSC believes security requirements should reside in CIP-012 as it pertains to the transfer of secure data between control centers. With similar requirements in IRO-010 and TOP-003 as well as CIP-012, entities are placed in a situation where multiple standards provide overlapping mandates. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. The SDT understands security requirements governing assets classified as cybersecurity are rightly located in the CIP standards. The SDT is addressing the requirements of the SAR which focus on the four reliability tasks contained in IRO-010 and TOP-003 and involve data and information exchanged between parties for that purpose. The SDT did not see any potential double jeopardy or overlapping mandates with CIP-012 because it deals with separate issues. | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | No |
| Document Name | |
| Comment | |
| MPC supports comments submitted by the MRO NERC Standards Review Forum. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see the responses to the NSRF. | |
| Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper | |
| Answer | No |
| Document Name | |
| Comment | |

Current industry practices and Standards (IRO-010-3 R3 and TOP-003-4 R5) already have proven and effective practices and methods in place regarding the data specification. Modification and additional documentation of these practices and methods would cause confusion and pose an undue burden on processes that already work well without adding additional reliability to the BES. Also, security requirement should reside in the CIP suite of standards to avoid the potential for NERC CIP-012 double jeopardy. The NERC standard should not be in the process of conflict resolution. Instead, this should be part of contractual obligations agreed upon between entities. Santee Cooper also believes this is additional administrative burden without a corresponding reliability improvement.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT understands security requirements governing assets classified as cybersecurity are rightly located in the CIP standards. The SDT is addressing the requirements of the SAR which focus on the four reliability tasks contained in IRO-010 and TOP-003 and involve data and information exchanged between parties for that purpose. The SDT did not see any potential double jeopardy or overlapping mandates with CIP-012 because it deals with separate issues. The SDT has retained the underlying legacy requirement of data exchanges through “[a] mutually agreeable process for resolving data conflicts” through reframing the requirements as a “mutually agreeable process for resolving conflicts” to be included in the data specification itself.

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

No

Document Name

Comment

The MRO NSRF is concerned about ‘securely transferring data or information:

- • Potential NERC CIP-012 double jeopardy
- • Security requirement should reside in the CIP suite of standards.

The MRO NSRF suggests removing ‘securely’ from Requirement IRO-010 & TOP-003 R1.8 and TOP-003 R2.8.

It is not advisable to have a NERC Reliability Standard address a conflict resolution processes between two Registered Entities. To the extent that one or both entities seek such a process, it should be outside of a compliance requirement. The MRO NSRF suggests removing Requirement IRO-010 & TOP-003 R1.7 and TOP-003 R2.7.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT understands security requirements governing assets classified as cybersecurity are rightly located in the CIP standards. The SDT is addressing the requirements of the SAR which focus on the four reliability tasks contained in IRO-010 and TOP-003 and involve data and information exchanged between parties for that purpose. The SDT did not see any potential double jeopardy or overlapping mandates with CIP-012 because it deals with separate issues. The SDT has retained the underlying legacy requirement of data exchanges through “[a] mutually agreeable process for resolving data conflicts” through reframing the requirements as a “mutually agreeable process for resolving conflicts” to be included in the data specification itself.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

EEI does not agree that the changes made represent any substantive improvement over what currently exists within IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT has made additional changes to the standards based on comments in Draft 1.

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer No

Document Name

Comment

| | |
|---|----|
| Energy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #3. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. Please see the responses to EEI comments. | |
| Teresa Krabe - Lower Colorado River Authority - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| LCRA TSC believes security requirements should reside in CIP-012 as it pertains to the transfer of secure data between control centers. With similar requirements in IRO-010 and TOP-003 as well as CIP-012, entities are placed in a situation where multiple standards provide overlapping mandates. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. The SDT understands security requirements governing assets classified as cybersecurity are rightly located in the CIP standards. The SDT is addressing the requirements of the SAR which focus on the four reliability tasks contained in IRO-010 and TOP-003 and involve data and information exchanged between parties for that purpose. The SDT did not see any potential double jeopardy or overlapping mandates with CIP-012 because it deals with separate issues. | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| Tri-State is concerned about using the word "securely" in R1 1.8 and recommends removing it. This could be possible double jeopardy with CIP-012.0 | |

| | |
|--|----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. The SDT understands security requirements governing assets classified as cybersecurity are rightly located in the CIP standards. The SDT is addressing the requirements of the SAR which focus on the four reliability tasks contained in IRO-010 and TOP-003 and involve data and information exchanged between parties for that purpose. The SDT did not see any potential double jeopardy or overlapping mandates with CIP-012 because it deals with separate issues. | |
| Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC) | |
| Answer | No |
| Document Name | |
| Comment | |
| The SRC disagrees with the inclusion of the intermediary in Part 1.7. As stated above, entities are successfully able to utilize an intermediary today. We do not see value in adding this commercial (contractual) provision to a mandatory reliability standard. Further, as this project was initiated pursuant to the Standards Efficiency Review (SER), the goal of this effort is to simplify (versus complicate) administrative burdens for entities issuing the data specification to keep track of intermediaries. We do not agree that the relocation of R5 requirements into R1 would benefit or reduce administrative burdens to the TOP, BA, or RC. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. The SDT has removed references to “intermediaries.” The SDT team believes locating all pertinent requirements related to the data specification to the specification itself will provide efficiency. | |
| Russell Noble - Cowlitz County PUD - 3 | |
| Answer | No |
| Document Name | |
| Comment | |

Cowlitz PUD supports negative comments by others in this regard and will review SDT responses to these commentors.

Likes 0

Dislikes 0

Response

Thank you for the comment.

Joshua London - Eversource Energy - 1, Group Name Eversource

Answer

No

Document Name

Comment

We do not believe the changes made represent any substantive improvement over what currently exists within IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Thank you for the comment.

Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Thank you for the comment.

| | |
|---|-----|
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The NAGF agrees with the proposed modifications to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|---|-----|
| AES Clean Energy agrees with the proposed modifications and believes that they will provide much needed guidance. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Section TOP-003-6 R1.8 in referenced redline document is blank. Agree with rational document comments regarding agreed upon method for secure transfer. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Ameren agrees with and supports NAGF comments | |
| Likes 0 | |

| | |
|---|-----|
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to NAGF. | |
| Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| No comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | Yes |

| | |
|--|-----|
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|--|-----|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Melanie Wong - Seminole Electric Cooperative, Inc. - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|-----|
| Thank you for the comment. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Thomas Foltz - AEP - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |

| | |
|--|-----|
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Ken Habgood - Seminole Electric Cooperative, Inc. - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|--|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |

| | |
|--|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |

| | |
|--|-----|
| Josh Combs - Black Hills Corporation - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Carl Pineault - Hydro-Quebec Production - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Mike Magruder - Avista - Avista Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|--|-----|
| Response | |
| Thank you for the comment. | |
| Nicolas Turcotte - Hydro-Quebec TransEnergie - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Bryan Bennett - Sempra - San Diego Gas and Electric - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|--|--|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | |
| Document Name | |
| Comment | |
| <p>BC Hydro appreciates the opportunity to comment and thanks the drafting team for their efforts.</p> <p>BC Hydro notes that currently effective IRO-010 and TOP-003 versions use “mutually agreeable” wording as an inference of an industry acceptable solution. The proposed drafts use “mutually agreed upon” (e.g. within Requirement R1 Part 1.6 and Part 1.8 in case of proposed IRO-010-5), which will set a compliance expectation that an agreement on format be reached before its inclusion in the documented specification mandated under R1.</p> <p>BC Hydro recommends considering changing “mutually agreed upon” to “mutually agreeable”. This will reduce the changes from the existing version and the additional compliance expectation implied by “agreed upon”.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. The SDT has made that change. | |
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |
| Answer | |
| Document Name | |
| Comment | |
| Please see Texas RE’s answer to #2. | |

| | |
|---|--|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to Texas RE. | |
| Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2 | |
| Answer | |
| Document Name | |
| Comment | |
| We support NPCC's comments: | |
| We do not believe the changes made represent any substantive improvement over what currently exists within IRO-010-5 and TOP-003-6. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see the response to NPCC RSC. | |
| Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | |
| Document Name | |
| Comment | |
| We do not believe the changes made represent any substantive improvement over what currently exists within IRO-010-5 and TOP-003-6. | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|---|---|
| Response | |
| Thank you for the comment. The SDT has made further changes in response to comments on Draft 1. | |
| Sheraz Majid - Hydro One Networks, Inc. - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| Support comments by NPCC RSC. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. Please see the response to NPCC RSC. | |

| | |
|--|----|
| <p>4. IRO-010-5 and TOP-003-6 require general data specifications to allow the Reliability Coordinator, Transmission Operator, and Balancing Authority to perform its Operational Planning Analysis, Real Time Assessment, Real-time monitoring (undefined term), and BA analysis functions (undefined term). The SDT focused on data and information generally rather than prescriptive requirements. Do you believe that all data and information needed by the RC, TOP, and BA to perform these reliability tasks (for example, PMU streaming, outage coordination, distribution, generator fuel information, etc.) is available pursuant to the proposed standards or is additional clarification needed that is more prescriptive.</p> | |
| Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC) | |
| Answer | No |
| Document Name | |
| Comment | |

The SRC strongly believes that more prescriptive standards result in less flexibility. It is easier for an entity to change the details within its specification than to change the details of a mandatory requirement once established in a NERC standard. Therefore, the SRC advocates for the retention of flexibility and less prescriptive requirements.

To the extent a need for additional data (that is necessary for an entity to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments) arises, entities already have the ability under the current standards to define additional “mutually agreed upon” data and the format the data is to be provided in.

To the extent an entity is unable to obtain the data necessary to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments, the SRC proposes that emphasis be placed on the dispute resolution process and the level of risk the lack of the data poses to reliably operating the BES.

Likes 0

Dislikes 0

Response

The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive.

Teresa Krabe - Lower Colorado River Authority - 5

Answer

No

Document Name

Comment

LCRA TSC believes all data and information needed to perform the described reliability tasks are available pursuant to the proposed standard.

LCRA TSC does not believe additional clarification is needed that is more prescriptive.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comment.

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #4.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comment.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

EEI does not support more prescriptive requirements for IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive.

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

Answer No

Document Name

Comment

Santee Cooper feels the industry is better served by performance-based standards rather than prescriptive data requirements and that data requirements are sufficient for the RC, TOP, and neighboring BAs to perform their functions. Again, providing prescriptive information would defeat the purpose of simplifying administrative burdens and does not add a reliability benefit; therefore, distribution of this information is not needed.

Likes 0

Dislikes 0

Response

The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive.

Diana Torres - Imperial Irrigation District - 6

Answer

No

Document Name

Comment

No, for smaller entities it would be difficult to obtain data.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comment.

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

No

Document Name

Comment

MPC supports comments submitted by the MRO NERC Standards Review Forum.

Likes 0

| | |
|--|----|
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| James Baldwin - Lower Colorado River Authority - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| LCRA TSC believes all data and information needed to perform the described reliability tasks are available pursuant to the proposed standard. LCRA TSC does not believe additional clarification is needed that is more prescriptive. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | No |
| Document Name | |
| Comment | |
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |

| | |
|--|----|
| Kinte Whitehead - Exelon - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment, please response to EEI's comment. | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECl | |
| Answer | No |
| Document Name | |
| Comment | |

AECI supports the SDT focus on data and information generally rather than prescriptive requirements. However, entities can not be expected to provide information that may not be available to them or within their purview such as fuel supplier or local distribution system information.

The proposed TOP-003-6 R2.1 and IRO-010-5 R1.1 detail a list of data and information needed by the BA, RC, and TOP to perform OPA, Real-time monitoring, and Real-time assessment; inclusive of non-BES data and information. These revisions are not supported by the associated technical rational documents provided on the project page and seem over-reaching as the NERC Standards apply to Bulk Electric System (BES) facilities. The following excerpts from the NERC ROP are supportive of this comment:

- "Bulk Power System" means, depending on the context: (i) (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy [++]. (Note that the terms "Bulk-Power System" or "Bulk Power System" shall have the same meaning.) (ii) Solely for purposes of Appendix 4E, Bulk Electric System.
- Reliability Coordinator - The entity that is the highest level of authority who is responsible for the Reliable Operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator vision.

Secondly the "Project 2014-03 Revisions to TOP and IRO Standards" SDT refer to FERC NOPR Issued November 21, 2013 (RM13-12-000), specifically paragraph 68 as the basis for the inclusion of sub-BES facilities in IRO-010-2. This action is not consistent with the facilities detailed in the NERC ROP and NERC Glossary Reliability Coordinator defined term as it specifically references BES facilities.

| | |
|--|----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Daniel Gacek - Exelon - 1 | |
| Answer | No |
| Document Name | |
| Comment | |

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comment, please see response to EEI's comment.

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer

No

Document Name

Comment

CEHE supports the comments as submitted by the Edison Electric Institute.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comment, please see response to EEI's comment.

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

No

Document Name

Comment

AZPS does not support more prescriptive requirements for IRO-010 and TOP-003.

Likes 0

Dislikes 0

Response

The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive.

Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez

Answer No

Document Name

Comment

Data provided has been sufficient to perform studies and we feel that the example data exceeds what is necessary for the RC, TOP, and neighboring BAs to perform their functions. Providing prescriptive information would defeat the purpose of simplifying administrative burdens. Specifically, Generator fuel information is considered proprietary, and in most cases, distribution of this information is not needed.

Likes 0

Dislikes 0

Response

The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive.

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer No

Document Name

Comment

WEC Energy Group supports EEI's comments.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comment, please see response to EEI's comment.

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer No

| | |
|---|----|
| Document Name | |
| Comment | |
| Minnesota Power agrees with EEI's comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment, please see response to EEI's comment. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| GO/GOPs have fuel information only as regards conditions at the plant, e.g. the number of days of coal on-hand. Problems at upstream facilities - natural gas wells, pipelines, compressor stations and the like - are not divulged by supplier companies prior to the time that they make a public announcement, to prevent giving any market participant an unfair competitive advantage (GOs trade contracts for fuel in addition to power). | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF | |
| Answer | No |
| Document Name | |
| Comment | |

ATC thinks the data specification is general in nature to allow the applicable entities to identify their data and information needs and identify the correct NERC registered entities that have the data and information and the capability of data and information exchange. ATC is not currently experiencing any challenges in obtaining the data it needs to perform its real-time monitoring, RTA or OPA obligations. Note also that the industry continues to evolve more quickly than the NERC requirements are able to be modified. The industry is better served by performance-based standards rather than prescriptive data requirements.

Likes 0

Dislikes 0

Response

The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comment.

Nazra Gladu - Manitoba Hydro - 1

Answer No

Document Name

Comment

Manitoba Hydro feels that an exhaustive list within the standard is not necessary.

| | |
|--|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| Russell Noble - Cowlitz County PUD - 3 | |
| Answer | Yes |
| Document Name | |

| Comment | |
|--|-----|
| While Cowlitz PUD agrees with the SDT intent, the added requirements detract from this objective. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

The SDT thanks you for your response.

Nicolas Turcotte - Hydro-Quebec TransEnergie - 1

Answer

Yes

Document Name

Comment

The identification of data and information needed by the RC, BA, TOP shall be left to their discretion. So, a standard focused on general data and information, and which is less prescriptive is preferred.

Likes 0

Dislikes 0

Response

The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive.

Carl Pineault - Hydro-Quebec Production - 5

Answer

Yes

Document Name

Comment

While past specifications in our Reliability Area actually went beyond OPA, RTA, Real-time Monitoring and BA analysis functions, over time, revisions to the specification have been focusing the specifications on those specific reliability functions. Within those functions, the specifications have been pretty comprehensive. Prescriptive requirements go against NERC's standard development principles to be more performance oriented than prescriptive. We continue to support performance oriented requirements.

| | |
|--|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Ameren agrees with and supports NAGF comments | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF | |

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| To the degree that SIGE understands the question correctly, we agree that the standard does not need to be more prescriptive regarding the data and information specification requirements. More prescriptive requirements do not add a reliability benefit. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| BPA believes data and information needed is available today. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|--|-----|
| AES Clean Energy supports the SDT focus on data and information generally rather than prescriptive requirements. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The NAGF supports the SDT focus on data and information generally rather than prescriptive requirements. However, GO/GOPs can not be expected to provide information that is not available to them or within their purview such as fuel supplier or local distribution system information. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| None. | |
| Likes 0 | |
| Dislikes 0 | |

| Response | |
|---|-----|
| The SDT thanks you for your response. | |
| Thomas Foltz - AEP - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>While AEP agrees with the concept of an agreed-upon approach rather than a prescriptive one, we believe as previously stated in the response to Question 1, that there will be instances where the Transmission Operator needs data from the Reliability Coordinator (i.e. load information, generation and load forecasts, etc.). Once again, the RC is not included as an Applicable Entity in TOP-003, nor is it obligated under TOP-003 R5. AEP recommends that the RC be added as a Applicable Entity for TOP-003 and also included in the obligations of R5.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. The SDT notes that the data cited (unit commitment data, load information, generation and load forecasts appears to be Balancing Authority data. The SDT believes that a TOP can request this data from a BA under TOP-003 similar to how an RC acquires this data through its data specification via its IRO-010 data specification.</p> | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>Should be up to the entities to communicate and come to an agreement if additional clarification is needed. More prescriptive Requirements could increase burdens and “one-size-fits-all” does not necessarily work with TOP-003 or IRO-010 (therein lies the bulk of the administrative burden). Possibly providing definitions for “Real-time monitoring” and “BA analysis functions” would be helpful to keep consistency across universal tasks/functions and lowering ambiguity with those overarching data spec terms.</p> | |

| | |
|--|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| Bryan Bennett - Sempra - San Diego Gas and Electric - 3 | |
| Answer | Yes |
| Document Name | |

| Comment | |
|--|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Mike Magruder - Avista - Avista Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Josh Combs - Black Hills Corporation - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|--|-----|
| The SDT thanks you for your comment. | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |

| | |
|--|-----|
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Lindsey Mannion - ReliabilityFirst - 10 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Ken Habgood - Seminole Electric Cooperative, Inc. - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Melanie Wong - Seminole Electric Cooperative, Inc. - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |
| Answer | Yes |

| | |
|--|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|--|-----|
| The SDT thanks you for your comment. | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your comment. | |
| Sheraz Majid - Hydro One Networks, Inc. - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| Need clarity on what is "information", e.g. weather, news, notifications received via email, etc.? Request clarity from SDT on this. +support comments by NPCC RSC. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | |
| Document Name | |
| Comment | |

| | |
|---|---|
| We do not support more prescriptive requirements for IRO-010-5 and TOP-003-6. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2 | |
| Answer | |
| Document Name | |
| Comment | |
| We do not support more prescriptive requirements for IRO-010-5 and TOP-003-6. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |
| Answer | |
| Document Name | |
| Comment | |
| General data specifications within the Standard are acceptable, however, Texas RE suggests that, rather than putting more prescriptive language in the requirements, the data specification document from the RC, TOP, and BA be required to be more specific. That way, the RC, TOP, and BA can determine which specific data is needed to be effective to perform their OPA, RTA, and Real-time monitoring. | |
| Likes | 0 |

| | |
|--|--|
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Because there are two questions being asked in question four, the actual 'Yes / No' answer is found in the following prose.</p> <p>Yes, the MRO NSRF feels the proposed language, as it relates to the actual data and information needed by the RC, TOP, and BA to perform these reliability tasks, is available pursuant to the proposed standards. No additional clarification is required, as it relates to the actual data and information needed by the RC, TOP, and BA to perform these reliability tasks.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |
| Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Because there are two questions being asked in question four, the actual 'Yes / No' answer is found in the following prose.</p> <p>Yes, the MRO NSRF feels the proposed language, as it relates to the actual data and information needed by the RC, TOP, and BA to perform these reliability tasks, is available pursuant to the proposed standards. No additional clarification is required, as it relates to the actual data and information needed by the RC, TOP, and BA to perform these reliability tasks.</p> | |

| | |
|--|--|
| Likes 1 | Lincoln Electric System, 1, Johnson Josh |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your response. The SDT will proceed with the focus on data and information being more general rather than prescriptive. | |

5. To support the proposed modifications, the SDT revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Thank you for the comment. Please see response to EEI.

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer No

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for the comment. Please see response to EEI.

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

| | |
|--|----|
| Answer | No |
| Document Name | |
| Comment | |
| WEC Energy Group supports EEI's comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to EEI. | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | No |
| Document Name | |
| Comment | |
| AZPS agrees with EEI's concerns that the primary purpose of the project was not met in this draft and therefore cannot comment on the proposed VSLs. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to EEI. | |
| Gordon Jonic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | No |
| Document Name | |
| Comment | |

| | |
|---|----|
| The primary purpose of this project was to reduce the unnecessary compliance burdens associated with evidence and data retention that was the key justification for opening this project. Until this is done, CEHE cannot comment on the appropriateness of the proposed changes to the VSLs. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECl | |
| Answer | No |
| Document Name | |
| Comment | |
| AECl is not fully supportive of the proposed TOP-003-6 R2.1 and IRO-010-5 R1.1 draft language, which is reflected in the VSLs for the corresponding requirements. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes | 0 |

| | |
|--|----|
| Dislikes | 0 |
| Response | |
| Thank you for the comment. Please see response to EEI. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | No |
| Document Name | |
| Comment | |
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. Please see response to EEI. | |
| Carl Pineault - Hydro-Qu?bec Production - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>Despite FERC accepting the VRF for the previous version of this standard, the VRF for R1 (low) seems to us inconsistent with respect to the VRF for R3 (medium). The requirement for an RC (in IRO-010) to identify information essential to reliability (R1.1) cannot logically be less important than an entity's communication of that same information to the RC. Indeed, since an RC's obligation applies to potentially many entities in its Area, it is more impactful for the RC Area's reliability that the RC correctly identify the information needed to satisfy its own reliability obligations than for a single respondent to fail to communicate the information. The VRF for R1 should be moved to Medium or the VRF for R3 should be lowered to Low.</p> <p>The same inconsistency holds for the proposed VSL. As proposed, the VSL for R3 attributes a severe VSL to any violation of elements 1.1 through 1.4. Meanwhile, a failure to identify an information per 1.1, 1.2 or 1.3 does not trigger the VSL which requires that at least two sub-requirements must be violated to qualify for VSL-low, and more subrequirements to have more serious VSL.</p> | |

So, for example, a failure to report information asked for in the specification as per R1.1 or R1.2 or R1.3 is potentially a VRF-medium, VSL-severe violation of R3, whereas the failure to identify that same information under R1 would be a VRF-low, VSL-none violation. Since the VSL is not even low, the latter is arguably not a violation at all!

We consider that an identification violation of R1.1, R1.2 or R1.3 individually should be at least as severe as a reporting violation of the same sub-requirements for a non-RC entity via R3. That is, identification violations of R1.1, R1.2 or R1.3 should be “severe”.

Finally, as noted earlier, if R1.4 is kept, it should be lumped in with 1.5 through 1.8 in the violation levels low, medium, high as equivalently administrative in nature and not core to the specification’s reliability content per R1.1, R1.2, and R1.3.

| | |
|---|----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. The SDT agrees with many of your points and changes should be reflected in Draft 2. | |
| Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper | |
| Answer | No |
| Document Name | |
| Comment | |
| The key justification for opening this project was to reduce the unnecessary compliance burdens associated with evidence and data retention; Santee Cooper has concerns that the purpose was not met in this draft and therefore cannot comment on the proposed VSLs. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Nicolas Turcotte - Hydro-Quebec TransEnergie - 1 | |
| Answer | No |
| Document Name | |

Comment

Despite FERC accepting the VRF for the previous version of this standard, the VRF for R1 (low) seems to us inconsistent with respect to the VRF for R3 (medium). The requirement for an RC or TOP to identify information essential to reliability (R1.1 in both IRO-010 and TOP-003) cannot logically be less important than an entity's communication of that same information to the RC or TOP. The same inconsistency holds for the proposed VSL.

So, for example, a failure to report information asked for in the specification as per R1.1 or R1.2 or R1.3 is potentially a VRF-medium, VSL-severe violation of R3 in IRO-010, whereas the failure to identify that same information under R1 would be a VRF-low, VSL-none violation. Since the VSL is not even low, the latter is arguably not a violation at all.

Finally, as noted earlier, if R1.4 is kept, it should be lumped in with 1.5 through 1.8 in the violation levels as equivalently administrative in nature and not core to the specification's reliability content per R1.1, R1.2, and R1.3.

Likes 0

Dislikes 0

Response

Thank you for the comment. The SDT agrees and the change should be reflected in Draft 2.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

No

Document Name

Comment

EI does not support the changes made to the VSLs. The primary purpose of this project was to reduce the unnecessary compliance burdens associated with evidence and data retention that was the key justification for opening this project. Until this is done, we cannot comment on the appropriateness of the proposed changes to the VSLs.

Likes 0

Dislikes 0

Response

Thank you for the comment.

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #5.

Likes 0

Dislikes 0

Response

Thank you for the comment. Please see response to EEI.

Russell Noble - Cowlitz County PUD - 3

Answer No

Document Name

Comment

Unable to evaluate until above concerns are addressed.

Likes 0

Dislikes 0

Response

Thank you for the comment.

Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3

Answer No

Document Name

Comment

| | |
|---|-----|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Agree if the Standards end up being revised as shown in redlines. That said, there may not be any benefit to have the Requirements and Parts drilled down with more specificity as shown in the modified Standards, and as commented on in this form. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |

| | |
|---|-----|
| Nazra Gladu - Manitoba Hydro - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| No comment. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <i>No comments & no concerns.</i> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Thomas Foltz - AEP - 5 | |
| Answer | Yes |
| Document Name | |

| Comment | |
|---|-----|
| AEP agrees with the SDT recommendation to change "did not meet" to instead state "failed to use." We believe this wording more accurately captures the spirit of the obligation itself. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| None. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The NAGF supports the revised VSLs as proposed. | |
| Likes | 0 |

| | |
|---|-----|
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay | |
| Answer | Yes |
| Document Name | |
| Comment | |
| AES Clean Energy supports the revised VSLs in both IRO-010-5 and TOP-003-6. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Daniel Gacek - Exelon - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. Please see response to EEI. | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | Yes |

| | |
|---|-----|
| Document Name | |
| Comment | |
| Exelon supports comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. Please see response to EEI. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Ameren agrees with and supports NAGF comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes 0 | |

| | |
|---|-----|
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| No comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <i>No comments & no concerns.</i> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | Yes |

| | |
|--|-----|
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC) | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|--|-----|
| The SRC agrees that is necessary for the SDT to adjust the VSLs so that they align with the provisions of the revised standards. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |

| | |
|---|-----|
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Melanie Wong - Seminole Electric Cooperative, Inc. - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |

| | |
|---|-----|
| Response | |
| Thank you for the comment. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|---|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Ken Habgood - Seminole Electric Cooperative, Inc. - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Lindsey Mannion - ReliabilityFirst - 10 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez | |
| Answer | Yes |

| | |
|--|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |

| | |
|--|-----|
| Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|--|-----|
| Response | |
| Thank you for the comment. | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|---|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Josh Combs - Black Hills Corporation - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| James Baldwin - Lower Colorado River Authority - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | Yes |
| Document Name | |

| Comment | |
|--|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Mike Magruder - Avista - Avista Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Bryan Bennett - Sempra - San Diego Gas and Electric - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Teresa Krabe - Lower Colorado River Authority - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|--|-----|
| Thank you for the comment. | |
| Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |

Dislikes 0

Response

Thank you for the comment.

6. The SDT reviewed the other standards listed in the SAR’s Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6 or create efficiencies reflective of the principle established by the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in these collateral standards, the SDT determined there is insufficient justifications for the retirement of these requirements and, therefore, the SDT is not proposing changes to these standards. Do you agree with this assessment? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Russell Noble - Cowlitz County PUD - 3

Answer No

Document Name

Comment

Need to see a SDT report justifying this conclusion.

Likes 0

Dislikes 0

Response

Thank you for the comment.

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institue (EEI) for question #6.

Likes 0

Dislikes 0

Response

| | |
|--|----|
| Thank you for the comment please see response to EEI's comment. | |
| Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable | |
| Answer | No |
| Document Name | |
| Comment | |
| In order for EEI to support the SDT's conclusions, the SDT will need to publish their analysis and findings regarding the other identified Requirements contained in the other 7 proposed Reliability Standards identified in the Project SAR and the SER Phase 2 white paper. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment please see additional information in the next ballot for this project. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | No |
| Document Name | |
| Comment | |
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment please see response to EEI's comment. | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | No |
| Document Name | |
| Comment | |

| | |
|---|----|
| Exelon supports comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment please see response to EEI's comment. | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment please see response to EEI's comment. | |
| Daniel Gacek - Exelon - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment please see response to EEI's comment. | |

| | |
|---|----|
| Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | No |
| Document Name | |
| Comment | |
| CEHE recommends that the SDT consider adding TOP-010-1(i) – Real-time Reliability Monitoring and Analysis Capabilities to the list of possibly affected standards due to the requirements around data quality and accuracy of Real-time monitoring and analysis capability. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment, the team will consider this when drafting for this next ballot. | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | No |
| Document Name | |
| Comment | |
| AZPS agrees with EEI's comments that in order to support the SDT's conclusions, the SDT needs to publish their analysis and findings regarding the other identified Requirements contained in the other 7 proposed Reliability Standards identified in the Project SAR and the SER Phase 2 white paper. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment please see response to EEI's comment. | |
| Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group | |
| Answer | No |
| Document Name | |
| Comment | |

| | |
|---|----|
| WEC Energy Group supports EEI's comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment please see response to EEI's comment. | |
| Jamie Monette - Allete - Minnesota Power, Inc. - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| Minnesota Power agrees with EEI's comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment please see response to EEI's comment. | |
| Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company | |
| Answer | No |
| Document Name | |
| Comment | |
| Southern Company endorses EEI comments which support the above response. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment please see response to EEI's comment. | |

| | |
|---|----|
| Nazra Gladu - Manitoba Hydro - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| To streamline the requirements of these standards, duplications should be removed as stated in the SAR. As commented in question 3 above, CIP-12 should look after security protocols. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment, the drafting team will look into this. | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Would agree if the Requirements identified in the collateral standards would include a footnote, or other type of identifier/cross-reference, indicating that they are Requirements that fall under umbrella of IRO-010 and/or TOP-003 (or list the cross-reference to collateral standards in IRO-010 and TOP-003 Standards, possibly in a table/attachment?). The redundancy between the data specs and these Standards is key contributor of administrative burdens. Clear identification within the standards from NERC's end of the crossover/redundancy would be helpful. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment the drafting team will be looking into this suggestion. | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |
| Document Name | |

| Comment | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|-----|
| Thank you for the comment. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <i>No comments & no concerns.</i> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|---|-----|
| No comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Ameren agrees with and supports NAGF comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |

| | |
|---|-----|
| Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| SIGE recommends that the SDT consider adding TOP-010(i) - Real-time Reliability Monitoring and Analysis Capabilities to the list of possibly affected standards due to the requirements around data quality and accuracy of Real-time monitoring and analysis capability. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay | |
| Answer | Yes |
| Document Name | |
| Comment | |
| AES Clean Energy agrees with the SDT assessment to not change other existing Standards. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|---|-----|
| The NAGF agrees with the SDT decision not to change other existing standards as referenced in the approved SAR. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| None. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <i>No comments & no concerns.</i> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |

| | |
|--|-----|
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC) | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|--|-----|
| Response | |
| Thank you for the comment. | |
| Teresa Krabe - Lower Colorado River Authority - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Bryan Bennett - Sempra - San Diego Gas and Electric - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|---|-----|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Mike Magruder - Avista - Avista Corporation - 1 | |
| Answer | Yes |
| Document Name | |

| Comment | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Carl Pineault - Hydro-Qu?bec Production - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| James Baldwin - Lower Colorado River Authority - 1 | |

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Josh Combs - Black Hills Corporation - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|-----|
| Thank you for the comment. | |
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |

| | |
|--|-----|
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECl | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Lindsey Mannion - ReliabilityFirst - 10 | |

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Ken Habgood - Seminole Electric Cooperative, Inc. - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Thomas Foltz - AEP - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|-----|
| Thank you for the comment. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |

| | |
|---|-----|
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Melanie Wong - Seminole Electric Cooperative, Inc. - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|--|-----|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| We need the SDT to share their analysis and findings regarding the other identified Requirements contained in the other proposed Reliability Standards identified in the Project SAR and the SER Phase 2 white paper. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2 | |
| Answer | |
| Document Name | |
| Comment | |
| We support NPCC's comments : We need the SDT to share their analysis and findings regarding the other identified Requirements contained in the other proposed Reliability Standards identified in the Project SAR and the SER Phase 2 white paper. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |

7. The SDT is proposing an 18-month implementation plan. Would this proposed timeframe give enough time to implement the proposed modifications in IRO-010-5 and TOP-003-6? If you think an alternate timeframe is needed, please propose an alternate implementation plan and time period, and provide a detailed explanation of actions planned to meet the implementation deadline.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer No

Document Name

Comment

Southern Company endorses EEI comments which support the above response.

Likes 0

Dislikes 0

Response

Thank you for the comment.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer No

Document Name

Comment

Due to the concerns caused by the uncertainty of the potential impacts of the quality and availability performance metrics, it is difficult to determine what the proper implementation time should be.

Likes 0

Dislikes 0

Response

Thank you for the comment and the suggestion.

Jamie Monette - Allele - Minnesota Power, Inc. - 1

Answer No

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for the comment.

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer No

Document Name

Comment

WEC Energy Group supports EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for the comment.

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer No

Document Name

Comment

| | |
|---|----|
| AZPS does not support the proposed changes and cannot comment on the proposed implementation plan timeframe. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment and for the suggestion. | |
| Gordon Jonic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | No |
| Document Name | |
| Comment | |
| CEHE does not support the proposed changes made to IRO-010-5 and TOP-003-6, and therefore cannot comment on the sufficiency of the proposed 18-month implementation plan. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment and for the suggestion. | |
| Daniel Gacek - Exelon - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by EEI. | |
| Likes 0 | |
| Dislikes 0 | |

| Response | |
|---|----|
| Thank you for the comment. | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | No |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| Exelon supports comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | No |
| Document Name | |

| Comment | |
|---|----|
| Portland General Electric Company supports the comments submitted by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper | |
| Answer | No |
| Document Name | |
| Comment | |
| Due to the concerns caused by the uncertainty of the potential impacts of the quality and availability performance metrics, it is difficult to determine what the proper implementation time should be. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment and for the suggestion. | |
| Bryan Bennett - Sempra - San Diego Gas and Electric - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| With the addition of an agreed upon security method, a 24 month time frame would be more reasonable. This will need to trickle down from the RC/BA to the TOP. Any change to security will need to be approved, vetted, and may need to be a captial project. | |

| | |
|---|----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment for and the suggestion and explanation. | |
| Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable | |
| Answer | No |
| Document Name | |
| Comment | |
| EEI does not support the proposed changes made to IRO-010-5 and TOP-003-6, and therefore cannot comment on the sufficiency of the proposed 18-month implementation plan. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment and for the suggestion. | |
| Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster | |
| Answer | No |
| Document Name | |
| Comment | |
| Evergy supports and incorporates by reference the comments of the Edison Electric Institue (EEI) for question #7. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |

| | |
|--|----|
| Thank you for the comment and for the suggestion. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | No |
| Document Name | |
| Comment | |
| Suggest a 24-month implementation as not sure of the impact to implement a process for question 2 criteria. "... for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary." | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment and for the explanation. The team will discuss and take this into consideration when planning the new implementation plan. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | No |
| Document Name | |
| Comment | |
| Suggest a 24-month implementation as not sure of the impact to implement a process for question 2 criteria. "... for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary." | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|--|----|
| Response | |
| Thank you for the comment and for the explanation. The team will discuss and take this into consideration when planning the new implementation plan. | |
| Russell Noble - Cowlitz County PUD - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| Cowlitz PUD questions the need for an implementation plan if the standard revisions are focused on a risk-based approach and "to simplify administrative burdens" as stated in the approved SAR. The SAR did not point to any reliability deficiencies, and the SDT should avoid adding to the current requirements. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment to the team. | |
| Ayslynn Mcavoy - Arkansas Electric Cooperative Corporation - 3 | |
| Answer | No |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | No |

| | |
|---|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Nazra Gladu - Manitoba Hydro - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| No concerns on timeline for Manitoba Hydro. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment. | |
| Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <i>No comments & no concerns.</i> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|-----|
| Thank you for the comment. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The NAGF supports the proposed 18-month implementation plan. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment. | |
| Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay | |
| Answer | Yes |
| Document Name | |
| Comment | |
| AES Clean Energy supports the proposed 18-month implementation plan. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment, the team thanks you for the support. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|---|-----|
| Ameren agrees with and supports NAGF comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment, the team thanks you for the support. | |
| Casey Perry - PNM Resources - Public Service Company of New Mexico - 1,3 - WECC,Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |
| PNMR agrees. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment, the team thanks you for the support. | |
| Carl Pineault - Hydro-Quebec Production - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The time frame seems appropriate. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment, the team thanks you for the support. | |

| | |
|--|-----|
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| No comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <i>No comments & no concerns.</i> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment | |
| Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC) | |
| Answer | Yes |
| Document Name | |
| Comment | |

As mentioned above, this project was initiated pursuant to the Standards Efficiency Review (SER) and the goal of this effort is to simplify (versus complicate) administrative burdens. Therefore, to the extent an 18-month implementation plan is insufficient, indicates the project has strayed from its initial objective.

Likes 0

Dislikes 0

Response

Thank you for the comment

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Yes

Document Name

Comment

These changes are most impactful to RC, BA, and TOP's. However, it is our opinion that that the updated requirements found herein are, by and large, standard practice across the industry. Codifying these practices in the new revisions provides greater clarity and guidance surrounding data specifications.

Likes 0

Dislikes 0

Response

Thank you for the comment

Lenise Kimes - City and County of San Francisco - 1 - WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

| Response | |
|--|-----|
| Thank you for the comment | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment | |
| Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the comment | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment | |
| Marc Sedor - Seminole Electric Cooperative, Inc. - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment | |
| Melanie Wong - Seminole Electric Cooperative, Inc. - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment | |
| Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD | |
| Answer | Yes |

| | |
|---|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment | |
| LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment | |

| | |
|--|-----|
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment | |
| Thomas Foltz - AEP - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment | |
| Ken Habgood - Seminole Electric Cooperative, Inc. - 4 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

| Response | |
|---|-----|
| Thank you for the comment | |
| Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support | |
| Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|--|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECl | |
| Answer | Yes |

| | |
|---|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |

| | |
|--|-----|
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Josh Combs - Black Hills Corporation - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|---|-----|
| Response | |
| Thank you for the support | |
| James Baldwin - Lower Colorado River Authority - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Mike Magruder - Avista - Avista Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|---|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support | |
| Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support | |
| Teresa Krabe - Lower Colorado River Authority - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for the support | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | Yes |
| Document Name | |

| Comment | |
|--|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the support | |
| Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment and support | |
| Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for the comment and support | |

| | |
|---|--|
| 8. Provide additional comments regarding IRO-010-5 for the SDT to consider. | |
| Russell Noble - Cowlitz County PUD - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| Please note that the RC may only seek data from BA and TOP entities if it is assured DP/GO/TO data will be addressed under TOP-006. This is necessary to reduce undue burden of tracking 100's of entities. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. We will pass this information along to Drafting Committee, with the notion of TOP-003 instead of TOP-006 as it is a retired standard. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | |
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Kimberly Turco - Constellation - 6 | |

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Teresa Krabe - Lower Colorado River Authority - 5 | |
| Answer | |
| Document Name | |

| Comment | |
|--|---|
| None at this time. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments. | |
| Nicolas Turcotte - Hydro-Quebec TransEnergie - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| <ul style="list-style-type: none"> We consider the use of the word “criteria” in R3 “receiving a specification in Requirement R2 shall satisfy the documented specifications using the criteria established in Requirement Parts 1.5 through 1.8” to be misleading, since only 1.5.2 identifies criteria. Furthermore, 1.4 is more in line with 1.5 through 1.8 than with 1.1 through 1.3. So the text should refer to “1.4 through 1.8”. That said, since all these elements (1.1 through 1.8) are all required in the specification, it seems to us simpler and sufficient to write “Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R2 shall satisfy its requirements established per R1.” Title in header of document needs to be modified to reflect changes to the title in Section 1. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments. We will pass this information along to Drafting Team for consideration. | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | |
| Document Name | |
| Comment | |

The MRO NSRF provides the following:

1: We suggest adding verbiage to the technical rationale of both standards (or just the one if they are combined) to clarify if and when a Registered Entity is required to submit a data specification sheet to those other entities that it is already receiving real-time information from via network links.

2: The changes to the standard title and purpose (A1 and A3), specifically, the added phrase “and information” after every mention of the word “data,” add little to no value and should be undone unless the drafting team provides further clarification on the difference between data and information. For example, the team could by putting the words “electronic SCADA” in from of the word data. Additionally, the drafting team should consider using the vernacular “data or information” rather than “data and information” as the language implies these are separate.

Likes 0

Dislikes 0

Response

Thank you for your comments. We will pass this information along to the Standard Drafting Team as well as incorporate into the Technical Rationale/White Paper.

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper

Answer

Document Name

Comment

Santee Cooper believes this is additional administrative burden without a corresponding reliability improvement and does not meet the objective of simplifying the Reliability Standards that facilitate the exchange of information and data necessary to plan and operate the BES.

Likes 0

Dislikes 0

Response

Thank you for your comments.

Diana Torres - Imperial Irrigation District - 6

Answer

| | |
|--|--|
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | |
| Document Name | |
| Comment | |
| MPC supports comments submitted by the MRO NERC Standards Review Forum. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Carl Pineault - Hydro-Qu?bec Production - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| We consider the use of the word "criteria" in R3 "receiving a specification in Requirement R2 shall satisfy the documented specifications using the criteria established in Requirement Parts 1.5 through 1.8" to be misleading, since only 1.5.2 identifies criteria. Furthermore, 1.4 is more in line with 1.5 | |

through 1.8 than with 1.1 through 1.3. So the text should refer to “1.4 through 1.8”. That said, since all these elements (1.1 through 1.8) are all required in the specification, it seems to us simpler and sufficient to write:

“Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R2 shall satisfy its requirements established per R1.”

Likes 0

Dislikes 0

Response

Thank you for your comments. We will pass this information along to Drafting Team for consideration when re drafting the standards.

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Document Name

Comment

Ameren has no additional comments

Likes 0

Dislikes 0

Response

Thank you for your comments.

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Document Name

Comment

Draft 1 of IRO-010-5 reflects a change to the standard title in Section A.1, but not in the header.

Likes 0

| | |
|--|--|
| Dislikes 0 | |
| Response | |
| Thank you for your comments. The team will incorporate this change in the next draft for commenting. | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Gordon Jonic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | |
| Document Name | |
| Comment | |
| CEHE would like the SDT to define and provide examples for the term “intermediary” in IRO-010 and TOP-003. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. We will pass this information along to the Technical Rationale/White Paper. | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | |

| | |
|---|--|
| Document Name | |
| Comment | |
| AZPS has no additional comments at this time. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | |
| Document Name | |
| Comment | |
| N/A | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay | |
| Answer | |
| Document Name | |
| Comment | |
| No additional comments. | |
| Likes 0 | |

| | |
|---|--|
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | |
| Document Name | |
| Comment | |
| The NAGF has no additional comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | |
| Document Name | |
| Comment | |
| None. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | |

| | |
|--|---|
| Document Name | |
| Comment | |
| <p>M3 of IRO-010-5 and M5 of TOP-003-6 accept as evidence, “electronic or hard copies of data transmittals or attestations of receiving entities,” but only the latter option is feasible. The information sent to RCs, BAs and TOPs includes telemetered signals that are continually changing, accumulations of thousands of daily reports, and inputs to portal systems that swallow the data without a trace, making it impossible to provide for an audit a full collection of what was sent. The only real proof of data transmittal adequacy is meanwhile that the RC, BA and TOP are satisfied, so IRO-010-5 and TOP-003-6 should require the receiving entities to issue an OK/Not OK attestation annually, rather than making this just an option, and for Not OK incidents the RC, BA and TOP should identify the deficiencies that occurred and the notifications that were sent to the transmitting entities.</p> <p>IRO-010-5 and TOP-003-3 should also require RCs, BAs and TOPs to explicitly state their NERC data specifications in a single, publicly available location. Some receiving entities list a portion of their data requirements in widely scattered places in their online manuals and protocols, while other mandatory inputs are in market data reporting systems, outage scheduling software and the like. In some cases we have nothing more than an email saying, “What you’re sending now is OK.” It is consequently difficult to impossible at times for a GO/GOP to identify just what the IRO-010/TOP-003 data specification is.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments. The team review this information when re-drafting the standards. | |
| Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO | |
| Answer | |
| Document Name | |
| Comment | |
| <p>The MRO NSRF provides the following:</p> <p>1: We suggest adding verbiage to the technical rationale of both standards (or just the one if they are combined) to clarify if and when a Registered Entity is required to submit a data specification sheet to those other entities that it is already receiving real-time information from via network links.</p> | |

2: The changes to the standard title and purpose (A1 and A3), specifically, the added phrase “and information” after every mention of the word “data,” add little to no value and should be undone.

| | |
|---------|--|
| Likes 1 | Lincoln Electric System, 1, Johnson Josh |
|---------|--|

| | |
|------------|--|
| Dislikes 0 | |
|------------|--|

Response

Thank you for your comments. We will pass this information along to the Standard Drafting Team as well as incorporate into the Technical Rationale/White Paper.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

| | |
|---------------|--|
| Answer | |
|---------------|--|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

| | |
|----------------|--|
| Comment | |
|----------------|--|

None

| | |
|---------|--|
| Likes 0 | |
|---------|--|

| | |
|------------|--|
| Dislikes 0 | |
|------------|--|

Response

Thank you for your comments.

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

| | |
|---------------|--|
| Answer | |
|---------------|--|

| | |
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| Document Name | |
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| | |
|----------------|--|
| Comment | |
|----------------|--|

Nothing further at this time

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| Likes 0 | |
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| Dislikes 0 | |
|------------|--|

| | |
|---|--|
| Response | |
| Thank you for your comments. | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | |
| Document Name | |
| Comment | |
| No additional comments at this time. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |

| | |
|---|--|
| 9. Provide additional comments regarding TOP-003-6 for the SDT to consider. | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | |
| Document Name | |
| Comment | |
| No additional comments at this time. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric | |
| Answer | |
| Document Name | |
| Comment | |
| Nothing further at this time | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company | |
| Answer | |

| | |
|--|--|
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO | |
| Answer | |
| Document Name | |
| Comment | |
| The MRO NSRF provides the following: | |
| 1: We suggest adding verbiage to the technical rationale of both standards (or just the one if they are combined) to clarify if and when a Registered Entity is required to submit a data specification sheet to those other entities that it is already receiving real-time information from via network links. | |
| 2: The changes to the standard title and purpose (A1 and A3), specifically, the added phrase “and information” after every mention of the word “data,” add little to no value and should be undone. | |
| Likes 1 | Lincoln Electric System, 1, Johnson Josh |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. We will pass this information along to the Technical Rationale/White Paper. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | |
| Document Name | |

Comment

M3 of IRO-010-5 and M5 of TOP-003-6 accept as evidence, “electronic or hard copies of data transmittals or attestations of receiving entities,” but only the latter option is feasible. The information sent to RCs, BAs and TOPs includes telemetered signals that are continually changing, accumulations of thousands of daily reports, and inputs to portal systems that swallow the data without a trace, making it impossible to provide for an audit a full collection of what was sent. The only real proof of data transmittal adequacy is meanwhile that the RC, BA and TOP are satisfied, so IRO-010-5 and TOP-003-6 should require the receiving entities to issue an OK/Not OK attestation annually, rather than making this just an option, and for Not OK incidents the RC, BA and TOP should identify the deficiencies that occurred and the notifications that were sent to the transmitting entities.

IRO-010-5 and TOP-003-3 should also require RCs, BAs and TOPs to explicitly state their NERC data specifications in a single, publicly available location. Some receiving entities list a portion of their data requirements in widely scattered places in their online manuals and protocols, while other mandatory inputs are in market data reporting systems, outage scheduling software and the like. In some cases we have nothing more than an email saying, “What you’re sending now is OK.” It is consequently difficult to impossible at times for a GO/GOP to identify just what the IRO-010/TOP-003 data specification is.

Likes 0

Dislikes 0

Response

Thank you for your comments. We will pass this information along to Drafting Team.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Thank you for your comments.

| | |
|--|--|
| Thomas Foltz - AEP - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>AEP believes that the Technical Rationale document for TOP-003 could benefit from clarity regarding the intermediaries that may be used for data pass-through. Perhaps examples could be given regarding who these entities might be, and what services they might provide. It might also be beneficial to provide insight regarding how data conflicts might be resolved when an intermediary is serving as the pass-through. Not all of these intermediaries will be registered as Function Entities, so we believe the Technical Rationale document would be the most appropriate document for this insight.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>Thank you for your comments. We will pass this information along to the Technical Rationale/White Paper.</p> | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | |
| Document Name | |
| Comment | |
| <p>The NAGF has no additional comments.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>Thank you for your comments.</p> | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | |

| | |
|--|--|
| Document Name | |
| Comment | |
| N/A | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | |
| Document Name | |
| Comment | |
| AZPS has no additional comments at this time. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Gordon Jonic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | |
| Document Name | |
| Comment | |
| CEHE would like the SDT to define and provide examples for the term “intermediary” in IRO-010 and TOP-003. | |
| Likes 0 | |

| | |
|---|--|
| Dislikes 0 | |
| Response | |
| Thank you for your comments. We will pass this information along to the Technical Rationale/White Paper. | |
| Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC | |
| Answer | |
| Document Name | |
| Comment | |
| Xcel Energy supports EEI comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| Ameren has no additional comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | |

| | |
|---|--|
| Document Name | |
| Comment | |
| MPC supports comments submitted by the MRO NERC Standards Review Forum. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | |
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | |
| Document Name | |
| Comment | |
| The MRO NSRF provides the following: | |

1: We suggest adding verbiage to the technical rationale of both standards (or just the one if they are combined) to clarify if and when a Registered Entity is required to submit a data specification sheet to those other entities that it is already receiving real-time information from via network links.

2: See Comment #2 for Q8.

Likes 0

Dislikes 0

Response

Thank you for your comments. We will pass this information along to the Technical Rationale/White Paper.

Nicolas Turcotte - Hydro-Quebec TransEnergie - 1

Answer

Document Name

Comment

Version history is incomplete for TOP-003-5 (Cold Weather Project 2019-06 (not 221-06))

Likes 0

Dislikes 0

Response

Thank you for your comments. We will incorporate this change in the next draft for commenting.

Teresa Krabe - Lower Colorado River Authority - 5

Answer

Document Name

Comment

None at this time.

Likes 0

| | |
|--|--|
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|--|--|
| Thank you for your comments. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | |
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Russell Noble - Cowlitz County PUD - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comments. | |
| Ruida Shu - NPCC - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | |
| Document Name | |
| Comment | |

Version history is incomplete for TOP-003-5.

Likes 0

Dislikes 0

Response

Thank you for your comments. We will incorporate this change in the next draft for commenting.

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer

Document Name

Comment

Version history is incomplete for TOP-003-5.

Likes 0

Dislikes 0

Response

Thank you for your comments.

| | |
|---|--|
| 10. Provide additional comments for the SDT to consider, if desired. | |
| Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable, Group Name Standards Review Committee (SRC) | |
| Answer | |
| Document Name | |
| Comment | |
| <p>During SRC’s review of the IRO-010-5/TOP-003-6 draft Standards, the SRC identified an inefficiency inherent in the IRO/TOP family of Standards. Unlike other Standards, the IRO/TOP set are divided by functional entity rather than reliability outcome.</p> <p>The SRC suggests IRO-010-5 and TOP-003-6 be merged into a single standard that could be located under a new family of Standards, e.g. “Data (DAT),” whereby the individual Requirements in the standard would indicate the Responsible Entity, similar to what is done with other Standards (i.e. MOD, PRC, TPL, COM, BAL, VAR).</p> <p>The SRC further suggests consideration be given to consolidating other relevant IRO/TOP Standards when they come up for review.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>The SDT thanks you for your comments. The SDT considered the comment and saw merit in the recommendation. While the SDT saw merit, the decision was for a future SDT consider such a combined standard for the RC, BA, and TOP data specification requirements as well as a broader effort to combine IRO/TOP standards. The SDT decided not to attempt this action to focus on the specific items in the approved SAR.</p> | |
| Russell Noble - Cowlitz County PUD - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| None | |

| | |
|---|--|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | |
| Document Name | |
| Comment | |
| Thank you for the effort and due diligence of the SDT in proposing the new revisions and for providing us the opportunity to comment. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments | |
| Kimberly Turco on behalf of Constellation Segement 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|--|
| The SDT thanks you | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Tri-State appreciates the opportunity to provide additional comments. Tri-State would like to see a better defined technical directive under IRO-010-5 R2. Under R2 it states the Reliability Coordinator is to "distribute" its data and information specification to entities that have data required by the Reliability Coordinator's Operational Planning Analyses, etc.. Tri-State would like to recommend that the SDT determine "reasonable" methods for distribution. The current distribution methods are varied in nature and are often posted in protected environments that all applicable recipients do not have access to. For example, a GO, GOP, or DP may not have authorization to an RC/BA/TOP protected reliability website and therefore do not receive "distribution" of IRO-010 or TOP-003 data requests per R2. Additionally, recipients that do have access may not be aware of new postings in these environments unless they check them consistently.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>The SDT thanks you for your comments. The SDT did not make any changes to the standard to address the noted concern. The SDT was concerned about inserting the recommended language as "reasonable" could be quite broad in interpretation. The SDT believes that the current and proposed requirements contain provisions to address such circumstances as the data specification is required to be a mutually agreeable format, security protocol, secure means of delivering and process for resolving data conflicts which allows the RC and the providers of data for the RC data specification to coordinate to resolve such issues.</p> | |
| Alison MacKellar - Constellation - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Constellation has no additional comments.</p> | |

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

The SDT thanks you.

Teresa Krabe - Lower Colorado River Authority - 5

Answer

Document Name

Comment

None at this time.

Likes 0

Dislikes 0

Response

The SDT thanks you.

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institue (EEI) for question #10.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT did review and consider if revisions should be made to other standards including the SER Phase 2 Project Team comments and recommendations. The SDT has worked to provide the review details and rationale for decisions to retain those requirements in a white paper to help address the noted concerns.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Document Name

Comment

EI was and continues to be supportive of the good work done by the SER Phase 2 Project Team and support their recommendations to address the Evidence and Retention issues in IRO-010 and TOP-003. We are also concerned that decisions were made to not consider the possible revisions to the other identified Reliability Standards in this SAR, and by the SER Phase 2 Project Team, without any documented technical justification that describes why no work can be done to address evidence, retention or overlapping requirements within those Reliability Standards. We would encourage the SDT to reconsider the proposed changes made in this first draft and we look forward to a second draft that more closely aligns with the recommendations made by the SER Phase 2 Project Team.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT did review and consider if revisions should be made to other standards including the SER Phase 2 Project Team comments and recommendations. The SDT has worked to provide the review details and rationale for decisions to retain those requirements in a white paper to help address the noted concerns.

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

The MRO NSRF feels that NERC Reliability Standard IRO-010-5 & TOP-003-6 are substantially the same and duplicative of each other. Due to this, there is enough overlap to justify combining them into one standard. The MRO NSRF believes this new standard should be housed in the Communication (COM) suite of standards.

| | |
|--|--|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT considered the comment and saw merit in the recommendation. While the SDT did not see the two standards as “duplicative”, they did see merit in a future SDT consider such a combined standard for the RC, BA, and TOP data specification requirements. The SDT decided not to attempt this action to focus on the specific items in the approved SAR. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | |
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you. | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | |
| Document Name | |
| Comment | |
| MPC supports comments submitted by the MRO NERC Standards Review Forum. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

The SDT thanks you for your comments. The SDT considered the comment and saw merit in the recommendation. While the SDT did not see the two standards as “duplicative”, they did see merit in a future SDT consider such a combined standard for the RC, BA, and TOP data specification requirements. The SDT decided not to attempt this action to focus on the specific items in the approved SAR.

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Document Name

Comment

Ameren has no additional comments

Likes 0

Dislikes 0

Response

The SDT thanks you.

Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC

Answer

Document Name

Comment

Xcel Energy supports EEI comments.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT did review and consider if revisions should be made to other standards including the SER Phase 2 Project Team comments and recommendations. The SDT has worked to provide the review details and rationale for decisions to retain those requirements in a white paper to help address the noted concerns.

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECl

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| AECI appreciates the diligence of the SDT, their consideration of industry comment, and the opportunity to provide substantive comment. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you. | |
| Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | |
| Document Name | |
| Comment | |
| To reiterate the comments above, the initial draft appears to be heading in the opposite direction of the issues identified by the SER. CEHE does not feel that the current IRO-010 and TOP-003 drafts are addressing the issues raised by the Standards Efficiency Review White Paper (from 11/14/2019) that originated the Project 2021-06. Instead of simplifying administrative burdens or eliminating them altogether, these revisions are adding an administrative burden that do not have a clear benefit to reliability. Additionally, CEHE believes that these changes create redundancy with the data quality and accuracy of Real-time monitoring and analysis capability requirements in TOP-010-1(i). | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comments. The SDT did review and consider if revisions should be made to other standards including the SER Phase 2 Project Team comments and recommendations. The review also assessed if there was potential reliability impact if the requirement were to be retired as well. The SDT has worked to provide the review details and rationale for decisions to retain those requirements in a white paper to help address the noted concerns. Additionally, the SDT reviewed the noted concern and disagrees with any redundancy with TOP-010. The SDT could see it complement TOP-010 in that the data specification would clearly articulate expected accuracy and availability specifications such that it could | |

prevent real-time issues along with the primary benefit of helping to address the SAR noted issue of a zero defect compliance approach to all data in TOP or BA data specification.

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

Document Name

Comment

AZPS has no additional comments at this time.

Likes 0

Dislikes 0

Response

The SDT thanks you.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

The SDT thanks you.

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Document Name

Comment

The NAGF has no additional comments.

Likes 0

Dislikes 0

Response

The SDT thanks you.

Jamie Monette - Allete - Minnesota Power, Inc. - 1

Answer

Document Name

Comment

Minnesota Power agrees with MRO's NERC Standards Review Forum's (NSRF) comments.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT considered the comment and saw merit in the recommendation. While the SDT saw merit, the decision was for a future SDT consider such a combined standard for the RC, BA, and TOP data specification requirements as well as a broader effort to combine IRO/TOP standards. The SDT decided not to attempt this action to focus on the specific items in the approved SAR.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

None.

| | |
|---|--|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you. | |
| LaTroy Brumfield - American Transmission Company, LLC - 1 - MRO,RF | |
| Answer | |
| Document Name | |
| Comment | |
| Though we disagree with some of the proposed changes as noted above, we appreciate the SDT's efforts to support system reliability through possible improvements to these standards. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you for your comment. | |
| Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO | |
| Answer | |
| Document Name | |
| Comment | |
| The MRO NSRF feels that NERC Reliability Standard IRO-010-5 & TOP-003-6 are substantially the same and duplicative of each other. Due to this, there is enough overlap to justify combining them into one standard. The MRO NSRF believes this new standard should be housed in the Communication (COM) suite of standards. | |
| Likes 1 | Lincoln Electric System, 1, Johnson Josh |
| Dislikes 0 | |
| Response | |

The SDT thanks you for your comments. The SDT considered the comment and saw merit in the recommendation. While the SDT saw merit, the decision was for a future SDT consider such a combined standard for the RC, BA, and TOP data specification requirements as well as a broader effort to combine IRO/TOP standards. The SDT decided not to attempt this action to focus on the specific items in the approved SAR.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

In the initial stage of this project, Southern raised concerns that the proposed SAR could lead to more prescriptive Data Specification standards. We argued that attempting to specify or determine what data is necessary to reliably operate the Bulk Electric System for all regions would create difficulties for requesting entities (i.e., RC, TOP, and BA) to respond quickly to changing system conditions and would not resolve the compliance issues the SAR was intending to address.

The Standard Drafting Team responded to our concerns with proposed revisions (draft 1) to the standards and by clarifying that “the intent [of the SAR] is to not be overly prescriptive so that Registered Entities may continue, as under the current standards, to request and receive the data necessary to support the four tasks identified in the applicable standards.”

We appreciate the SDT’s efforts, however, we remain concerned with revisions that go beyond the administrative issues identified in the Standers Efficiency Review. EEI’s comments raise the concerns in greater detail. We appreciate the SDT’s careful review of these matters.

Likes 0

Dislikes 0

Response

The SDT thanks you for your comments. The SDT did review and consider if revisions should be made to other standards including the SER Phase 2 Project Team comments and recommendations. The SDT has worked to provide the review details and rationale for decisions to retain those requirements in a white paper to help address the noted concerns. The SDT also removed the data intermediary requirements for the data specifications based on stakeholder feedback. The SDT believes this draft appropriately balances the necessary detail to avoid zero defect compliance approaches, improves clarity for mutually agreed upon specifications by including in the data specification, and minimizes any prescriptiveness for the RC, BA, and TOP to request and receive the data necessary to support the four tasks identified in the applicable standards.

Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric

Answer

| | |
|---|--|
| Document Name | |
| Comment | |
| Nothing further at this time | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you. | |
| Lenise Kimes - City and County of San Francisco - 1 - WECC | |
| Answer | |
| Document Name | |
| Comment | |
| No additional comments at this time. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| The SDT thanks you. | |

Comments received from Steven Rueckert/WECC

1. To address third party participation in data exchanges, the SDT added a provision in both IRO-010-5 and TOP-003-6 that recognizes that an applicable entity that is required to respond to the data specification may identify data and information that will be provided by a third-party intermediary. However, this provision does not shift the responsibility to respond to the data request from the applicable entity to the intermediary. Rather, the provision recognizes that an applicable entity may utilize an intermediary to pass through data and information unaltered from the entities that originated the data and information. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

- Yes
 No

Comments: The introduction of roles or the use of an intermediate party that is not responsible by the standard for compliance seems to add ambiguity rather than clarifying the standard. The standard language does not provide enough clarity on responsibility for providing the data/information.

R1.1 states the RC/TOP/BA *must* provide provisions (in their documented specification) including identification of applicable entities responsible for responding.

R1.4 uses the words “responsible respondent” identified in part 1.1, but those words are not used in part 1.1. This could be viewed as defining an “applicable entity” as an intermediary. If responsible entity does not use an intermediary is the “responsible entity” considered an “applicable entity” and which entity is being addressed in Part 1.1.

R2 requires distribution of the data/info specification but does not use either of the terms in R1.1 and requires distribution to “entities that have data” Is this the “responsible entity” or the “applicable entity” or both?

R3 is applicable to registered functions receiving a specification per R2. It is not clear whether the intermediary party would even receive the specification from the requestor or would operate by directive of the entity which has the source data. If a GOP has the source data are they allowed to direct a TOP to provide their data to an RC?

To summarize, there is no current prohibition on any third party providing data to a requestor. But because they are not mentioned there is also no confusion over which party is ultimately responsible. It is not necessary to establish a formal requirement for intermediaries. This seems to add unnecessary ambiguity.

These proposed revisions would require all RCs/TOPs/BAs to modify their data specifications documents and place an additional

administrative obligation on the entity requesting the data/information.

At a minimum, the standard requirements need to be very clear on which registered entity is responsible and use the same terminology throughout the standard.

While we do not believe intermediaries need to be addressed a possible recommendation for language might be:

- 1.1 A list of data and information needed by the Reliability Coordinator (or TOP or BA) to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessment, including non-BES data and information, external network data and information, and identification of the **applicable** registered entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator (or TOP/BA).

1.4. Delete

R3. Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider **identified as an entity responsible for responding to the data and information specification in Part 1.1 receiving a specification in Requirement R2** shall satisfy the documented specifications **either directly or through use of an intermediary as agreed to by the RC (or TOP/BA)** using the criteria established in Requirement Parts 1.5 through 1.8.

2. To mitigate potential zero defect assumptions and decrease administrative burdens, the SDT revised the data specification requirements in both IRO-010-5 and TOP-003-6 to include more specificity to the protocols for providing data and information that includes: specific deadlines or periodicity in which data and information is to be provided, performance criteria for availability and accuracy of data, and provisions to allow a respondent entity to update or correct data and information as necessary. Do you agree with these provisions? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

- Yes
 No

Comments: WECC agrees with the objective to minimize the impact of zero defect compliance. However, the standard revisions as proposed do not satisfy this objective because they require the requestor to include within the specification: Specific deadlines and periodicity, and specify performance criteria for availability. The requestor's obligation to conduct Real Time Assessments could make them reluctant to publish more relaxed performance criteria for some data elements and the task of identifying the performance requirements for each type of data or information element would be onerous to the requestor.

Suggested improvement

- 1.5. Protocols for the responsible respondent identified in Part 1.1 to provide data and information that includes, but is not limited to:
 - 1.5.1 **Target Specific** deadlines and periodicity in which data and information is to be provided;

1.5.2 ~~Criteria for communications and resolution during periods when data exchange is interrupted, source data is not available or to address known inaccuracies. interruption Performance criteria for the availability and accuracy of data and information, as applicable;~~

1.5.3 Provisions to update or correct data and information, as applicable or necessary.

3. To improve administration of data and information for the applicable entities, the SDT modified IRO-010-5 and TOP-003-6 to require the data specification to specify mutually agreed upon format, conflict resolution process, and security protocols or methods for securely transferring data or information. Do you agree with these modifications? If you do not agree, or if you agree but have comments or suggestions for the SDT, please provide your recommendation and explanation.

- Yes
 No

Comments: It is unclear how a mutually agreed upon format, conflict resolution process and security protocols could be included in a Data specification prior to it being distributed to the entities responsible for responding? That does not seem like it would be “mutually agreeable.” It appears that it would be developed and directed by the requestor. The current standards IRO-010 and TOP-003 correctly include the provisions of mutual agreeable formats, conflict resolution and security protocols in requirements for the responding entity as part of their response obligations. Such that each entity may coordinate with the requestor as needed. WECC believes a modification to address these items is unnecessary.

However, if the desire is to move this into the area of responsibility of the requestor a possible suggestion is:

1.6 Identification of a *preferred* format.

1.7. Identification of a *preferred* process for resolving conflicts between the Reliability Coordinator, the entity responsible for responding identified in Part 1.1

1.8. Identification of the *preferred* security protocol or method for securely transferring data and information.

1.9 The preferred elements in Part 1.6, 1.7, and 1.8 may be modified though documented mutual agreement between the data requestor and the entity responsible for responding.

4. IRO-010-5 and TOP-003-6 require general data specifications to allow the Reliability Coordinator, Transmission Operator, and Balancing Authority to perform its Operational Planning Analysis, Real Time Assessment, Real-time monitoring (undefined term), and BA analysis functions (undefined term). The SDT focused on data and information generally rather than prescriptive requirements. Do you believe that all data and information needed by the RC, TOP, and BA to perform these reliability tasks (for example, PMU streaming, outage coordination, distribution, generator fuel information, etc.) is available pursuant to the proposed standards or is additional clarification needed that is more prescriptive?

- Yes
 No

Comments: While R1 and Part 1.1 as written appear to satisfy the intent of a generic data request, Part 1.2 and 1.3 are inconsistent with this idea by making requirements for very specific data.

WECC believes a preferable process would be to remove specific data items and allow R1 and R1.1 to stand alone. An even better approach may be to consider allowing the requestor to request ANY planning and operational data needed for it to monitor its area to maintain reliability during normal and abnormal conditions and not restrict it to data associated with OPA, RT monitoring and RTA.

5. To support the proposed modifications, the SDT revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Yes
 No

Comments: No comment

6. The SDT reviewed the other standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6 or create efficiencies reflective of the principle established by the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in these collateral standards, the SDT determined there is insufficient justifications for the retirement of these requirements and, therefore, the SDT is not proposing changes to these standards. Do you agree with this assessment? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Yes
 No

Comments: However, if redundancies in data delivery exist it does establish the possibility of having more than one non-compliance for the same issue. This could be identified and resolved with Enforcement Discretion as needed.

7. The SDT is proposing an 18-month implementation plan. Would this proposed timeframe give enough time to implement the proposed modifications in IRO-010-5 and TOP-003-6? If you think an alternate timeframe is needed, please propose an alternate implementation plan and time period, and provide a detailed explanation of actions planned to meet the implementation deadline.

Yes
 No

Comments: No Comment. WECC believes the entities responsible for implementing any revisions are best suited to comment on the length of the implementation plan.

8. Provide additional comments regarding IRO-010-5 for the SDT to consider.

Comments: Please see response to question 10

9. Provide additional comments regarding TOP-003-6 for the SDT to consider.

Comments: Please see response to question 10

10. Provide any additional comments for the SDT to consider, if desired.

Comments: WECC questions if it is really necessary to mandate that the entity that needs operational data create and maintain a formal document?

If it is truly desired to reduce administrative burden, then WECC suggests having IRO-010 and TOP-003 focus on giving the requestors (RC/TOP/BA) the “Authority” to request and collect the data and information in the frequency and format needed.

Since the data needed can vary widely based on the needs of the requestor, the only enforceable requirement for the requestor should be that they formally make the requests to the entity that has the data.

It should not be necessary to provide and maintain single large data specification primarily for audit purposes. This seems to add administrative burden

The standard could be simplified to two simple requirements.

R1 specify requestor has clear authority to request data and is *required* to communicate those requests to the providers of the data/info.

Measurement would include records of the request.

It could be optional to the requestor based on its needs if they wished to maintain and send a formal catalog of requested data to everyone or provide a simple request for specific data via email or other communication to an entity. Their request could provide any or all of the elements in the subparts of R1 at the discretion of the requestor as needed to get the data/info they need.

R2 would be the requirement for entities to comply with the data/information request.

Measurement would be documentation the request was complied with.

There would be little need to perform periodic audits of this requirement. Other Standards that measure performance of the data requestor would demonstrate if the entities received the data they needed by satisfactory performance of other standards that depend on the data. Failure to comply by the entity receiving the request could be addressed through the CMEP complaint process.

These suggestions are provided in an attempt to clarify the wording of the standards and reduce administrative burden. WECC thanks the drafting team for the opportunity to provide comments and suggestions.

End of Report

Reminder

Standards Announcement

2021-06 Modifications to IRO-010 and TOP-003

Initial Ballots and Non-binding Polls Open through December 15, 2022

[Now Available](#)

Initial ballots and non-binding polls of the associated Violation Risk Factors and Violation Severity Levels are open through **8 p.m. Eastern, Thursday, December 15, 2022** for:

- IRO-010-5 – Reliability Coordinator Data Specification and Collection
- TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- Implementation Plan

Balloting

Members of the ballot pools associated with this project can log in and submit their votes by accessing the Standards Balloting and Commenting System (SBS) [here](#).

- *Contact NERC IT support directly at <https://support.nerc.net/> (Monday – Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.*
- *Passwords expire every **6 months** and must be reset.*
- *The SBS **is not** supported for use on mobile devices.*
- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

The ballot results will be announced and posted on the project page. The drafting team will review all responses received during the comment period and determine the next steps of the project.

For more information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003 observer list" in the Description Box.

North American Electric Reliability Corporation
3353 Peachtree Rd, NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003

Formal Comment Period Open through December 15, 2022
Ballot Pools Forming through November 30, 2022

[Now Available](#)

A formal comment period is open through **8 p.m. Eastern, Thursday, December 15, 2022** for the following:

- IRO-010-5 – Reliability Coordinator Data Specification and Collection
- IRO-010-5 – Implementation Plan
- TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- TOP-003-6 – Implementation Plan

Commenting

Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments. Find an unofficial Word version of the comment form on the [project page](#).

Ballot Pools

Ballot pools are being formed through **8 p.m. Eastern, Wednesday, November 30, 2022**. Registered Ballot Body members can join the ballot pools [here](#).

- *Contact NERC IT support directly at <https://support.nerc.net/> (Monday–Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.*
- *Passwords expire every **6 months** and must be reset.*
- *The SBS is **not** supported for use on mobile devices.*
- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

Initial ballots for the standards and implementation plan, as well as non-binding polls of the associated Violation Risk Factors and Violation Severity Levels will be conducted **December 6-15, 2022**.

For information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003 observer list" in the Description Box.

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BALLOT RESULTS

Comment: View Comment Results (/CommentResults/Index/263)

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 IN 1 ST

Voting Start Date: 12/6/2022 12:01:00 AM

Voting End Date: 12/15/2022 8:00:00 PM

Ballot Type: ST

Ballot Activity: IN

Ballot Series: 1

Total # Votes: 258

Total Ballot Pool: 293

Quorum: 88.05

Quorum Established Date: 12/15/2022 2:43:34 PM

Weighted Segment Value: 52.32

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 26 | 0.406 | 38 | 0.594 | 0 | 8 | 8 |
| Segment: 2 | 7 | 0.5 | 2 | 0.2 | 3 | 0.3 | 0 | 1 | 1 |
| Segment: 3 | 65 | 1 | 21 | 0.375 | 35 | 0.625 | 0 | 4 | 5 |
| Segment: 4 | 16 | 1 | 10 | 0.833 | 2 | 0.167 | 0 | 2 | 2 |
| Segment: 5 | 72 | 1 | 26 | 0.5 | 26 | 0.5 | 0 | 7 | 13 |
| Segment: 6 | 46 | 1 | 17 | 0.472 | 19 | 0.528 | 0 | 4 | 6 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 10 | 6 | 0.4 | 3 | 0.3 | 1 | 0.1 | 0 | 2 | 0 |
| Totals: | 293 | 5.9 | 105 | 3.087 | 124 | 2.813 | 0 | 29 | 35 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allete - Minnesota Power, Inc. | Jamie Monette | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Abstain | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Negative | Comments Submitted |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Negative | Comments Submitted |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|----------------------|
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Negative | Comments Submitted |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Negative | Comments Submitted |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Third-Party Comments |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | Affirmative | N/A |
| 1 | Colorado Springs Utilities | Mike Braunstein | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Third-Party Comments |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Candace Marshall | | Negative | Comments Submitted |
| 1 | Duke Energy | Laura Lee | | Negative | Comments Submitted |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|----------------------|
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |
| 1 | FirstEnergy - FirstEnergy Corporation | Julie Severino | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | Third-Party Comments |
| 1 | Great River Energy | Gordon Pietsch | | Negative | Third-Party Comments |
| 1 | Hydro One Networks, Inc. | Sheraz Majid | | Negative | Comments Submitted |
| 1 | Hydro-Qu?bec TransEnergie | Nicolas Turcotte | | Negative | Comments Submitted |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | None | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | None | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | Negative | Third-Party Comments |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | James Baldwin | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------|------------------|-------------|----------------------|
| 1 | M and A Electric Power Cooperative | William Price | | Negative | Third-Party Comments |
| 1 | Manitoba Hydro | Nazra Gladu | | Negative | Comments Submitted |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Third-Party Comments |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Negative | Third-Party Comments |
| 1 | National Grid USA | Michael Jones | | Negative | Third-Party Comments |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | Third-Party Comments |
| 1 | New York Power Authority | Salvatore Spagnolo | | Negative | Third-Party Comments |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Negative | Third-Party Comments |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Negative | Third-Party Comments |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Third-Party Comments |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Third-Party Comments |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | None | N/A |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------------|------------------|-------------|----------------------|
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | Abstain | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Affirmative | N/A |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | Comments Submitted |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Negative | Third-Party Comments |
| 1 | Public Utility District No. 1 of Chelan County | Diane E Landry | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | Negative | Comments Submitted |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | Comments Submitted |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | Negative | Third-Party Comments |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | | Affirmative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------------------------|------------------|-------------|----------------------|
| 1 | Tennessee Valley Authority | David Plumb | | None | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Negative | Comments Submitted |
| 1 | Western Area Power Administration | Sean Erickson | | Affirmative | N/A |
| 1 | Xcel Energy, Inc. | Eric Barry | | Negative | Third-Party Comments |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Andrew Gallo | | Affirmative | N/A |
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Negative | Comments Submitted |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | None | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Negative | Third-Party Comments |
| 2 | New York Independent System Operator | Gregory Campoli | | Negative | Third-Party Comments |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Abstain | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Abstain | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Negative | Comments Submitted |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Negative | Comments Submitted |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Negative | Comments Submitted |
| 3 | Austin Energy | Michael Dieringer | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|----------------------|
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | Negative | Comments Submitted |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | Negative | Third-Party Comments |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Third-Party Comments |
| 3 | Cowlitz County PUD | Russell Noble | | Negative | Comments Submitted |
| 3 | Dominion - Dominion Resources, Inc. | Connie Schroeder | | Negative | Comments Submitted |
| 3 | DTE Energy - Detroit Edison Company | Karie Barczak | | Affirmative | N/A |
| 3 | Duke Energy | Lee Schuster | | Negative | Comments Submitted |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | Negative | Third-Party Comments |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Eergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Negative | Comments Submitted |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|----------------------|
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Negative | Third-Party Comments |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | Lakeland Electric | Steven Marshall | | None | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | Comments Submitted |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Negative | Third-Party Comments |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Third-Party Comments |
| 3 | National Grid USA | Brian Shanahan | | Negative | Third-Party Comments |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | Third-Party Comments |
| 3 | New York Power Authority | David Rivera | | Negative | Third-Party Comments |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Negative | Third-Party Comments |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | None | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Negative | Third-Party Comments |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Third-Party Comments |
| 3 | Omaha Public Power District | David Heins | | Negative | Third-Party Comments |
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | None | N/A |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Affirmative | N/A |
| 3 | Portland General Electric Co. | Adam Menendez | | Negative | Comments Submitted |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Negative | Third-Party Comments |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Negative | Third-Party Comments |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Rayburn Country Electric Cooperative, Inc. | Frank Owens | | None | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|----------------------|
| 3 | Santee Cooper | James Poston | | Negative | Comments Submitted |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrold Murdaugh | | Negative | Third-Party Comments |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | Comments Submitted |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Janelle Marriott Gill | | Negative | Comments Submitted |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |
| 3 | Xcel Energy, Inc. | Nicholas Friebel | | Negative | Third-Party Comments |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | Negative | Third-Party Comments |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Affirmative | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | Affirmative | N/A |
| 4 | DTE Energy | Patricia Ireland | | Affirmative | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | Abstain | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------------|------------------|-------------|--------------------|
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | Affirmative | N/A |
| 4 | LaGen | Wayne Messina | | Affirmative | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | None | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | Affirmative | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | None | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | Seminole Electric Cooperative, Inc. | Ken Habgood | | Abstain | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | Sing Tay | Affirmative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Abstain | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Negative | Comments Submitted |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|----------------------|
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Negative | Comments Submitted |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Negative | Comments Submitted |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | None | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | Third-Party Comments |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | None | N/A |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | Abstain | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | Negative | Comments Submitted |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Negative | Comments Submitted |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | Negative | Third-Party Comments |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------|------------------|-------------|----------------------|
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Negative | Third-Party Comments |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Affirmative | N/A |
| 5 | Hydro-Quebec Production | Carl Pineault | | Negative | Comments Submitted |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Jason Fortik | | Negative | Comments Submitted |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Negative | Comments Submitted |
| 5 | Manitoba Hydro | Kristy-Lee Young | | None | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Third-Party Comments |
| 5 | National Grid USA | Robin Berry | | Negative | Third-Party Comments |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Negative | Third-Party Comments |
| 5 | New York Power Authority | Zahid Qayyum | | Negative | Third-Party Comments |
| 5 | NextEra Energy | Summer Esquerre | | Affirmative | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Negative | Third-Party Comments |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|----------------------|
| 5 | Northern California Power Agency | Jeremy Lawson | James Mearns | None | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Third-Party Comments |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | None | N/A |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Negative | Third-Party Comments |
| 5 | Orlando Utilities Commission | Dania Colon | | Abstain | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | None | N/A |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | Negative | Comments Submitted |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | None | N/A |
| 5 | PSEG - PSEG Fossil LLC | Tim Kucey | | Negative | Third-Party Comments |
| 5 | PSEG Nuclear LLC | Tim Kucey | | None | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Meaghan Connell | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Amy Jones | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Jennifer Bennett | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | Abstain | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | Comments Submitted |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Abstain | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | Negative | Comments Submitted |
| 5 | Tri-State G and T Association, Inc. | Ryan Walter | | Negative | Comments Submitted |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 5 | Xcel Energy, Inc. | Gerry Huitt | | Negative | Third-Party Comments |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Abstain | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Negative | Comments Submitted |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Negative | Comments Submitted |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Negative | Comments Submitted |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|----------------------|
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirschak | | Affirmative | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Third-Party Comments |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | Negative | Comments Submitted |
| 6 | Duke Energy | John Sturgeon | | Negative | Comments Submitted |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | Comments Submitted |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | Abstain | N/A |
| 6 | Manitoba Hydro | Simon Tanapat-Andre | | Negative | Comments Submitted |
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | Third-Party Comments |
| 6 | New York Power Authority | Shelly Dineen | | Negative | Third-Party Comments |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|----------------------|
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | None | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Third-Party Comments |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Third-Party Comments |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Negative | Comments Submitted |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | None | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | None | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | M LeRoy Patterson | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | None | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Glenda Horne | | Negative | Comments Submitted |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|----------------------|
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | Comments Submitted |
| 6 | Southern Indiana Gas and Electric Co. | Erin Spence | | Abstain | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | | Affirmative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | Affirmative | N/A |
| 6 | Xcel Energy, Inc. | Carrie Dixon | | Negative | Third-Party Comments |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | | Abstain | N/A |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Negative | Comments Submitted |

Showing 1 to 293 of 293 entries

Previous

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Next

BALLOT RESULTS

Comment: [View Comment Results \(/CommentResults/Index/263\)](#)

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 IN 1 ST

Voting Start Date: 12/6/2022 12:01:00 AM

Voting End Date: 12/15/2022 8:00:00 PM

Ballot Type: ST

Ballot Activity: IN

Ballot Series: 1

Total # Votes: 258

Total Ballot Pool: 293

Quorum: 88.05

Quorum Established Date: 12/15/2022 2:52:40 PM

Weighted Segment Value: 51.26

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 25 | 0.391 | 39 | 0.609 | 0 | 8 | 8 |
| Segment: 2 | 7 | 0.5 | 2 | 0.2 | 3 | 0.3 | 0 | 1 | 1 |
| Segment: 3 | 66 | 1 | 20 | 0.351 | 37 | 0.649 | 0 | 4 | 5 |
| Segment: 4 | 15 | 1 | 10 | 0.833 | 2 | 0.167 | 0 | 1 | 2 |
| Segment: 5 | 72 | 1 | 25 | 0.49 | 26 | 0.51 | 0 | 7 | 14 |
| Segment: 6 | 46 | 1 | 17 | 0.459 | 20 | 0.541 | 0 | 4 | 5 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 10 | 6 | 0.4 | 3 | 0.3 | 1 | 0.1 | 0 | 2 | 0 |
| Totals: | 293 | 5.9 | 102 | 3.024 | 128 | 2.876 | 0 | 28 | 35 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Negative | Comments Submitted |
| 1 | Allete - Minnesota Power, Inc. | Jamie Monette | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Abstain | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Negative | Comments Submitted |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Negative | Comments Submitted |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|----------------------|
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Negative | Comments Submitted |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Negative | Comments Submitted |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Third-Party Comments |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | Affirmative | N/A |
| 1 | Colorado Springs Utilities | Mike Braunstein | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Third-Party Comments |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Candace Marshall | | Negative | Comments Submitted |
| 1 | Duke Energy | Laura Lee | | Negative | Comments Submitted |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|----------------------|
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |
| 1 | FirstEnergy - FirstEnergy Corporation | Julie Severino | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | Third-Party Comments |
| 1 | Great River Energy | Gordon Pietsch | | Negative | Third-Party Comments |
| 1 | Hydro One Networks, Inc. | Sheraz Majid | | Negative | Comments Submitted |
| 1 | Hydro-Quebec TransEnergie | Nicolas Turcotte | | Negative | Comments Submitted |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | None | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | None | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | Negative | Third-Party Comments |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | James Baldwin | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------|------------------|-------------|----------------------|
| 1 | M and A Electric Power Cooperative | William Price | | Negative | Third-Party Comments |
| 1 | Manitoba Hydro | Nazra Gladu | | Negative | Comments Submitted |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Third-Party Comments |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Negative | Third-Party Comments |
| 1 | National Grid USA | Michael Jones | | Negative | Third-Party Comments |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | Third-Party Comments |
| 1 | New York Power Authority | Salvatore Spagnolo | | Negative | Third-Party Comments |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Negative | Third-Party Comments |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Negative | Third-Party Comments |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Third-Party Comments |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Third-Party Comments |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | None | N/A |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------------|------------------|-------------|----------------------|
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | Abstain | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Affirmative | N/A |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | Comments Submitted |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Negative | Third-Party Comments |
| 1 | Public Utility District No. 1 of Chelan County | Diane E Landry | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | Negative | Comments Submitted |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | Comments Submitted |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | Negative | Third-Party Comments |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | | Affirmative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------------------------|------------------|-------------|----------------------|
| 1 | Tennessee Valley Authority | David Plumb | | None | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Negative | Comments Submitted |
| 1 | Western Area Power Administration | Sean Erickson | | Affirmative | N/A |
| 1 | Xcel Energy, Inc. | Eric Barry | | Negative | Third-Party Comments |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Andrew Gallo | | Affirmative | N/A |
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Negative | Comments Submitted |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | None | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Negative | Third-Party Comments |
| 2 | New York Independent System Operator | Gregory Campoli | | Negative | Third-Party Comments |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Abstain | N/A |
| 3 | AEP | Kent Feliks | | Negative | Comments Submitted |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Abstain | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Negative | Comments Submitted |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Negative | Comments Submitted |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Negative | Comments Submitted |
| 3 | Austin Energy | Michael Dieringer | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|----------------------|
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | Negative | Comments Submitted |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | Negative | Third-Party Comments |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Third-Party Comments |
| 3 | Cowlitz County PUD | Russell Noble | | Negative | Comments Submitted |
| 3 | Dominion - Dominion Resources, Inc. | Connie Schroeder | | Negative | Comments Submitted |
| 3 | DTE Energy - Detroit Edison Company | Karie Barczak | | Affirmative | N/A |
| 3 | Duke Energy | Lee Schuster | | Negative | Comments Submitted |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | Negative | Third-Party Comments |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Eergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Negative | Comments Submitted |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|----------------------|
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Negative | Third-Party Comments |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | KAMO Electric Cooperative | Tony Gott | | Negative | Third-Party Comments |
| 3 | Lakeland Electric | Steven Marshall | | None | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | Comments Submitted |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Negative | Third-Party Comments |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Third-Party Comments |
| 3 | National Grid USA | Brian Shanahan | | Negative | Third-Party Comments |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | Third-Party Comments |
| 3 | New York Power Authority | David Rivera | | Negative | Third-Party Comments |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Negative | Third-Party Comments |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | Negative | Third-Party Comments |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | None | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Negative | Third-Party Comments |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Third-Party Comments |
| 3 | Omaha Public Power District | David Heins | | Negative | Third-Party Comments |
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | None | N/A |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Affirmative | N/A |
| 3 | Portland General Electric Co. | Adam Menendez | | Negative | Comments Submitted |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Negative | Third-Party Comments |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Negative | Third-Party Comments |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Rayburn Country Electric Cooperative, Inc. | Frank Owens | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|----------------------|
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | James Poston | | Negative | Comments Submitted |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrod Murdaugh | | Negative | Third-Party Comments |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | Comments Submitted |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Janelle Marriott Gill | | Negative | Comments Submitted |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |
| 3 | Xcel Energy, Inc. | Nicholas Friebe | | Negative | Third-Party Comments |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | Negative | Third-Party Comments |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Affirmative | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | Affirmative | N/A |
| 4 | DTE Energy | Patricia Ireland | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|--------------------|-------------------------|---------------|--------------------|
| 4 | Electricities of North Carolina | Marcus Freeman | | Abstain | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | Affirmative | N/A |
| 4 | LaGen | Wayne Messina | | Affirmative | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | None | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | Affirmative | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | None | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Negative | Comments Submitted |
| 5 | AES - AES Corporation | Ruchi Shah | Sing Tay | Affirmative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Abstain | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Negative | Comments Submitted |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------------|-------------------------|---------------|----------------------|
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Negative | Comments Submitted |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Negative | Comments Submitted |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | None | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | Third-Party Comments |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | None | N/A |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | Abstain | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | Negative | Comments Submitted |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Negative | Comments Submitted |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | Negative | Third-Party Comments |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|----------------------|
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Eergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Negative | Third-Party Comments |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Affirmative | N/A |
| 5 | Hydro-Qu?bec Production | Carl Pineault | | Negative | Comments Submitted |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Jason Fortik | | Negative | Comments Submitted |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Negative | Comments Submitted |
| 5 | Manitoba Hydro | Kristy-Lee Young | | None | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Third-Party Comments |
| 5 | National Grid USA | Robin Berry | | Negative | Third-Party Comments |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | None | N/A |
| 5 | New York Power Authority | Zahid Qayyum | | Negative | Third-Party Comments |
| 5 | NextEra Energy | Summer Esquerre | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|---------------------|-------------------------|---------------|----------------------|
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Negative | Third-Party Comments |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | James Mearns | None | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Third-Party Comments |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | None | N/A |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Negative | Third-Party Comments |
| 5 | Orlando Utilities Commission | Dania Colon | | Abstain | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | None | N/A |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | Negative | Comments Submitted |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | None | N/A |
| 5 | PSEG - PSEG Fossil LLC | Tim Kucey | | Negative | Third-Party Comments |
| 5 | PSEG Nuclear LLC | Tim Kucey | | None | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Meaghan Connell | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|----------------------|
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Amy Jones | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Jennifer Bennett | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | Abstain | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | Comments Submitted |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Abstain | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | Negative | Comments Submitted |
| 5 | Tri-State G and T Association, Inc. | Ryan Walter | | Negative | Comments Submitted |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 5 | Xcel Energy, Inc. | Gerry Huitt | | Negative | Third-Party Comments |
| 6 | AEP | Justin Kuehne | | Negative | Comments Submitted |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Abstain | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|----------------------|
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Negative | Comments Submitted |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Negative | Comments Submitted |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Negative | Comments Submitted |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirchak | | Affirmative | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Third-Party Comments |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | Negative | Comments Submitted |
| 6 | Duke Energy | John Sturgeon | | Negative | Comments Submitted |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | Comments Submitted |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | Abstain | N/A |
| 6 | Manitoba Hydro | Simon Tanapat-Andre | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|----------------------|
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | Third-Party Comments |
| 6 | New York Power Authority | Shelly Dineen | | Negative | Third-Party Comments |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | None | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Third-Party Comments |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Third-Party Comments |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Negative | Comments Submitted |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | None | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | None | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | M LeRoy Patterson | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------|-------------------------|---------------|----------------------|
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Glenda Horne | | Negative | Comments Submitted |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | Comments Submitted |
| 6 | Southern Indiana Gas and Electric Co. | Erin Spence | | Abstain | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | | Affirmative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | Affirmative | N/A |
| 6 | Xcel Energy, Inc. | Carrie Dixon | | Negative | Third-Party Comments |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | | Abstain | N/A |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Negative | Comments Submitted |

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Next

BALLOT RESULTS

Comment: View Comment Results (/CommentResults/Index/263)

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 Implementation Plan IN 1 OT

Voting Start Date: 12/6/2022 12:01:00 AM

Voting End Date: 12/15/2022 8:00:00 PM

Ballot Type: OT

Ballot Activity: IN

Ballot Series: 1

Total # Votes: 257

Total Ballot Pool: 290

Quorum: 88.62

Quorum Established Date: 12/15/2022 2:45:30 PM

Weighted Segment Value: 61.14

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 36 | 0.563 | 28 | 0.438 | 0 | 8 | 8 |
| Segment: 2 | 7 | 0.5 | 3 | 0.3 | 2 | 0.2 | 0 | 1 | 1 |
| Segment: 3 | 65 | 1 | 32 | 0.561 | 25 | 0.439 | 0 | 4 | 4 |
| Segment: 4 | 14 | 1 | 9 | 0.818 | 2 | 0.182 | 0 | 1 | 2 |
| Segment: 5 | 71 | 1 | 27 | 0.529 | 24 | 0.471 | 0 | 7 | 13 |
| Segment: 6 | 46 | 1 | 19 | 0.514 | 18 | 0.486 | 0 | 4 | 5 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 10 | 6 | 0.2 | 2 | 0.2 | 0 | 0 | 0 | 4 | 0 |
| Totals: | 290 | 5.7 | 128 | 3.485 | 99 | 2.215 | 0 | 30 | 33 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allete - Minnesota Power, Inc. | Jamie Monette | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Abstain | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Negative | Comments Submitted |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------------|------------------|-------------|----------------------|
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Affirmative | N/A |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Negative | Comments Submitted |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Third-Party Comments |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | Affirmative | N/A |
| 1 | Colorado Springs Utilities | Mike Braunstein | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Third-Party Comments |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Candace Marshall | | Negative | Comments Submitted |
| 1 | Duke Energy | Laura Lee | | Negative | Comments Submitted |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Eergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Affirmative | N/A |
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|---------------------|------------------|-------------|----------------------|
| 1 | FirstEnergy - FirstEnergy Corporation | Julie Severino | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Affirmative | N/A |
| 1 | Great River Energy | Gordon Pietsch | | Negative | Third-Party Comments |
| 1 | Hydro One Networks, Inc. | Sheraz Majid | | Negative | Comments Submitted |
| 1 | Hydro-Qu?bec TransEnergie | Nicolas Turcotte | | Affirmative | N/A |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | None | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | None | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | Negative | Third-Party Comments |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | James Baldwin | | Negative | Comments Submitted |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Manitoba Hydro | Nazra Gladu | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------|------------------|-------------|----------------------|
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Third-Party Comments |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |
| 1 | National Grid USA | Michael Jones | | Negative | Third-Party Comments |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | Third-Party Comments |
| 1 | New York Power Authority | Salvatore Spagnolo | | Negative | Third-Party Comments |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Third-Party Comments |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Third-Party Comments |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | None | N/A |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | Abstain | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|----------------------|
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Affirmative | N/A |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | Comments Submitted |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Negative | Third-Party Comments |
| 1 | Public Utility District No. 1 of Chelan County | Diane E Landry | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | Negative | Comments Submitted |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | Comments Submitted |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | Negative | Third-Party Comments |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | | Affirmative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | None | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------------------|-------------------------|---------------|----------------------|
| 1 | Western Area Power Administration | Sean Erickson | | Affirmative | N/A |
| 1 | Xcel Energy, Inc. | Eric Barry | | Negative | Third-Party Comments |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Andrew Gallo | | Abstain | N/A |
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Negative | Comments Submitted |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | None | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | Negative | Third-Party Comments |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Abstain | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Negative | Comments Submitted |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Negative | Comments Submitted |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Michael Dieringer | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|----------------------|
| 3 | Bonneville Power Administration | Ken Lanehome | | Affirmative | N/A |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | Affirmative | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Third-Party Comments |
| 3 | Cowlitz County PUD | Russell Noble | | Negative | Comments Submitted |
| 3 | Dominion - Dominion Resources, Inc. | Connie Schroeder | | Negative | Comments Submitted |
| 3 | DTE Energy - Detroit Edison Company | Karie Barczak | | Affirmative | N/A |
| 3 | Duke Energy | Lee Schuster | | Negative | Comments Submitted |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | Negative | Third-Party Comments |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Eergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Affirmative | N/A |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | KAMO Electric Cooperative | Tony Gott | | Negative | Third-Party Comments |
| 3 | Lakeland Electric | Steven Marshall | | None | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | Comments Submitted |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Affirmative | N/A |
| 3 | National Grid USA | Brian Shanahan | | Negative | Third-Party Comments |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | Third-Party Comments |
| 3 | New York Power Authority | David Rivera | | Negative | Third-Party Comments |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | Affirmative | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | None | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Third-Party Comments |
| 3 | Omaha Public Power District | David Heins | | Negative | Third-Party Comments |
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | None | N/A |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Affirmative | N/A |
| 3 | Portland General Electric Co. | Adam Menendez | | Negative | Comments Submitted |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Negative | Third-Party Comments |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Negative | Third-Party Comments |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | James Poston | | Negative | Comments Submitted |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------|-------------------------|---------------|----------------------|
| 3 | Sho-Me Power Electric Cooperative | Jarrold Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | Comments Submitted |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Janelle Marriott Gill | | Affirmative | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |
| 3 | Xcel Energy, Inc. | Nicholas Friebel | | Negative | Third-Party Comments |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | Negative | Third-Party Comments |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Affirmative | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | Affirmative | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | Abstain | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | Affirmative | N/A |
| 4 | LaGen | Wayne Messina | | Affirmative | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------------|------------------|-------------|----------------------|
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | Affirmative | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | None | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | Sing Tay | Affirmative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Abstain | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Negative | Comments Submitted |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Negative | Comments Submitted |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Affirmative | N/A |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | None | N/A |
| 5 | Choctaw Generation Limited Partnership | Rob Watson | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|----------------------|
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | None | N/A |
| 5 | Constellation | Alison MacKellar | | Negative | Comments Submitted |
| 5 | Cowlitz County PUD | Deanna Carlson | | Abstain | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | Negative | Comments Submitted |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Negative | Comments Submitted |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | Negative | Third-Party Comments |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Negative | Third-Party Comments |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Affirmative | N/A |
| 5 | Hydro-Quebec Production | Carl Pineault | | Negative | Comments Submitted |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------|-------------------------|---------------|----------------------|
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Jason Fortik | | Negative | Comments Submitted |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Negative | Comments Submitted |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Third-Party Comments |
| 5 | National Grid USA | Robin Berry | | Negative | Third-Party Comments |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Negative | Third-Party Comments |
| 5 | New York Power Authority | Zahid Qayyum | | Negative | Third-Party Comments |
| 5 | NextEra Energy | Summer Esquerre | | Affirmative | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | James Mearns | None | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Third-Party Comments |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|----------------------|
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Negative | Third-Party Comments |
| 5 | Orlando Utilities Commission | Dania Colon | | Abstain | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | None | N/A |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | Negative | Comments Submitted |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | None | N/A |
| 5 | PSEG - PSEG Fossil LLC | Tim Kucey | | Negative | Third-Party Comments |
| 5 | PSEG Nuclear LLC | Tim Kucey | | None | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Meaghan Connell | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Amy Jones | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Jennifer Bennett | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | Abstain | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Abstain | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | None | N/A |
| 5 | Tri-State G and T Association, Inc. | Ryan Walter | | Negative | Comments Submitted |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 5 | Xcel Energy, Inc. | Gerry Huitt | | Negative | Third-Party Comments |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Abstain | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Negative | Comments Submitted |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Negative | Comments Submitted |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Negative | Comments Submitted |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirschak | | Affirmative | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Third-Party Comments |
| 6 | Constellation | Kimberly Turco | | Negative | Comments Submitted |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | Negative | Comments Submitted |
| 6 | Duke Energy | John Sturgeon | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|----------------------|
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | Comments Submitted |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | Abstain | N/A |
| 6 | Manitoba Hydro | Simon Tanapat-Andre | | Affirmative | N/A |
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | Third-Party Comments |
| 6 | New York Power Authority | Shelly Dineen | | Negative | Third-Party Comments |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | None | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Third-Party Comments |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|--------------------|
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Negative | Comments Submitted |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | None | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | None | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | M LeRoy Patterson | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Glenda Horne | | Negative | Comments Submitted |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | Comments Submitted |
| 6 | Southern Indiana Gas and Electric Co. | Erin Spence | | Abstain | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | | Affirmative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|----------------------|
| 6 | Xcel Energy, Inc. | Carrie Dixon | | Negative | Third-Party Comments |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | | Abstain | N/A |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Abstain | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Abstain | N/A |

Showing 1 to 290 of 290 entries

Previous 1 Next

BALLOT RESULTS

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 Non-binding Poll IN 1 NB

Voting Start Date: 12/6/2022 12:01:00 AM

Voting End Date: 12/15/2022 8:00:00 PM

Ballot Type: NB

Ballot Activity: IN

Ballot Series: 1

Total # Votes: 241

Total Ballot Pool: 280

Quorum: 86.07

Quorum Established Date: 12/15/2022 3:50:46 PM

Weighted Segment Value: 52.38

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes | Negative Fraction | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|----------------|-------------------|---------|---------|
| Segment: 1 | 78 | 1 | 25 | 0.481 | 27 | 0.519 | 15 | 11 |
| Segment: 2 | 6 | 0.2 | 0 | 0 | 2 | 0.2 | 2 | 2 |
| Segment: 3 | 63 | 1 | 20 | 0.426 | 27 | 0.574 | 11 | 5 |
| Segment: 4 | 14 | 1 | 9 | 0.818 | 2 | 0.182 | 0 | 3 |
| Segment: 5 | 70 | 1 | 26 | 0.578 | 19 | 0.422 | 12 | 13 |
| Segment: 6 | 42 | 1 | 16 | 0.552 | 13 | 0.448 | 8 | 5 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes | Negative Fraction | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|----------------|-------------------|---------|---------|
| Segment: 10 | 6 | 0.3 | 3 | 0.3 | 0 | 0 | 3 | 0 |
| Totals: | 280 | 5.5 | 99 | 3.154 | 90 | 2.346 | 52 | 39 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allele - Minnesota Power, Inc. | Jamie Monette | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Abstain | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Negative | Comments Submitted |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Negative | Comments Submitted |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------------|------------------|-------------|--------------------|
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Affirmative | N/A |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Negative | Comments Submitted |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Comments Submitted |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | Affirmative | N/A |
| 1 | Colorado Springs Utilities | Mike Braunstein | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Comments Submitted |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Candace Marshall | | Negative | Comments Submitted |
| 1 | Duke Energy | Laura Lee | | Negative | Comments Submitted |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Affirmative | N/A |
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |
| 1 | FirstEnergy - FirstEnergy Corporation | Julie Severino | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|---------------------|------------------|-------------|--------------------|
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Abstain | N/A |
| 1 | Great River Energy | Gordon Pietsch | | Negative | Comments Submitted |
| 1 | Hydro One Networks, Inc. | Sheraz Majid | | Abstain | N/A |
| 1 | Hydro-Qu?bec TransEnergie | Nicolas Turcotte | | Negative | Comments Submitted |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | None | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | None | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | Abstain | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | None | N/A |
| 1 | Lower Colorado River Authority | James Baldwin | | Negative | Comments Submitted |
| 1 | M and A Electric Power Cooperative | William Price | | Negative | Comments Submitted |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Comments Submitted |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Negative | Comments Submitted |
| 1 | National Grid USA | Michael Jones | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|--------------------|
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Abstain | N/A |
| 1 | New York Power Authority | Salvatore Spagnolo | | Negative | Comments Submitted |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Abstain | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | None | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Negative | Comments Submitted |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Comments Submitted |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Comments Submitted |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | Abstain | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Abstain | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Affirmative | N/A |
| 1 | Portland General Electric Co. | Brooke Jockin | | Abstain | N/A |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | None | N/A |
| 1 | Public Utility District No. 1 of Chelan County | Diane E Landry | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|--------------------|
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | Abstain | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | Comments Submitted |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | Negative | Comments Submitted |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | | Affirmative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | None | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Negative | Comments Submitted |
| 1 | VELCO -Vermont Electric Power Company, Inc. | Randall Buswell | | None | N/A |
| 1 | Western Area Power Administration | Sean Erickson | | Abstain | N/A |
| 1 | Xcel Energy, Inc. | Eric Barry | | Negative | Comments Submitted |
| 2 | Electric Reliability Council of Texas, Inc. | Andrew Gallo | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------------------|-------------------------|---------------|--------------------|
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Negative | Comments Submitted |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | None | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Negative | Comments Submitted |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Abstain | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Abstain | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Negative | Comments Submitted |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Negative | Comments Submitted |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Negative | Comments Submitted |
| 3 | Austin Energy | Michael Dieringer | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | Affirmative | N/A |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | Negative | Comments Submitted |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|--------------------|
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Comments Submitted |
| 3 | Cowlitz County PUD | Russell Noble | | Negative | Comments Submitted |
| 3 | Dominion - Dominion Resources, Inc. | Connie Schroeder | | Abstain | N/A |
| 3 | DTE Energy - Detroit Edison Company | Karie Barczak | | Affirmative | N/A |
| 3 | Duke Energy | Lee Schuster | | Negative | Comments Submitted |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | Negative | Comments Submitted |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Affirmative | N/A |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Negative | Comments Submitted |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | KAMO Electric Cooperative | Tony Gott | | Negative | Comments Submitted |
| 3 | Lakeland Electric | Steven Marshall | | None | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|--------------------|
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Negative | Comments Submitted |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Comments Submitted |
| 3 | National Grid USA | Brian Shanahan | | Negative | Comments Submitted |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | Comments Submitted |
| 3 | New York Power Authority | David Rivera | | Negative | Comments Submitted |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Negative | Comments Submitted |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | Negative | Comments Submitted |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | None | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Negative | Comments Submitted |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Comments Submitted |
| 3 | Omaha Public Power District | David Heins | | Negative | Comments Submitted |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------|-------------------------|---------------|--------------------|
| 3 | Platte River Power Authority | Richard Kiess | | Abstain | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Affirmative | N/A |
| 3 | Portland General Electric Co. | Adam Menendez | | Abstain | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | None | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Abstain | N/A |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | James Poston | | Abstain | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrod Murdaugh | | Negative | Comments Submitted |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | Comments Submitted |
| 3 | Tennessee Valley Authority | Ian Grant | | Abstain | N/A |
| 3 | Tri-State G and T Association, Inc. | Janelle Marriott Gill | | Negative | Comments Submitted |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|--------------------|
| 3 | Xcel Energy, Inc. | Nicholas Friebel | | None | N/A |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | Negative | Comments Submitted |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Affirmative | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | Affirmative | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | Affirmative | N/A |
| 4 | LaGen | Wayne Messina | | Affirmative | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | None | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | Affirmative | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | None | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES, AES Corporation | Ruchi Shah | Sing Tay | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|--------------------|
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Abstain | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Negative | Comments Submitted |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Negative | Comments Submitted |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Affirmative | N/A |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | None | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | Comments Submitted |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | None | N/A |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | Abstain | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|--------------------|
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Negative | Comments Submitted |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | Negative | Comments Submitted |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Negative | Comments Submitted |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Affirmative | N/A |
| 5 | Hydro-Quebec Production | Carl Pineault | | Negative | Comments Submitted |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Jason Fortik | | Abstain | N/A |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Negative | Comments Submitted |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Comments Submitted |
| 5 | National Grid USA | Robin Berry | | Negative | Comments Submitted |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 5 | Nebraska Public Power District | Ronald Bender | | Abstain | N/A |
| 5 | New York Power Authority | Zahid Qayyum | | Negative | Comments Submitted |
| 5 | NextEra Energy | Summer Esquerre | | Affirmative | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Negative | Comments Submitted |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | James Mearns | None | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Comments Submitted |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | None | N/A |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Negative | Comments Submitted |
| 5 | Orlando Utilities Commission | Dania Colon | | Abstain | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | None | N/A |
| 5 | Platte River Power Authority | Jon Osell | | Abstain | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | Abstain | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------|------------------|-------------|--------------------|
| 5 | PSEG - PSEG Fossil LLC | Tim Kucey | | Abstain | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | None | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Meaghan Connell | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Amy Jones | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Jennifer Bennett | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | Abstain | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | Comments Submitted |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Abstain | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | None | N/A |
| 5 | Tri-State G and T Association, Inc. | Ryan Walter | | Negative | Comments Submitted |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Abstain | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|--------------------|
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Negative | Comments Submitted |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Negative | Comments Submitted |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Negative | Comments Submitted |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Comments Submitted |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | Negative | Comments Submitted |
| 6 | Duke Energy | John Sturgeon | | Negative | Comments Submitted |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Abstain | N/A |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | Abstain | N/A |
| 6 | New York Power Authority | Shelly Dineen | | Negative | Comments Submitted |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|--------------------|
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | None | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Comments Submitted |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Comments Submitted |
| 6 | Platte River Power Authority | Sabrina Martz | | Abstain | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Abstain | N/A |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | None | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | None | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | M LeRoy Patterson | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Glenda Horne | | Abstain | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|--------------------|
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | Comments Submitted |
| 6 | Southern Indiana Gas and Electric Co. | Erin Spence | | Abstain | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | | Affirmative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | Affirmative | N/A |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | | Abstain | N/A |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Abstain | N/A |

Showing 1 to 280 of 280 entries

Previous 1 Next

BALLOT RESULTS

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 Non-binding Poll IN 1 NB

Voting Start Date: 12/6/2022 12:01:00 AM

Voting End Date: 12/15/2022 8:00:00 PM

Ballot Type: NB

Ballot Activity: IN

Ballot Series: 1

Total # Votes: 238

Total Ballot Pool: 277

Quorum: 85.92

Quorum Established Date: 12/15/2022 3:38:52 PM

Weighted Segment Value: 52.66

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes | Negative Fraction | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|----------------|-------------------|---------|---------|
| Segment: 1 | 78 | 1 | 25 | 0.481 | 27 | 0.519 | 15 | 11 |
| Segment: 2 | 6 | 0.2 | 0 | 0 | 2 | 0.2 | 2 | 2 |
| Segment: 3 | 62 | 1 | 20 | 0.426 | 27 | 0.574 | 11 | 4 |
| Segment: 4 | 14 | 1 | 9 | 0.818 | 2 | 0.182 | 0 | 3 |
| Segment: 5 | 68 | 1 | 26 | 0.591 | 18 | 0.409 | 10 | 14 |
| Segment: 6 | 42 | 1 | 16 | 0.552 | 13 | 0.448 | 8 | 5 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes | Negative Fraction | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|----------------|-------------------|---------|---------|
| Segment: 10 | 6 | 0.3 | 3 | 0.3 | 0 | 0 | 3 | 0 |
| Totals: | 277 | 5.5 | 99 | 3.167 | 89 | 2.333 | 50 | 39 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allele - Minnesota Power, Inc. | Jamie Monette | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Abstain | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Negative | Comments Submitted |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Negative | Comments Submitted |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------------|------------------|-------------|--------------------|
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Affirmative | N/A |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Negative | Comments Submitted |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Comments Submitted |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | Affirmative | N/A |
| 1 | Colorado Springs Utilities | Mike Braunstein | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Comments Submitted |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Candace Marshall | | Negative | Comments Submitted |
| 1 | Duke Energy | Laura Lee | | Negative | Comments Submitted |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Affirmative | N/A |
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |
| 1 | FirstEnergy - FirstEnergy Corporation | Julie Severino | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|---------------------|------------------|-------------|--------------------|
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Abstain | N/A |
| 1 | Great River Energy | Gordon Pietsch | | Negative | Comments Submitted |
| 1 | Hydro One Networks, Inc. | Sheraz Majid | | Abstain | N/A |
| 1 | Hydro-Qu?bec TransEnergie | Nicolas Turcotte | | Negative | Comments Submitted |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | None | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | None | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | Abstain | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | None | N/A |
| 1 | Lower Colorado River Authority | James Baldwin | | Negative | Comments Submitted |
| 1 | M and A Electric Power Cooperative | William Price | | Negative | Comments Submitted |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Comments Submitted |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Negative | Comments Submitted |
| 1 | National Grid USA | Michael Jones | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|--------------------|
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Abstain | N/A |
| 1 | New York Power Authority | Salvatore Spagnolo | | Negative | Comments Submitted |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Abstain | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | None | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Negative | Comments Submitted |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Comments Submitted |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Comments Submitted |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | Abstain | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Abstain | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Affirmative | N/A |
| 1 | Portland General Electric Co. | Brooke Jockin | | Abstain | N/A |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | None | N/A |
| 1 | Public Utility District No. 1 of Chelan County | Diane E Landry | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|--------------------|
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | Abstain | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | Comments Submitted |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | Negative | Comments Submitted |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | | Affirmative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | None | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Negative | Comments Submitted |
| 1 | VELCO -Vermont Electric Power Company, Inc. | Randall Buswell | | None | N/A |
| 1 | Western Area Power Administration | Sean Erickson | | Abstain | N/A |
| 1 | Xcel Energy, Inc. | Eric Barry | | Negative | Comments Submitted |
| 2 | Electric Reliability Council of Texas, Inc. | Andrew Gallo | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------------------|-------------------------|---------------|--------------------|
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Negative | Comments Submitted |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | None | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Negative | Comments Submitted |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Abstain | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Abstain | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Negative | Comments Submitted |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Negative | Comments Submitted |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Negative | Comments Submitted |
| 3 | Austin Energy | Michael Dieringer | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | Affirmative | N/A |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | Negative | Comments Submitted |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|--------------------|
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Comments Submitted |
| 3 | Cowlitz County PUD | Russell Noble | | Negative | Comments Submitted |
| 3 | Dominion - Dominion Resources, Inc. | Connie Schroeder | | Abstain | N/A |
| 3 | DTE Energy - Detroit Edison Company | Karie Barczak | | Affirmative | N/A |
| 3 | Duke Energy | Lee Schuster | | Negative | Comments Submitted |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | Negative | Comments Submitted |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Affirmative | N/A |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Negative | Comments Submitted |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | KAMO Electric Cooperative | Tony Gott | | Negative | Comments Submitted |
| 3 | Lakeland Electric | Steven Marshall | | None | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|--------------------|
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Negative | Comments Submitted |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Comments Submitted |
| 3 | National Grid USA | Brian Shanahan | | Negative | Comments Submitted |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | Comments Submitted |
| 3 | New York Power Authority | David Rivera | | Negative | Comments Submitted |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Negative | Comments Submitted |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | Negative | Comments Submitted |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | None | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Negative | Comments Submitted |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Comments Submitted |
| 3 | Omaha Public Power District | David Heins | | Negative | Comments Submitted |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------|-------------------------|---------------|--------------------|
| 3 | Platte River Power Authority | Richard Kiess | | Abstain | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Affirmative | N/A |
| 3 | Portland General Electric Co. | Adam Menendez | | Abstain | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | None | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Abstain | N/A |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | James Poston | | Abstain | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrod Murdaugh | | Negative | Comments Submitted |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | Comments Submitted |
| 3 | Tennessee Valley Authority | Ian Grant | | Abstain | N/A |
| 3 | Tri-State G and T Association, Inc. | Janelle Marriott Gill | | Negative | Comments Submitted |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|--------------------|
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | Negative | Comments Submitted |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Affirmative | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | Affirmative | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | Affirmative | N/A |
| 4 | LaGen | Wayne Messina | | Affirmative | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | None | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | Affirmative | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | None | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | Sing Tay | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|--------------------|
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Abstain | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Negative | Comments Submitted |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Negative | Comments Submitted |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Affirmative | N/A |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | None | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | Comments Submitted |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | None | N/A |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------|-------------------------|---------------|--------------------|
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Negative | Comments Submitted |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | Negative | Comments Submitted |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | Great River Energy | Jacalynn Bentz | | Negative | Comments Submitted |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Affirmative | N/A |
| 5 | Hydro-Quebec Production | Carl Pineault | | Negative | Comments Submitted |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Jason Fortik | | Abstain | N/A |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Negative | Comments Submitted |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Comments Submitted |
| 5 | National Grid USA | Robin Berry | | Negative | Comments Submitted |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|---------------------|-------------------------|---------------|--------------------|
| 5 | New York Power Authority | Zahid Qayyum | | Negative | Comments Submitted |
| 5 | NextEra Energy | Summer Esquerre | | Affirmative | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | James Mearns | None | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Comments Submitted |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | None | N/A |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Negative | Comments Submitted |
| 5 | Orlando Utilities Commission | Dania Colon | | Abstain | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | None | N/A |
| 5 | Platte River Power Authority | Jon Osell | | Abstain | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | Abstain | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | None | N/A |
| 5 | PSEG - PSEG Fossil LLC | Tim Kucey | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|--------------------|
| 5 | PSEG Nuclear LLC | Tim Kucey | | None | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Meaghan Connell | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Amy Jones | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Jennifer Bennett | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | Abstain | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | Comments Submitted |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Abstain | N/A |
| 5 | Tri-State G and T Association, Inc. | Ryan Walter | | Negative | Comments Submitted |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Abstain | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Negative | Comments Submitted |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|--------------------|
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Negative | Comments Submitted |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Negative | Comments Submitted |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Comments Submitted |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | Negative | Comments Submitted |
| 6 | Duke Energy | John Sturgeon | | Negative | Comments Submitted |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Abstain | N/A |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | Abstain | N/A |
| 6 | New York Power Authority | Shelly Dineen | | Negative | Comments Submitted |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|--------------------|
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | None | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Comments Submitted |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Comments Submitted |
| 6 | Platte River Power Authority | Sabrina Martz | | Abstain | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Abstain | N/A |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | None | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | None | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | M LeRoy Patterson | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Glenda Horne | | Abstain | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | Comments Submitted |
| 6 | Southern Indiana Gas and Electric Co. | Erin Spence | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|--------------------|
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | | Affirmative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | Affirmative | N/A |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | | Abstain | N/A |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Abstain | N/A |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the second draft of the proposed standard.

| Completed Actions | Date |
|---|--------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 08 – August 06, 2021 |
| SAR posted for comment | January 11 – February 09, 2022 |
| 45-day formal comment period with ballot | October 25 – December 09, 2022 |

| Anticipated Actions | Date |
|---|------------------------------|
| 45-day formal comment period with additional ballot | May 05, 2023 – June 12, 2023 |
| 10-day final ballot | June 12 – June 22, 2023 |
| Board adoption | July 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data and Information Specification and Collection
2. **Number:** IRO-010-5
3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring the Reliability Coordinator has the data and information it needs to plan, Monitor and assess the operation of its Reliability Coordinator Area.
4. **Applicability**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2019-06.

B. Requirements

- R1.** The Reliability Coordinator shall maintain a documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- 1.1.** A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessment, including non-BES data and information, external network data and information, and identification of the entity responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** Methods for the entity identified in Part 1.1 to provide data and information that includes, but is not limited to.
 - 1.5.1** Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3** Provisions to update or correct data and information, as applicable or necessary.
 - 1.5.4** A mutually agreeable format.
 - 1.5.5** A mutually agreeable methods for securely transferring data and information.

- M1.** The Reliability Coordinator shall make available its dated, current, in force documented specification for data and information.
- R2.** The Reliability Coordinator shall distribute its data and information specification to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *(Violation Risk Factor: Low) (Time Horizon: Operations Planning)*
- M2.** The Reliability Coordinator shall make available evidence that it has distributed its specification to entities that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.
- R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R2 shall satisfy the obligations of the documented specifications. *(Violation Risk Factor: Medium) (Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations)*
- M3.** The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

- 1.1. **Compliance Enforcement Authority:** “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.
- 1.2. **Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its data specification to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

- 1.3. **Compliance Monitoring and Enforcement Program:** As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R # | Time Horizons | VRF | Violation Severity Levels | | | |
|---|---------------------|-----|--|---|--|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include two or fewer of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |

IRO-010-5 – Reliability Coordinator Data Specification and Collection

| R # | Time Horizons | VRF | Violation Severity Levels | | | |
|-----------|--|--------|--|--|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R2 | Operations Planning | Low | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R3 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use one of the criteria in Requirement R1 Parts 1.5. | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use two of the criteria in Requirement R1 Parts 1.5. | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use three or more of the criteria in Requirement R1 Parts 1.5. | The responsible entity receiving a specification in Requirement R2 did not satisfy the documented specifications. |

D. Regional Variances

None

E. Interpretations

None

F. Associated Documents

None

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|--|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
| 1a | August 5, 2009 | Added Appendix 1: Interpretation of R1.2 and R3 as approved by Board of Trustees | Addition |
| 1a | March 17, 2011 | Order issued by FERC approving IRO-010-1a (approval effective 5/23/11) | |
| 1a | November 19, 2013 | Updated VRFs based on June 24, 2013 approval | |
| 2 | April 2014 | Revisions pursuant to Project 2014-03 | |
| 2 | November 13, 2014 | Adopted by NERC Board of Trustees | Revisions under Project 2014-03 |
| 2 | November 19, 2015 | FERC approved IRO-010-2. Docket No. RM15-16-000 | |
| 3 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | TBD | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 Cold Weather |
| 3 | October 30, 2020 | FERC approved IRO-010-2. Docket No. RD20-4-000 | |
| 4 | June 11, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 |
| 4 | August 24, 2021 | FERC approved IRO-010-4 Docket No. RD21-5-000 | |
| 5 | June, 2021 | Revisions pursuant to Project 2021-06 | |
| 5 | | TBD | TBD |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the first draft of the proposed standard.

| Completed Actions | Date |
|---|--------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 08 – August 06, 2021 |
| SAR posted for comment | January 11 – February 09, 2022 |
| 45-day formal comment period with ballot | October 25 – December 09, 2022 |

| Anticipated Actions | Date |
|---|--|
| 45-day formal comment period with additional ballot | May 05, February 2023 – June 10 April 03 , 2023 |
| 10-day final ballot | June 10 April 17 – June 20 April 27 , 2023 |
| Board adoption | July May 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data and Information Specification and Collection
2. **Number:** IRO-010-~~54~~
3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring the Reliability Coordinator has the data and information it needs to plan, Monitor and assess the operation of its Reliability Coordinator Area.
4. **Applicability**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2019-06.

B. Requirements

- R1. The Reliability Coordinator shall maintain a documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
 - 1.1. A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessment, including non-BES data and information,- external network data and information, and identification of the entity responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
 - 1.2. Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3. Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1 Operating limitations based on:
 - 1.3.1.1. capability and availability;
 - 1.3.1.2. fuel supply and inventory concerns;

- 1.3.1.3. fuel switching capabilities; and
- 1.3.1.4. environmental constraints
- 1.3.2. Generating unit(s) minimum:
 - 1.3.2.1. design temperature; or
 - 1.3.2.2. historical operating temperature; or
 - 1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

1.4. Identification of a mutually agreeable process for resolving conflicts.

1.5. Methods for the entity identified in Part 1.1 to provide data and information that includes, but is not limited to.

1.5.1 Specific deadlines or periodicity in which data and information is to be provided;

1.5.2 Performance criteria for the availability and accuracy of data and information, as applicable;

1.5.3 Provisions to update or correct data and information, as applicable or necessary.

1.5.4 A mutually agreeable format.

1.5.5 A mutually agreeable methods for securely transferring data and information.

~~The deadline by which the respondent is to provide the indicated data.~~

- M1.** The Reliability Coordinator shall make available its dated, current, in force documented specification for data and information.
- R2.** The Reliability Coordinator shall distribute its data and information specification to entities that have data required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- M2.** The Reliability Coordinator shall make available evidence that it has distributed its ~~data~~ specification to entities that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.
- R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification in Requirement R2 shall satisfy the obligations of the

documented specifications ~~using:~~ (Violation Risk Factor: Medium) (Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations)

~~3.1. A mutually agreeable format~~

~~3.2. A mutually agreeable process for resolving data conflicts~~

~~3.3. A mutually agreeable security protocol~~

M3. The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

- 1.1. Compliance Enforcement Authority:** “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.
- 1.2. Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its ~~Compliance Enforcement Authority~~ CEA to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its data specification to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

- 1.3. Compliance Monitoring and Enforcement Program:** As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|---------------------|-----|---|--|---|--|
| | | | Lower | Moderate | High | Severe |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include two or fewer of the parts (Part 1.1 through Part 1.5) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time |

| | | | | | | |
|---|---------------------|-----|--|--|---|--|
| | | | | | | monitoring, and Real-time Assessments |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |
| R2 | Operations Planning | Low | <p>The Reliability Coordinator did not distribute its data specification as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not distribute its data specification as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator's Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not distribute its data specification as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Reliability Coordinator did not distribute its data specification as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> |

| | | | | | | |
|------------------|--|---------------|---|---|---|--|
| <p>R3</p> | <p>Operations Planning, Same-Day Operations , Real-time Operations</p> | <p>Medium</p> | <p>The responsible entity receiving a data specification in Requirement R2 satisfied the obligations of the documented specifications for data but failed to follow use one of the criteria shown in <u>Requirement R1</u> Parts <u>13.51—3.3</u>.</p> | <p>The responsible entity receiving a data specification in Requirement R2 satisfied the obligations of the documented specifications for data but failed to use follow two of the criteria shown in <u>Requirement R1</u> Parts <u>13.51—3.3</u>.</p> | <p>The responsible entity receiving a data specification in Requirement R2 satisfied the obligations of the documented specifications for data but failed to use follow any three or more of the criteria shown in <u>Requirement R1</u> Parts <u>13.51—3.3</u>.</p> | <p>The responsible entity receiving a data specification in Requirement R2 did not satisfy the obligations of the documented specifications for data.</p> |
|------------------|--|---------------|---|---|---|--|

D. Regional Variances

None

E. Interpretations

None

F. Associated Documents

None

Version History

| Version | Date | Action | Change Tracking |
|---------------|---|--|--|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
| 1a | August 5, 2009 | Added Appendix 1: Interpretation of R1.2 and R3 as approved by Board of Trustees | Addition |
| 1a | March 17, 2011 | Order issued by FERC approving IRO-010-1a (approval effective 5/23/11) | |
| 1a | November 19, 2013 | Updated VRFs based on June 24, 2013 approval | |
| 2 | April 2014 | Revisions pursuant to Project 2014-03 | |
| 2 | November 13, 2014 | Adopted by NERC Board of Trustees | Revisions under Project 2014-03 |
| 2 | November 19, 2015 | FERC approved IRO-010-2. Docket No. RM15-16-000 | |
| 3 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | TBD | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 Cold Weather |
| 3 | October 30, 2020 | FERC approved IRO-010-2. Docket No. RD20-4-000 | |
| 4 | June 11, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 |
| 4 | August 24, 2021 | FERC approved IRO-010-4 Docket No. RD21-5-000 | |
| 54 | August 24, 2021 June, 2021 | Revisions pursuant to Project 2021-06 April 1, 2023 | Effective Date |
| <u>5</u> | | <u>TBD</u> | <u>TBD</u> |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the second draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 – August 6, 2021 |
| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|-------------------------|
| 45-day formal comment period with additional ballot | May 05– June 12, 2023 |
| 10-day final ballot | June 12 – June 22, 2023 |
| Board adoption | July 2023 |

A. Introduction

1. **Title:** Transmission Operator and Balancing Authority Data and Information Specification and Collection
2. **Number:** TOP-003-6
3. **Purpose:** To ensure that the Transmission Operator and Balancing Authority have the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.
4. **Applicability:**
 - 4.1. Transmission Operator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Owner
 - 4.6. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2019-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain a documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the entity responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** Methods for the entity identified in Part 1.1 to provide the data and information that includes at a minimum the following.
 - 1.5.1.** Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2.** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3.** Provisions to update or correct data and information, as applicable or necessary.
 - 1.5.4.** A mutually agreeable format.
 - 1.5.5.** A mutually agreeable methods for securely transferring data and information.

- M1.** Each Transmission Operator shall make available its dated, current, in force documented specification for data and information.

- R2.** Each Balancing Authority shall maintain a documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
 - 2.1.** A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.
 - 2.2.** Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
 - 2.3.** Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
 - 2.3.1.** Operating limitations based on:
 - 2.3.1.1.** capability and availability;
 - 2.3.1.2.** fuel supply and inventory concerns;
 - 2.3.1.3.** fuel switching capabilities; and
 - 2.3.1.4.** environmental constraints.
 - 2.3.2.** Generating unit(s) minimum:
 - 2.3.2.1.** design temperature; or
 - 2.3.2.2.** historical operating temperature; or
 - 2.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 2.4.** Identification of a mutually agreeable process in resolving conflicts.
 - 2.5.** Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.
 - 2.5.1.** Specific deadlines or periodicity in which data and information is to be provided;
 - 2.5.2.** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 2.5.3.** Provisions to update or correct data and information, as applicable or necessary.
 - 2.5.4.** A mutually agreeable format.
 - 2.5.5.** A mutually agreeable methods for securely transferring data and information.

- M2.** Each Balancing Authority shall make available its dated, current, in force documented specification for data and information.
- R3.** Each Transmission Operator shall distribute its data and information specification to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.
[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]
- M3.** Each Transmission Operator shall make available evidence that it has distributed its specification to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

- R4.** Each Balancing Authority shall distribute its data and information specification to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M4.** Each Balancing Authority shall make available evidence that it has distributed its data specification to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.
- R5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall satisfy the obligations of the documented specifications.
[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]
- M5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a specification in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specification. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

- 1.1. **Compliance Enforcement Authority:** “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.
- 1.2. **Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its data specification to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its data specification to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R5 and Measurement M5.

- 1.3 Compliance Monitoring and Enforcement Program:** As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|---------------------|-------|--|---|--|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include two or fewer of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR The Transmission Operator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|--|---------------------|-------|--|---|--|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification for the data and information necessary for it to perform its analysis functions and Real- time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification for the data and information necessary for it to perform its analysis functions and Real- time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification for the data and information necessary for it to perform its analysis functions and Real- time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification for the data and information necessary for it to perform its analysis functions and Real- time monitoring. OR The Balancing Authority did not have a documented specification for the data necessary for it to perform its analysis functions and Real- time monitoring. |
| <p>For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by | The Transmission Operator did not distribute its specification to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that | The Transmission Operator did not distribute its specification to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that | The Transmission Operator did not distribute its specification to four or more entities, or more than 15% of the entities that have data and information required by |

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----------|--|--------|--|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to four or more entities, or more than 15% of the entities that have Data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use one of the criteria in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use two of the criteria in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use three or more of the criteria in Requirement R1 Part 15 or Requirement R2 Part 2.5. | The responsible entity receiving a specification in Requirement R3 or R4 did not satisfy the documented specification. |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|---|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP-003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |
| 4 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order | |
| 5 | June, 2021 | Revision under project 2021-06 | |
| 6 | | TBD | Revised under project 2021-06 |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the first draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 – August 6, 2021 |
| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|--|
| 45-day formal comment period with additional ballot | February 22 <u>May 05 2023</u> – June 10 <u>April 3</u> , 2023 |
| 10-day final ballot | June 10 <u>April 17</u> – June 10 <u>April 27</u> , 2023 |
| Board adoption | July <u>May</u> 2023 |

A. Introduction

1. **Title:** ~~Operational Reliability~~Transmission Operator and Balancing Authority Data and Information Specification and Collection
2. **Number:** TOP-003-~~65~~
3. **Purpose:** To ensure that the Transmission Operator and Balancing Authority have the data and information it need~~ed~~ to plan, monitor, and assess the fulfill their operation~~al~~ of its Transmission Operator Area or Balancing Authority Area and planning responsibilities.
4. **Applicability:**
 - 4.1. Transmission Operator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Owner
 - 4.6. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2019-06.

B. Requirements and Measures

- R1. Each Transmission Operator shall maintain a documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
 - 1.1. A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, and external network data and information, and identification of the entity responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2. Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3. Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1. Operating limitations based on:
 - 1.3.1.1. capability and availability;
 - 1.3.1.2. fuel supply and inventory concerns;
 - 1.3.1.3. fuel switching capabilities; and

1.3.1.4. environmental constraints

1.3.2. Generating unit(s) minimum:

1.3.2.1. design temperature; or

1.3.2.2. historical operating temperature; or

1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

1.4. Identification of a mutually agreeable process for resolving conflicts.

1.5. The deadline by which the respondent is to provide the indicated data and information that includes at a minimum the following.

1.5.1. Specific deadlines or periodicity in which data and information is to be provided;

1.5.2. Performance criteria for the availability and accuracy of data and information, as applicable;

1.5.3. Provisions to update or correct data and information, as applicable or necessary.

1.5.4. A mutually agreeable format.

1.3.3. A mutually agreeable methods for securely transferring data and information.

1.5.5.

M1. Each Transmission Operator shall make available its dated, current, in force documented specification for data and information.

R2. Each Balancing Authority shall maintain a documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

2.1. A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.

2.2. Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.

2.3. Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:

2.3.1. Operating limitations based on:

- 2.3.1.1. capability and availability;
- 2.3.1.2. fuel supply and inventory concerns;
- 2.3.1.3. fuel switching capabilities; and
- 2.3.1.4. environmental constraints.

2.3.2. Generating unit(s) minimum:

- 2.3.2.1. design temperature; or
- 2.3.2.2. historical operating temperature; or
- 2.3.2.3. current cold weather performance temperature determined by an engineering analysis.

2.4. Identification of a mutually agreeable process in resolving conflicts.

2.5. A periodicity for providing data. Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.

2.5.1. Specific deadlines or periodicity in which data and information is to be provided;

2.5.2. Performance criteria for the availability and accuracy of data and information, as applicable;

2.5.3. Provisions to update or correct data and information, as applicable or necessary.

2.5.4. A mutually agreeable format.

2.3.3, 2.5.5. A mutually agreeable methods for securely transferring data and information.

~~The deadline by which the respondent is to provide the indicated data.~~

M2. Each Balancing Authority shall make available its dated, current, in force documented specification for data and information.

R3. Each Transmission Operator shall distribute its data and information specification to entities that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.
[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

M3. Each Transmission Operator shall make available evidence that it has distributed its ~~data~~ specification to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

R4. Each Balancing Authority shall distribute its data and information specification to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

M4. Each Balancing Authority shall make available evidence that it has distributed its data specification to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.

R5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall satisfy the obligations of the documented specifications~~s~~. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*

~~5.1. A mutually agreeable format~~

~~5.2. A mutually agreeable process for resolving data conflicts~~

~~5.3. A mutually agreeable security protocol~~

M5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~-specification in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specifications~~s~~. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the ~~Compliance Enforcement Authority~~CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its ~~Compliance Enforcement Authority~~CEA to retain specific evidence for a longer period of time as part of an investigation.;

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its data specification to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its data specification to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R5 and Measurement M5.

1.3. Compliance Monitoring and Enforcement Program: As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|---------------------|-------|---|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include two or fewer of the parts (Part 1.1 through Part 1.5) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, |

TOP-003-5 — Operational Reliability Data

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|---------------------|-------|--|---|--|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | | | The Transmission Operator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification for the data <u>and information -</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. |

TOP-003-5 — Operational Reliability Data

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|---|--|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | | | OR, The Balancing Authority did not have a documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its data specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data specification to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time | The Transmission Operator did not distribute its data specification to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time | The Transmission Operator did not distribute its data specification to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

TOP-003-5 — Operational Reliability Data

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|--|--------|--|---|--|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | monitoring, and Real-time Assessments. | monitoring, and Real-time Assessments. | |
| R4 | Operations Planning | Lower | The Balancing Authority did not data distribute its data specification to one entity, or 5% or less of the entities, whichever is greater, that have <u>data and information</u> required by the Balancing Authority’s - analysis functions and Real-time monitoring. | The Balancing Authority did not data distribute its data specification to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have <u>data and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not data distribute its data specification to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have <u>data and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not data distribute its data specification to four or more entities, or more than 15% of the entities that have <u>Data and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a data specification in Requirement R3 or R4 satisfied the obligations in the data specification but <u>failed to use did not meet</u> one of the criteria shown in Requirement <u>R51 (Parts 51.51—5.3) or Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification in Requirement R3 or R4 satisfied the obligations in the data specification but <u>failed to use did not meet</u> two of the criteria shown in Requirement <u>R51 (Parts 15.51—5.3) or Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification in Requirement R3 or R4 satisfied the obligations in the data specification but <u>failed to use did not meet</u> three <u>or more</u> of the criteria shown in Requirement <u>R51 (Parts 51.51—5.3) or Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification in Requirement R3 or R4 did not satisfy the obligations of the documented specifications for data . |

TOP-003-5 — Operational Reliability Data

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|--------------|-----|---------------------------|--------------|-------------|------------|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | | <u>2.5.</u> | |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP-003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |

| | | | |
|-----------|---------------------------------|---|--------------------------------------|
| 4 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order | |
| <u>54</u> | June August 24, 2021 | Revision under project 2021-06 April 1, 2023 | Effective Date |
| <u>5</u> | | <u>TBD</u> | <u>Revised under project 2021-06</u> |

Implementation Plan

Reliability Standards IRO-010-5 and TOP-003-6 Project 2021-06 Modifications to IRO-010 and TOP-003

Applicable Standard(s)

- Reliability Standard IRO-010-5 – Reliability Coordinator Data and Information Specification and Collection
- Reliability Standard TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection

Requested Retirements

- Reliability Standard IRO-010-4 – Reliability Coordinator Data Specification and Collection
- Reliability Standard TOP-003-5 – Operational Reliability Data

Applicable Entities

- See subject standards.

Background

The primary purpose of this project is to simplify administrative burdens and mitigate potential zero defects expectations associated with the current IRO-010-4 and TOP-003-5 standards, while ensuring that Registered Entities with operational responsibilities continue to request and receive the data necessary to support Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

General Considerations

This implementation plan reflects consideration that responsible entities will need time to develop revised data and information specifications under Reliability Standards IRO-010-5 and TOP-003-6, including: (i) developing new protocols for submission periodicity, performance criteria, and provisions to update information as needed; (ii) developing provisions for using intermediary entities to provide data; and (iii) codifying in the data and information specification the mutually agreed upon formats, process for resolving conflicts, and security protocols to use for data and information exchange. This implementation plan also reflects consideration of the time that responsible entities will need to distribute the revised data and information specifications to the reporting entities, and that the reporting entities will need to comply with the revised data and information specifications.

Effective Date

Reliability Standards IRO-010-5 and TOP-003-6

Where approval by an applicable governmental authority is required, the standards shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the effective date of the applicable governmental authority's order approving the standard, or as otherwise provided for by the applicable governmental authority.

Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction.

Retirement Date

Reliability Standards IRO-010-4 and TOP-003-5

Reliability Standards IRO-010-4 and TOP-003-5 shall be retired immediately prior to the effective date of Reliability Standards IRO-010-5 and TOP-003-6 in the particular jurisdiction in which the revised standards are becoming effective.

Unofficial Comment Form

Project 2021-06 Modifications to IRO-010 and TOP-003

Do not use this form for submitting comments. Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments on **2021-06 Modifications to IRO-010 and TOP-003**. Comments must be submitted by **8 p.m. Eastern, Tuesday, June 20, 2023**.

Additional information is available on the [project page](#). If you have questions, contact Standards Developer, [Josh Blume](#) (email), or at 404-446-2593.

Background Information

The primary purpose of this project is to simplify administrative burdens identified by the SER Phase 2 Team associated with the current IRO-010-5 and TOP-003-6 standards and limit unnecessary data requirements that do not contribute to BES reliability and resiliency. As written the standards create a zero-defect expectation for each registered entity receiving a data specification to demonstrate perfect performance on every item in the data specification for an entire audit period. This can result in unnecessary administrative burdens for the registered entity to demonstrate compliance, including excessive data retention. If instead a risk-based approach was developed and performance was triggered upon an event or unresolved data conflicts between entities, then the purpose of the standards would be achieved in an effective and efficient manner.

The secondary purpose of this project is to evaluate removing other data exchange requirements dispersed in other standards. The standards drafting team (SDT) would need to evaluate those requirements after proposed changes to the IRO-010-5 and TOP-003-6 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010-5 and TOP-003-6. This may require enhancing the standards to allow each registered entity with responsibilities to perform the tasks identified in IRO-010-5 and TOP-003-6 the ability to request and receive any information it needs from other Registered Entities to perform those tasks.

Questions

1. To support the proposed modifications, the SDT has revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Yes

No

Comments:

2. Provide any additional comments regarding IRO-010-5 for the SDT to consider.

Comments:

3. Provide any additional comments regarding TOP-003-6 for the SDT to consider.

Comments:

4. Provide any additional comments for the SDT to consider, if desired.

Comments:

Technical Rationale for Reliability Standard IRO-010-5

May 2023

IRO-010-5 – Reliability Coordinator Data and Information Specification and Collection

Rationale:

The primary purpose of this project is to reduce unnecessary administrative overhead and reduce potential zero defect expectations associated with the current IRO-010-4 and TOP-003-5 standards. Also ensuring that Registered Entities request and receive the data and information necessary to support the core reliability tasks required to perform Operational Planning Analysis, Real-time Assessments, and Real-time monitoring, and Balancing Authority analysis functions.

The core reliability tasks for Reliability Coordinators identified in IRO-010 are identified as Operational Planning Analysis, Real-time Assessments, and Real-time monitoring.

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-4 and TOP-003-5. The SDT also reviewed the results of the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in (standards listed in the SAR's Detailed Description), the SDT determined there is insufficient justification(s) for the retirement of these requirements and are not proposing changes to the reviewed standards. For further information on the justification(s) for not proposing additional retirements or consolidation of existing requirements into IRO-010-4 or TOP-003-5 see the white paper titled **White Paper for 2021-06 Modifications to IRO-010 and TOP-003** with the project document.

The data specification requirements in IRO-010-5 and TOP-003-6 are substantively similar, if not functionally identical therefore the SDT has revised both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements.

The SDT has drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability.

Proposed revisions include Title, Purpose, and Requirements sections.

Rationale for Title

The proposed Title change from “Reliability Coordinator Data Specification and Collection” to “Reliability Coordinator Data and Information Specification and Collection” acknowledges that the specifications are for the collection of both Data and Information.

Rationale for Purpose

The proposed changes to IRO-010-5 purpose is to align with the purpose of TOP-003. Throughout the standard, the SDT used the terms “data” and “information” to clarify that specifications include both “data and information.” The intent is to include data and information necessary for Reliability Coordinators to perform their core reliability tasks. The revision clarifies that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.

In addition to monitoring and assessing stated in the previous version of the standard, both data and information are necessary for satisfying all of the identified core reliability tasks. The tasks include planning activities, therefore the purpose has been clarified by including planning, monitoring, and assessing operations.

Rationale for Requirement R1

R1 is revised to clarify that specifications include both data and information that a Reliability Coordinator requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R1.1

R1 is revised to include not only the list of data and Information that the requestor needs for the core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R1.4

R1.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather multiple requirements.

R1.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Reliability Coordinator and the respondent. Placement of this sub part under R1, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor’s authority to request data it needs. Respondents would be expected to engage the requestor about the respondent’s concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute

resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R1.5

R1.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R3.1 and placed in R1.5.4, and the identification of security protocols have been removed from R3.3 and placed in R.1.5.5. Moving format and security protocols into R1 is appropriate so that the data specification requirements are contained in one requirement, rather multiple requirements.

- R1.5.1 is revised to include deadlines and periodicity (as previously included in R1.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R1.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R1.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R1.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R1.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R1.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R2

R2 is revised to add the term “and Information” for consistency.

Rationale for Requirement R3

R3 is revised to require the Respondents to satisfy the documented specification based on the criterion established in R1.

| Version 4 Requirement | Revision | Version 5 |
|-----------------------|-------------|-----------|
| R1.4 | Revised | R1.5.1 |
| | | |
| None | Newly added | R1.5 |
| | | |
| R3.1 | Moved | R1.6 |
| | | |

Technical Rationale for Reliability Standard

TOP-003-6

May 2023

TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection

Rationale:

The primary purpose of this project is to reduce unnecessary administrative overhead and reduce potential zero defects expectations associated with the current IRO-010-4 and TOP-003-5 standards. Also, ensuring that Registered Entities request and receive the data and information necessary to support the four reliability tasks required to perform Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6. The SDT also reviewed the results of the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in (standards listed in the SAR's Detailed Description), the SDT determined there is insufficient justification(s) for the retirement of these requirements and are not proposing changes to the reviewed standards. For further information on the justification(s) for not proposing additional retirements or consolidation of existing requirements into IRO-010-4 or TOP-003-5 see the white paper titled **White Paper for 2021-06 Modifications to TOP-003 and IRO-010** with the project documents.

The data specification requirements in IRO-010-5 and TOP-003-6 are substantively similar, if not functionally identical therefore the SDT has revised both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements.

The SDT has drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability.

Proposed revisions include Title, Purpose, and Requirements sections.

Rationale for Title

The proposed Title change from "Operational Reliability Data" to "Transmission Operator and Balancing Authority Data and Information Specification and Collection" aligns with the Title section of IRO-010-5. This revision refers to the function of the standard whereas the previous title suggests a broader purpose than the four identified core reliability tasks.

Rationale for Purpose

The proposed changes to Purpose in TOP-003 align with the purpose of IRO-010-5. The two standards are companions, whereas the former applies to RC data specifications, this standard applies to TOP and BA specifications. Throughout the standard, the SDT used the terms “data” and “information” to clarify that specifications include both “data and information.” The intent is to include data and information necessary for Transmission Operators and Balancing Authorities to perform their core reliability tasks. The revision clarifies that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.

In addition to operational planning stated in the previous version of the standard, both data and information are necessary for satisfying the four identified core reliability tasks. The four tasks include monitoring and assessing activities, therefore the purpose has been clarified by including planning, monitoring, and assessing operations.

Rationale for Requirement R1

R1 is revised to clarify that specifications include both data and information that a Transmission Operator requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R1.1

R1 is revised to include not only the list of data and Information that the requestor needs for the four core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R1.4

R1.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather multiple requirements.

R1.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Transmission Operator and the respondent. Placement of this sub part under R1, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor’s authority to request data it needs. Respondents would be expected to engage the requestor about the respondent’s concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R1.5

R1.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R5.1 and placed in R1.5.4, and the identification of security protocols have been removed from R5.3 and placed in R1.5.5. Moving format and security protocols into R1 is appropriate so that the data specification requirements are contained in one requirement, rather multiple requirements.

- R1.5.1 is revised to include deadlines and periodicity (as previously included in R1.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R1.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R1.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R1.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R1.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R1.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R2

R2 is revised to clarify that specifications include both data and information that a Balancing Authority requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R2.1

R2 is revised to include not only the list of data and Information that the requestor needs for the core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request

Rationale for Subpart R2.4

R2.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather than multiple requirements.

R2.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Balancing Authority and the respondent. Placement of this sub part under R2, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as a sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor's authority to request data it needs. Respondents would be expected to engage the requestor about the respondent's concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R2.5

R2.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R5.1 and placed in R2.5.4, and the identification of security protocols have been removed from R5.3 and placed in R2.5.5. Moving format and security protocols into R2 is appropriate so that the data specification requirements are contained in one requirement, rather than multiple requirements.

- R2.5.1 is revised to include deadlines and periodicity (as previously included in R2.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R2.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R2.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R2.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R2.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a

protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R2.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R3

R3 is revised to add the term “and Information” for consistency.

Rationale for Requirement R4

R4 is revised to add the term “and Information” for consistency.

Rationale for Requirement R5

R5 is revised to require the Respondents to satisfy the documented specification based on the criterion established in R1 for requests originating from Transmission Operator specifications.

R5 is revised to require the Respondents to satisfy the documented specification based on criterion established in R2 for requests originating from Balancing Authority specifications.

Violation Risk Factor and Violation Severity Level Justifications

2021-06 Modifications to IRO-010 and TOP-003

This document provides the standard drafting team's (SDT's) justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in [Project Number and Name or Standard Number]. Each requirement is assigned a VRF and a VSL. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the Electric Reliability Organizations (ERO) Sanction Guidelines. The SDT applied the following NERC criteria and FERC Guidelines when developing the VRFs and VSLs for the requirements.

NERC Criteria for Violation Risk Factors

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to Bulk Electric System instability, separation, or a cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to Bulk Electric System instability, separation, or a cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of a medium risk requirement is unlikely to lead to Bulk Electric System instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to Bulk Electric System instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System.

FERC Guidelines for Violation Risk Factors

Guideline (1) – Consistency with the Conclusions of the Final Blackout Report

FERC seeks to ensure that VRFs assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System. In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) – Consistency within a Reliability Standard

FERC expects a rational connection between the sub-Requirement VRF assignments and the main Requirement VRF assignment.

Guideline (3) – Consistency among Reliability Standards

FERC expects the assignment of VRFs corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) – Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular VRF level conforms to NERC’s definition of that risk level.

Guideline (5) – Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

NERC Criteria for Violation Severity Levels

VSLs define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

VSLs should be based on NERC’s overarching criteria shown in the table below:

| Lower VSL | Moderate VSL | High VSL | Severe VSL |
|--|--|--|--|
| The performance or product measured almost meets the full intent of the requirement. | The performance or product measured meets the majority of the intent of the requirement. | The performance or product measured does not meet the majority of the intent of the requirement, but does meet some of the intent. | The performance or product measured does not substantively meet the intent of the requirement. |

FERC Order of Violation Severity Levels

The FERC VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

Guideline (1) – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline (2) – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

Guideline (3) – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline (4) – Violation Severity Level Assignment Should Be Based on a Single Violation, Not on a Cumulative Number of Violations

Unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

IRO-010-5

VRF Justification for IRO-010-5, Requirement R1

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for IRO-010-5, Requirement R1

Please refer to the VSL table located below.

VRF Justification for IRO-010-5, Requirement R2

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to R2 were administrative in nature therefore the VRF remained a low.

VSL Justification for IRO-010-5, Requirement R2

Please refer to the VSL table located below.

VRF Justification for IRO-010-5, Requirement R3

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to Requirement R3 directly effect the electrical state or capability of the Bulk Electric system therefore the VRF remained a medium.

VSL Justification for IRO-010-5, Requirement R3

Please refer to the VSL table located below.

| VSL Justifications for IRO-010-5, Requirement 1 | | | |
|--|---|--|---|
| Lower | Moderate | High | Severe |
| The Reliability Coordinator did not include two or fewer of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments |

| VSL Justifications for IRO-010-5, Requirement 1 | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding additional sub requirements to requirement R1. The proposed VSL was modified to reflect the additional sub requirement. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of | The requirement is for the responsible entity to maintain a documented specification for the data and information. Guideline 2a is not applicable as these VSLs are not binary. The VSLs do not contain ambiguous language. |

VSL Justifications for IRO-010-5, Requirement 1

| | |
|---|--|
| <p>Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for IRO-010-5, Requirement 2 | | | |
|--|--|---|--|
| Lower | Moderate | High | Severe |
| The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| VSL Justifications for IRO-010-5, Requirement 2 | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by add language for consistency purposes to requirement R2. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for IRO-010-5, Requirement 2

| | |
|--|--|
| <p>Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for IRO-010-5, Requirement 3 | | | |
|---|---|---|---|
| Lower | Moderate | High | Severe |
| The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use one of the criteria in Requirement R1 Parts 1.5. | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use two of the criteria in Requirement R1 Parts 1.5. | The responsible entity receiving a specification in Requirement R2 satisfied the documented specifications but failed to use three or more of the criteria in Requirement R1 Parts 1.5. | The responsible entity receiving a specification in Requirement R2 did not satisfy the documented specifications. |

| VSL Justifications for IRO-010-5, Requirement 3 | |
|--|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by deleting language for consistency purposes to requirement R3. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain Ambiguous Language | The requirement is for the responsible entity receiving a specification in Requirement R3 shall satisfy the documented specifications. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |
| FERC VSL G3 | The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent |

VSL Justifications for IRO-010-5, Requirement 3

| | |
|---|---|
| <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

TOP-003-6

VRF Justification for TOP-003-6, Requirement R1

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R1

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R2

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R2 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R2

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R3

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R3

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R4

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R4

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R5

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to Requirement R3 directly effect the electrical state or capability of the Bulk Electric system therefore the VRF remained a medium.

VSL Justification for TOP-003-6, Requirement R5

Please refer to the VSL table located below.

| VSL Justifications for TOP-003-6, Requirement 1 | | | |
|--|---|--|--|
| Lower | Moderate | High | Severe |
| The Transmission Operator did not include two or fewer of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| VSL Justifications for TOP-003-6, Requirement 1 | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding additional sub requirements to requirement R1. The proposed VSL was modified to reflect the additional sub requirement. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 | The requirement is for the responsible entity to maintain a documented specification for the data and information. |

VSL Justifications for TOP-003-6, Requirement 1

| | |
|---|--|
| <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | <p>Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language.</p> |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for TOP-003-6, Requirement 2

| Lower | Moderate | High | Severe |
|--|---|--|---|
| <p>The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring.</p> | <p>The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring.</p> | <p>The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring.</p> | <p>The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification for the data and information necessary for it to perform its analysis functions and Real-time monitoring.</p> <p>OR,</p> <p>The Balancing Authority did not have a documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring.</p> |

VSL Justifications for TOP-003-6 Requirement 2

| | |
|---|--|
| <p>FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p> | <p>The requirement was modified by adding additional language to requirement R2. The proposed VSL was modified to reflect the additional language. It does not have an unintended consequence of lowering the level of compliance.</p> |
| <p>FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category</p> | <p>The requirement is for the responsible entity to maintain a document specification for the data and information. Guideline 2a is not applicable as these VSLs are not binary. The VSLs do not contain ambiguous language.</p> |

VSL Justifications for TOP-003-6 Requirement 2

| | |
|--|--|
| <p>for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for TOP-003-6, Requirement 3

| Lower | Moderate | High | Severe |
|---|---|--|--|
| The Transmission Operator did not distribute its specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

VSL Justifications for TOP-003-6, Requirement 3

| | |
|--|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by add language for consistency purposes to requirement R3. The purposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 3

| | |
|--|--|
| <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for TOP-003-6, Requirement 4

| Lower | Moderate | High | Severe |
|--|--|---|---|
| The Balancing Authority did not distribute its specification to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification to four or more entities, or more than 15% of the entities that have Data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. |

VSL Justifications for TOP-003-6, Requirement 4

| | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding language for consistency purposes to requirement R4. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 4

| | |
|--|---|
| Ambiguous Language | |
| FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement | The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement. |
| FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations | Each VSL is based on a single violation and not cumulative violations. |

VSL Justifications for TOP-003-6, Requirement 5

| Lower | Moderate | High | Severe |
|---|---|--|--|
| The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use one of the criteria in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use two of the criteria in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification in Requirement R3 or R4 satisfied the specification but failed to use three or more of the criteria in Requirement R1 Part 15 or Requirement R2 Part 2.5. | The responsible entity receiving a specification in Requirement R3 or R4 did not satisfy the documented specification. |

VSL Justifications for TOP-003-6, Requirement 5

| | |
|--|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by deleting language for consistency purposes to requirement R5. The purposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain Ambiguous Language | The requirement is for the responsible entity receiving a specification in Requirement R5 shall satisfy the documented specifications. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |
| FERC VSL G3 | The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent |

VSL Justifications for TOP-003-6, Requirement 5

| | |
|---|---|
| <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

White Paper

Project 2021-06 Modifications to TOP-003 and
IRO-010

April 2023

RELIABILITY | RESILIENCE | SECURITY



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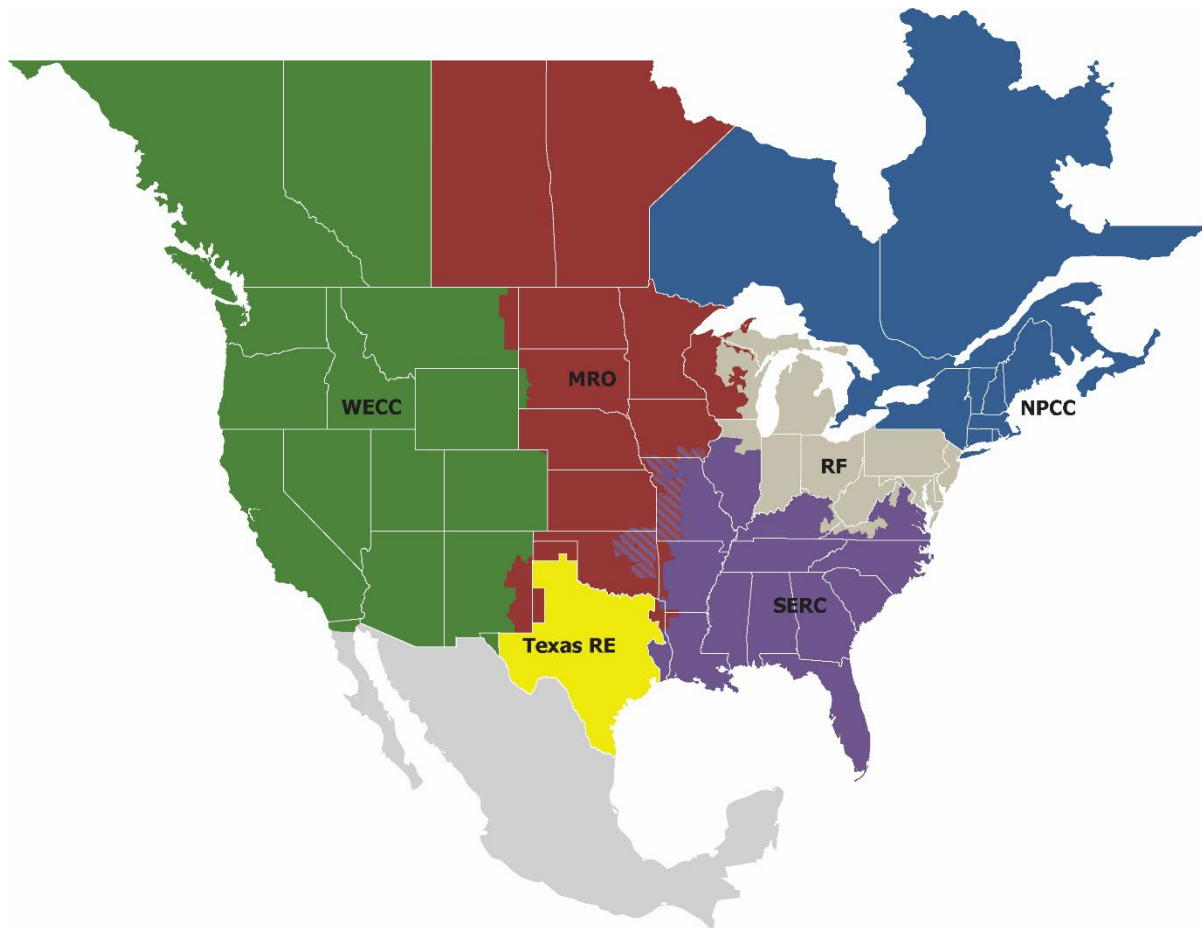
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Preface

Electricity is a key component of the fabric of modern society and the Electric Reliability Organization (ERO) Enterprise serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of NERC and the six Regional Entities, is a highly reliable, resilient, and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.

Reliability | Resilience | Security
Because nearly 400 million citizens in North America are counting on us

The North American BPS is made up of six Regional Entity boundaries as shown in the map and corresponding table below. The multicolored area denotes overlap as some load-serving entities participate in one Regional Entity while associated Transmission Owners/Operators participate in another.



| | |
|-----------------|--------------------------------------|
| MRO | Midwest Reliability Organization |
| NPCC | Northeast Power Coordinating Council |
| RF | ReliabilityFirst |
| SERC | SERC Reliability Corporation |
| Texas RE | Texas Reliability Entity |
| WECC | WECC |

Introduction

This White Paper was created to provide further clarity, with more detailed explanation and guidance to aid industry in its review of the proposed changes to Reliability Standards IRO-010 and TOP-003 pursuant to Project 2021-06 Modifications to IRO-010 and TOP-003.

The reader will review a short history regarding the scope of the project contained in the Standard Authorization Request (SAR) and reasons the standard drafting team (SDT) did or did not make certain revisions or take action with respect to the SAR's scope. The justification for the SDT actions are explained based on the expertise of the SDT and decisions made by consensus of the team. The SDT will review the results of the balloted standards and the comments submitted by industry to assess the status of the project and determine the next steps to fulfill its responsibilities in order to close out the project in a timely and effective manner.

Background

Reliability Standards IRO-010 and TOP-003 address data and information requests from Reliability Coordinators (RCs), Transmission Operators (TOPs) and Balancing Authorities (BAs) to allow these entities to perform the four reliability tasks identified in the respective standards. The four reliability tasks identified in the respective standards and SAR are:

1. Operational Planning Analysis
2. Real-time Assessments
3. Real-time monitoring
4. Balancing Authority analysis functions

The Project 2021-06 Modifications to IRO-010 and TOP-003 SDT prepared edits to the referenced standards based on five major purposes or goals identified in the SAR, summarized as follows:

- Simplify administrative burdens identified by the Standards Efficiency Review (SER)¹ Phase 2 Team associated with the current IRO-010-4 and TOP-003-5 standards
- Limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency
- Reduce administrative burden associated with a zero-defect compliance expectation, including excessive data retention
- Clarify expectations for the “data specification” with a broader definition or scope description
- Evaluate removing and consolidating within IRO-010 or TOP-003 other data exchange requirements dispersed in other standards that are related to the four reliability tasks

The Project 2021-06 SDT assessed the requirements identified by the SER Phase 2 team for removal, but ultimately decided against removing any requirements. After the initial ballots, the SDT confirmed that there is greater need to clarify how the proposed edits would benefit industry and why these proposed changes would address the questions and concerns raised by stakeholders. The SDT also realized it should document its assessment and rationale for its decision to not remove any of the SER Phase 2 cited requirements or other any other requirements. The major substantive difference between the initial drafts and the revised proposal for the two standards is that the concept of “intermediaries” has been removed, as requested by several commenters.

Another significant request identified in the SAR was to address potential duplications found in other standards, perceived redundancies that add to administrative burden or that may create unnecessary risks. In the SAR for this project, aspects of the SER Phase 2 were considered. The SDT reviewed the identified standards noted in the SAR, and assessed whether IRO-010 and TOP-003 could address data requirements of those standards effectively.

The SDT concluded that the requirements for data and information within those standards served a greater purpose in their existing locations, and that removing or relocating to IRO-010 and TOP-003 risked misalignment or misunderstanding without extensive referencing. In this assessment it appears that IRO-010 and TOP-003 are effective standards that allow an RC, BA, and TOP to request and receive the necessary data and information to perform the four reliability tasks identified. However, there is a clear need to maintain other requirements in the NERC Reliability Standards that identify clear bright line requirements supporting reliability that would otherwise be lost or lose effectiveness if completely removed or relocated in IRO-010 or TOP-003 without carrying over the same specificity and bright line requirements that exist in its existing location. This did not appear to “reduce administrative

¹ Information regarding the Standards Efficiency Review Project can be found on NERC’s website at <https://www.nerc.com/pa/Stand/Standards-Efficiency-Review.aspx>.

burden” rather than seem to be a matter of locational preference with the stated impact of lost context when not housed with other similar requirements of subject.

In order to address administrative burden, the SDT members considered how industry perceives data and information, noting there were differences of opinion on the two terms. However, the SDT agreed that both terms were important, and that clarification is needed to aid industry’s assessment of the proposed changes.

It was recognized that the requirements should not be prescriptive, but rather, they should allow for requestors together with respondents to identify and agree on methods to address security methods, communication methods, error correction and conflict resolution. To eliminate the assumption of zero-defect compliance, the focus on methods in the requirements permits requestors and respondents to address issues through processes they establish, including performance expectations, as well as error and conflict resolution processes when problems arise. The establishment of processes does not reduce the right of the requestor to ask for data it needs, but rather allows the parties to collaborate to make the data provision successful. The SDT reviewed that previous version relocated the “mutually agreed” language from the data specification requirements (e.g., IRO-010 R1) to the Respondent requirements (e.g., IRO-010 R3). The SDT believes this may have enhanced issues with a zero-defect expectation since there was no requirement to document what was agreed-upon. The SDT has attempted to rectify this by requiring the data specification to document mutually agreed-upon expectations so that compliance entities clearly see data expectations.

This White Paper will address each of these issues in detail.

SER Findings

The scope of the data specification should reflect the information necessary to cover the scope of the applicable tasks identified in IRO-010-4 or TOP-003-5 for the individual Registered Entity. To restate, the four reliability tasks identified in these standards are:

1. Operational Planning Analysis
2. Real-time Assessments
3. Real-time monitoring
4. Balancing Authority analysis functions

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-4 and TOP-003-5. The SDT took exceptional care to consider whether removal or relocation could be reasonably justified and not have an adverse impact to the entities involved and or who utilizes such information. In general, the SDT assessed if the existing data and information requirements were better suited in a "must provide" construct or a "request and provide" construct (e.g., IRO-010 or TOP-003 are generally a "request and provide" context). The SDT considered if lost context could create additional confusion or degradation in reliability, and reviewed the results of the SER initiative.

The SDT utilized guidance in the SAR as part of this assessment. The guidance included the following:

- *"enhance the "data specification" approach to reduce the administrative burdens of excessive data retention, while ensuring Registered Entities with operational responsibilities continue, as under the current standards, to request and receive the data necessary to support the four tasks identified in IRO-010-4 and TOP-003-5 (and described in the Detailed Description section below), while protecting public disclosure of commercially sensitive information and providing a dispute resolution process.*
- *"flexibility for differences in operational environments and emerging technology must be maintained."*
- *"creating a minimum list of items to include in a data specification is not desired."*
- *"The drafting team would need to evaluate those requirements after proposed changes to the IRO-010 and TOP-003 are developed to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003."*
- *The intent of the project is not to do away with specific requirements in other Reliability Standards under the assumption that the same data will be requested per a data exchange under IRO-010-4 and TOP-003-5; and the Standard Drafting Team should evaluate any potential reliability risk incurred by removing a perceived redundant requirement prior to recommending changes to requirements in other Reliability Standards.*
- *The SDT should not revise requirements that are not directly related to the four reliability tasks identified above.*
- *The evaluation at a minimum should consider the following questions:*
 - *Is the purpose of the activity currently within the scope of one or more of the tasks identified in IRO-010-4 and TOP-003-5? If so, then consider revising due to redundancy.*
 - *If minor modifications were made to IRO-010-4, TOP-003-5 and/or associated definitions (especially Real-time monitoring and Balancing Authority analysis functions), then would the activity be within the scope of those standards? If so, then consider revising due to redundancy.*

- The drafting team *should reference precedence from past projects to support this effort*, including background materials developed during Project 2014-03 that describe the “data specification” concept including the petition to the FERC and the Project 2014-03 Mapping Document.

Due to the criticality of the tasks and functions identified in the SAR’s Detailed Description, the SDT determined there is insufficient justification(s) for the retirement of these requirements and is not proposing changes to the reviewed standards.

As it was a purpose of this project to evaluate removing other data exchange requirements dispersed in other standards, the drafting team considered and evaluated each of those requirements to determine if they are within the scope of the four tasks and consequently within the scope of IRO-010 and TOP-003. In addition, the SDT did not identify any new requirements necessary to perform the tasks identified in IRO-010-4 and TOP-003-5. The intent of the project is not to do away with specific requirements in other Reliability Standards under the assumption that the same data will be requested per a data exchange under IRO-010-4 and TOP-003-5. Rather, the review was to identify whether those requirements should be moved to IRO-010-4 and TOP-003-5. The SDT concluded there was also a greater potential reliability risk incurred by removing a perceived redundant requirement or by recommending changes to requirements in other Reliability Standards.

The data required in each of the standards is essential to meeting the requirements of the specific standard, beyond the scope of the core reliability tasks.

In the SAR, the following standards were identified for review:

| Standard And Requirement Number | Standard Title |
|--------------------------------------|--|
| • BAL-005-1 R2 | Balancing Authority Control |
| • EOP-005-3 | System Restoration from Blackstart Resources |
| • FAC-014-3 | Establish and Communicate System Operating Limits |
| • IRO-008-3 R5 • IRO-008-3 R6 | Reliability Coordinator Operational Analyses and Real-time Assessments |
| • IRO-017-1 R3 | Outage Coordination |
| • TOP-001-6 R9 • TOP-001-6 R15 | Transmission Operations |
| • VAR-002-4.1 R3 • VAR-002-4.1 R4 | Generator Operation for Maintaining Network Voltage Schedules |

BAL -005-1

BAL-005-1 establishes a detailed specification of requirements for calculating Reporting Area Control Error (Reporting ACE). The standard provides detailed requirements for scan rate, metering requirements, availability requirements, reporting quality flags to operators, processes for mitigating errors, etc.

“R2. A Balancing Authority that is unable to calculate Reporting ACE for more than 30- consecutive minutes shall notify its Reliability Coordinator within 45 minutes of the beginning of the inability to calculate Reporting ACE.”

The SER Phase 2 team recommended the following: “Recommend for Periodic Review and if other modifications are needed, consider removing BAL-005-1 Requirement R2 and associated Measure M2 and placing it in BAL-001-2 as new Requirement R3 and Measure M3 as these requirements are closely related. Keep Violation Severity Limit the same.”

The focus of R2 is on notification of the RC when an entity is unable to calculate ACE for a period of time. As the focus of this requirement is strictly a bright line communication for a BA to a RC for times when the required data is not available, context is lost if a specific requirement is placed in IRO-010 and TOP-003 on its own rather than in a standard devoted to a BA’s ACE. For example, an RC may require, quality flags and other information necessary for operators, are not part of this requirement. Error mitigation is also not included in this requirement but as another requirement in the BAL-005-1 standard.

In the language of IRO-010, the RC may request a greater frequency of notification or include other relevant data necessary for its assessments, including such information as quality flags. The language of IRO-010 provides flexibility where it may be required. If relocated to IRO-010, the bright line (not to exceed) timing requirement may be lost if not specifically called out. Creating a specific list where the bright line criteria could be maintained in IRO-010 but appeared to oppose the SAR guidance, *“creating a minimum list of items to include in a data specification is not desired.”*

By retaining the base requirement in BAL-005, the standard provides all requirements for Reporting ACE (including specifying a minimum periodicity, accuracy, and availability requirement for acquisition of the data, and for providing the information to the System Operator for carrying out their responsibilities). These responsibilities include notification of the RC with a minimum time.

Thus, the SDT recommended no changes to BAL-005 R2 for this project.

EOP -005-3

The purpose of EOP-005-3 is to ensure plans, Facilities, and personnel are prepared to enable System restoration from Blackstart Resources to ensure reliability is maintained during restoration and priority is placed on restoring the Interconnection.

R13. Each Generator Operator with a Blackstart Resource shall notify its Transmission Operator of any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator’s restoration plan within 24 hours following such change

R14. Each Generator Operator with a Blackstart Resource shall perform Blackstart Resource tests, and maintain records of such testing, in accordance with the testing requirements set by the Transmission Operator to verify that the Blackstart Resource can perform as specified in the restoration plan

14.2. Each Generator Operator shall provide the blackstart test results within 30 calendar days following a request from its Reliability Coordinator or Transmission Operator

EOP-005-3 is one of the Reliability Standards for emergency operations. The SDT assessed that R13 or R14.2 would not fall under the four reliability tasks identified in TOP-003. The R13 requirement is not necessary for meeting the core reliability requirements that TOP-003 is intended to address and is more of a situational awareness requirement

so that the TOP can create alternate blackstart plans if necessary. Further, R14.2 has a reporting requirement that is long past the time horizon envisioned to effectively support the core reliability tasks.

The scope of the EOP-005-3 standard addresses the greater need for restoration plans (using Blackstart Resources), for which these reporting requirements would be expected to be documented with in. This documentation is communicated as a coordinated and comprehensive plan, for which personnel are trained for and plans that are practiced. As such retaining these communication requirements allows for entities to find all the compliance requirements within one documented standard.

This assessment in considering the guidance from the 2021-06 project's SAR, "Is the purpose of the activity currently within the scope of one or more of the tasks identified in IRO-010-4 and TOP-003-5? If so, then consider revising due to redundancy." appears to not be within the scope of one or more of the tasks identified in IRO-010-4 and TOP-003-5.

Thus, the SDT recommended no changes to EOP-005-3 R13 and EOP-005 R14.2 for this project.

FAC-014-3

FAC-014-3 is approved and will become mandatory and effective on April 1, 2024. While the cited requirements in the SAR appear to be incorrect or older references, the SDT still reviewed FAC-014-3 comprehensively. Additionally, in review of the SER Phase 2 recommendation for FAC-014-2 R5, the following was noted "No action. Deferring to the team of Project 2015-09."

Communication of SOLs between the appropriate reliability entities is a critical component for Operational Planning Analysis, Realtime Assessment and Real-time monitoring for the RC and TOP. The Technical Rationale for establishing Reliability Standard FAC-014-3 (Project 2015-09 Establish and Communicate System Operating Limits, April 2021) provided insight that R3 and R5 were "complementary" to IRO-010 and TOP-003 and not redundant.

For R3, the Project 2015-09 SDT wrote: "The SDT recognizes that the provision of SOL information from the TOP to the RC may also be addressed via IRO-010-2. However, *the proposed requirement may also be utilized for SOL information other than what is utilized for Operational Planning Analysis (OPA), Real-time Assessment (RTA) and Real-time monitoring.* In such instances, the timing requirements should be coordinated between the data specification document and the RC's SOL methodology. *Requirement R3 sets a common expectation across industry of the minimum actions any TOP must take when communicating SOLs to their RC. It's important for this requirement to remain within FAC-014-3 to ensure SOLs are communicated from the TOP to the RC in case IRO-010-2 is modified or removed in future revisions to the standards.*"

For R5, the Project 2015-09 SDT wrote in its FAC-014-3 rationale document: The requirement addresses varying needs in terms of both the content and the frequency at which the information is provided. *This requirement also complements existing NERC requirements that provide a construct for communication of SOLs and SOL-related information (e.g., TOP-003-3, IRO010-2, IRO-014-2) to prevent redundancies in requirements. TOP-to-TOP SOL information communication is addressed in TOP-003-3. RC-to-RC SOL information communication is addressed in IRO-014-2. TOP-to-RC information communication is addressed in Requirement R3 and may be addressed in IRO-010-2.*

In response to comments for Q4 and Q5 from, the Project 2015-09 SDT wrote: "R5.3 R5.4: The rationale documentation around R5.3 and R5.4 describes the importance of this requirement is to ensure that the TOP has the value of the corresponding IROL or stability limit for each Operations time horizon. This information is critical to ensuring the TOP and the RC are working together to ensure cascading and uncontrolled separation do not occur. *TOP-003-3 is a very non-specific requirement for the TOP and doesn't require the RC to fulfill the obligation to send the TOP IROL/stability information which is key to maintaining reliable operation across our interconnections.*"

Additionally, the SDT considered that Attachment 1-TOP-005 Electric System Reliability Data from previously effective TOP-005 (precursor to TOP-003) identified SOLs specifically in item 2.1.

In drafting the current requirements in FAC-014-3, the respective SDT considered the establishment of the requirement to communicate SOLs as necessary, and the frequency and timing could be addressed within an RC's SOL methodology. The SDT recognized, however that IRO-010 serves as an existing mechanism to communicate those SOLs on a frequency or with timing requirements established in the data specification, and as such this consideration is not a duplication or redundancy, but rather complimentary. FAC-014-3 requires the communication of SOLs from TOPs to RCs and other TOPs. IRO-010 and TOP-003 identify "how" and specific details of the SOL data and information necessary to fulfill the reliability tasks.

The SDT also notes that provision of SOL related data and information from the RC to a TOP is solely addressed in FAC-014-3 and not in TOP-003 as the RC is not a recipient of the TOP data specification and is not required to provide data and information accordingly. FAC-014-3 sufficiently meets the necessary requirements for the TOP.

These requirements appeared to adhere to a principle surrounding certain NERC Reliability Standard requirements that were critical in nature that rise to a level of requiring an entity to "provide" notification, data, or information in addition to, or rather than, a "request and provide" construct housed solely in IRO-010 and TOP-003. Creating a specific list where the requirement for SOL information to be included in the data specification be maintained in IRO-010 and TOP-003 not only risked losing the context in FAC-014-3 but appeared to oppose the SAR guidance, "*creating a minimum list of items to include in a data specification is not desired.*"

Thus, the SDT recommended no changes to FAC-014-3 R3 and FAC-014-3 R5 for this project.

IRO-008-3

The purpose of IRO-008-3 is to perform analyses and assessments to prevent instability, uncontrolled separation, or Cascading. Requirements R5 and R6 require the following:

R5: Each Reliability Coordinator shall notify impacted Transmission Operators and Balancing Authorities within its Reliability Coordinator Area, and other impacted Reliability Coordinators as indicated in its Operating Plan, when the results of a Real-time Assessment indicate an actual or expected condition that results in, or could result in, a System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) exceedance within its Wide Area.

R6: Each Reliability Coordinator shall notify, in accordance with SOL methodology, impacted Transmission Operators and Balancing Authorities within its Reliability Coordinator Area, and other impacted Reliability Coordinators as indicated in its Operating Plan, when the System Operating Limit (SOL) exceedance or an Interconnection Reliability Operating Limit (IROL) exceedance identified in Requirement R5 has been prevented or mitigated. [Violation Risk Factor: Medium] [Time Horizon: Same-Day Operations, Real-time Operations]

The SER Phase 2 team stated no recommendations for R5 and R6.

The two requirements identified, R5 and R6, were put into place to ensure that the RC notifies impacted entities when an SOL has been exceeded and then when it has been mitigated. There are no current requirement in TOP-003 for the RC to provide information to a BA or TOP, therefore there is no redundancy. RC would have to be added to list of applicable entities in TOP-003 and in R5. This communication was modified to include SOLs in addition to IROLs as part of the remand Notice of Proposed Rulemaking associated with Project 2014-03.

Thus, the SDT recommended no changes to IRO-008-3 R5 and IRO-008-3 R6 for this project.

IRO-017-1

The purpose of IRO-017-1 is to ensure that outages are properly coordinated in the Operations Planning time horizon and Near-Term Transmission Planning Horizon. Requirement R3 requires the following:

“Each Planning Coordinator and Transmission Planner shall provide its Planning Assessment to impacted Reliability Coordinators.”

The SER Phase 2 recommendations stated the following:

“Requirement R3 could retired be to similar language in TPL-001-4, R8, regarding distribution of the report of the results of the analysis. TPL-001-4, R8, could be modified to include “Reliability Coordinator” in the list of entities in the distribution list. [Leave as is, IRO-017 relates to the Operations Planning time frame and TPL-001 is based on a Long Term Planning time frame]”

The noted requirement is not specifically identified as being related to the four reliability tasks identified in IRO-010 and TOP-003. Additionally the SER Phase 2 recommendations are to leave as-is. Therefore, the SDT did not find any necessary changes. IRO-010 and TOP-003 may still serve a means of communication of outage information, however that is not specifically identified in IRO-017. The SDT identified no redundancies or duplication of purpose.

Thus, the SDT recommended no changes to IRO-017-1 for this project.

TOP-001-6

The purpose of TOP-001-6 is to prevent instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Interconnection by ensuring prompt action to prevent or mitigate such occurrences. R9 and R15 require the following:

R9: “Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator and known impacted interconnected entities of all planned outages, and unplanned outages of 30 minutes or more, for telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities.”

R15: “Each Transmission Operator shall inform its Reliability Coordinator of actions taken to return the System to within limits when a SOL has been exceeded in accordance with its Reliability Coordinator’s SOL methodology.”

The focus of TOP-001-6 R9 is notification of the RC when a BA or TOP has a planned or unplanned outage of 30 minutes or more for capabilities, equipment, and communication channels that could affect the provision of data and information required as part of IRO-010 and TOP-003. The SER Phase 2 recommendation was to consider relocation to IRO-017. The information identified in R9 was different than normal outage coordination related to transmission and generation facilities. The SDT assessed this to be different than the data and information required in a data specification but rather notification for situational awareness so that alternative actions can be taken by impacted entities. This could include the RC and TOP but could also include other entities not subject to a data specification. This requirement also identifies a bright line criterion of 30 minutes or more that could be lost if not specifically called out or listed in IRO-010 and TOP-003. It could also potentially affect processes outside of the four reliability tasks.

TOP-001-6 R15 is critical and necessary for situational awareness for verifying the implementation of an Operating Plan and or Operating Instruction was successful in mitigating an SOL exceedance. This informing may aid in the RC's next Real-time Assessment or its Real-time monitoring, however this information may vary greatly from SOL exceedance to SOL exceedance. The SER Phase 2 recommendation was no action. The SDT assessed that this requirement was specific and necessary enough to be specifically called out in IRO-010 if relocated, although the context of the requirement would be lost as well if relocated as R13 and R14 highlight the sequence of events.

Thus, the SDT recommended no changes to TOP-001-6 R9 and R15 for this project.

VAR-002-4.1

The purpose of VAR-002-4.1 is to ensure generators provide reactive support and voltage control, within generating Facility capabilities, in order to protect equipment and maintain reliable operation of the Interconnection. R3 and R4 requires the following:

R3. Each Generator Operator shall notify its associated Transmission Operator of a status change on the AVR, power system stabilizer, or alternative voltage controlling device within 30 minutes of the change. If the status has been restored within 30 minutes of such change, then the Generator Operator is not required to notify the Transmission Operator of the status change.

R4. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of becoming aware of a change in reactive capability due to factors other than a status change described in Requirement R3. If the capability has been restored within 30 minutes of the Generator Operator becoming aware of such change, then the Generator Operator is not required to notify the Transmission Operator of the change in reactive capability.

VAR-002-4.1 R3 provides critical generator information to a TOP and RC regarding status changes on the AVR, power system stabilizer, or alternative voltage controlling device. VAR-002-4.1 also establishes a bright line timeline of 30 minutes which would be lost if relocated to IRO-010 and TOP-003. The SER Phase 2 recommendation is blank. The SER Phase 1 recommendation questioned both the reliability need and the minimum the 30-minute notification requirement. There was no recommendation to remove due to redundancy with TOP-003. While IRO-010 and TOP-003 offers the RC and TOP flexibility to specify the methods of notification (i.e., SCADA telemetry, verbal notifications) and more stringent timelines to support its reliability processes, relocating would lose the bright line 30-minute criteria which aligns with the 30-minute RTA requirement for RCs and TOPs.

VAR-002-4.1 R4 is a critical piece of information for providing to a TOP (and RC) and which identified a not to exceed timeline of 30 minutes which would be lost if assumed if relocated to IRO-010 and TOP-003. While IRO-010 and TOP-003 offers the flexibility to specify how to notify (i.e., SCADA telemetry, verbal notifications) and more stringent timelines to support its reliability processes. The SER Phase 2 recommendation is blank. The SER Phase 1 recommendation questioned the reliability need entirely or at a minimum the 30-minute requirement. There was no recommendation to remove due to redundancy with TOP-003. While in 2016, the EPRT stated that the RC may get the information under IRO-010, the EPRT did not recommend its retirement, relocating would lose the bright line 30-minute criteria which aligns with the 30-minute RTA requirement for RCs and TOPs.

It may be worth noting that RCs and TOPs utilize contingency and stability analysis tools as part of R3 and R4, for determining accurate stability limits and SOL exceedances. Accurate communication of this information is critical to ensure that instability, Cascading, or uncontrolled separation do not occur. These requirements were put in place with the Version 0 standards as a result of recommendations related to the 2003 Northeast Blackout.

Thus, the SDT recommended no changes to VAR-002-4.1 R3 and R4 for this project.

Data and Information

The SDT considered the feedback from the SER Phase 2 effort and also the SAR.

Industry participants have suggested that they think of data as being the “bits and bytes” which are normally how we perceive telemetry and statuses in SCADA and provide to others via ICCP. Others may also consider data as being such things as RAS arming statuses and quantities of load or generation shedding. The scope of a data specification, however, should contain more than routine real time operating data used in real time monitoring. For example, RAS Arming statuses may need context information such as the descriptions of the RAS and its actions. In order to perform its required assessments, the RC, BA, and TOP data specifications may need to also include information that provides insights for the four reliability tasks: Operational Planning Analysis, Real- Time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

One would only have to consider the definition of OPA and RTA to see how extensive the data and information necessary to conduct such activities would be. This information could be used to address Operating Plans to resolve problems in these assessments and provide context for the use of data. Typically, this information are types of documentation such as Operating Procedures that address the manual actions that may or may not be modeled in study tools. This information can be the supporting documentation such as a Remedial Action Scheme’s detail, Outage Request dates/times or other details, must run operations requests, emergency procedures, modeling information, etc. The NERC Glossary of Terms definitions for OPA and RTA can be seen below:

Operational Planning Analysis: An evaluation of projected system conditions to assess anticipated (pre-Contingency) and potential (post-Contingency) conditions for next-day operations. The evaluation shall reflect applicable inputs including, but not limited to, load forecasts; generation output levels; Interchange; known Protection System and Special Protection System status or degradation; Transmission outages; generator outages; Facility Ratings; and identified phase angle and equipment limitations. (Operational Planning Analysis may be provided through internal systems or through third-party services.)

Real Time Assessments: An evaluation of system conditions using Real-time data to assess existing (pre-Contingency) and potential (post-Contingency) operating conditions. The assessment shall reflect applicable inputs including, but not limited to: load, generation output levels, known Protection System and Special Protection System status or degradation, Transmission outages, generator outages, Interchange, Facility Ratings, and identified phase angle and equipment limitations. (Real-time Assessment may be provided through internal systems or through third-party services.)

Additionally, the terms Real-time monitoring and Balancing Authority analysis functions are broad. The Guidelines and Technical Basis section of IRO-018 offers the below guidance:

Real-time monitoring, or monitoring the Bulk Electric System (BES) in Real-time, is a primary function of Reliability Coordinators (RCs), Transmission Operators (TOPs), and Balancing Authorities (BAs) as required by TOP and IRO Reliability Standards. As used in TOP and IRO Reliability Standards, monitoring involves observing operating status and operating values in Real-time for awareness of system conditions. Real-time monitoring may include the following activities performed in Real-time:

- Acquisition of operating data;
- Display of operating data as needed for visualization of system conditions;
- Audible or visual alerting when warranted by system conditions; and
- Audible or visual alerting when monitoring and analysis capabilities degrade or become unavailable.

As can be seen, the data specification requirements encompass activities that are very detailed and very broad so that RCs, BAs, and TOPs can acquire the necessary data and information to ensure the four reliability tasks can be adequately performed. This includes evolving system data and information that comes about by an ever-changing system (e.g., system inertia, distributed energy resource data, dynamic facility ratings, sub-synchronous resonance alerts, and oscillations).

The use of both data and information as terms aids our understanding of the broader scope of requirements that an entity deems necessary to perform the four reliability tasks. This suggests that context be given for issues of security, errors, timing and communication mechanisms which may be different from that of “data”. Specifications should have flexibility to request data and information recognizing that alternate methods of communication such as phone, instant messaging, internet-based systems, may be appropriate. For example, a Web based extranet may be a suitable repository for such information. The security methods and transfer considerations for the requestor and the provider may be very different from that of SCADA.

The SDT considered adding a provision for confidentiality to the Standard. The provision would apply to all data requests, and would likely add unnecessary administrative burden. By requiring parties to demonstrate agreements, mechanisms and controls potentially for all data/information, the burden and compliance risk would increase dramatically. However, a general or overarching requirement can be avoided considering other requirements that were proposed for the standard. The SDT members identified that a requirement that suggesting a requestor establish a conflict resolution process, for managing error corrections and conflicts of disputes provides a means to address specific confidentiality issues. By establishing a method of collaboration, requests can better address requestors and respondents needs, while having a mechanism to address problems in the provision of data and information.

For example, in the case that some data or information has confidentiality risks that a respondent needs to protect, the existence of processes or methods for resolution of errors or conflicts implies that the requestors and respondents should consider resolving problems in the creation of the data request. The use of this resolution mechanism can provide a means for the parties to address the specific confidentiality issues and or security requirements, and come to agreement on mechanisms, controls, protections to address the confidentiality for the specific data or information that had a confidentiality or security need. Such a mechanism suggests then that an overarching compliance requirement for confidentiality should not be necessary. Rather, there is flexibility for the requestor and respondent to determine which data or information need this greater level of protections and the best way to accommodate such protections.

Methods and Mitigation of Zero-defect Expectations

Methods

Industry believes the standards should avoid being overly prescriptive, as doing so would add to the administrative burden. Requirement 1.5 was drafted with the intent of focusing on methods; establishing processes, and specifying methods to address provision of data and information. The intent of the SDT is to alleviate strict criterion for each specified data or information requirement.

The current approved standards IRO-010-3 and TOP-003-4, have requirements R1.2 and R1.3, which are prescriptive of some expected content. However, this aspect of the SAR was intended to reduce the potential administrative burden of the data request specification (format, protocol, security) which may not be required for a specific data or information type. Therefore these terms may create unnecessary burdens.

To address these concerns, the SDT reviewed the sub-requirements for respondents to demonstrate compliance (IRO-010 -3 R3, TOP-003-4 R5), that include:

- A mutually agreeable format
- A mutually agreeable process for resolving data conflicts
- A mutually agreeable security protocol

The SDT concluded that these sub-requirements were best addressed by building them into the specification itself. With these sub-requirements brought into R1, the requirements for the specification are better delineated, as they are all collected together. This is accomplished by establishing R1.5 and its sub-requirements to address the characteristics of the data request. Previous versions of IRO-010 and TOP-003 took a similar approach before removal of the requirements, which exacerbated the noted issue of zero-defect expectations. By clarifying that some level of accuracy and availability deviation is acceptable, a zero-defect compliance would no longer be expected.

The repeated use of the term “mutual agreed upon” is intentional to facilitate collaboration between requestors and respondents in preparing the data specification to ensure the specification is feasible, reasonable, and sufficient. The retention of the word mutual for these requirements suggests that a data specification should be developed collaboratively, to address issues and concerns around the provision and protection of content of the respondent data can be addressed in the specification itself.

The SDT concluded that mutual collaboration does not diminish the authority of the requestor to request data and information it requires. R1 clearly provides this authority in IRO-010-3. The proposed R.1.5 establishes collaboration on the methods used within the data request, to achieve the desired provision of data to the requestor.

Similarly, R1 and R2 of TOP-003 provide the authority of the requestor to request data and information it requires. The proposed R1.5 and R2.55 establishes collaboration on the methods used within the data request, to achieve the desired provision of data to the requestor.

The proposed content for R1.5 of IRO-010 and R1.5 for TOP-003 (and similarly in R2.5 of TOP-003) is:

- 1.5.** Methods for the entity identified in Part 1.1 to provide data and information that includes, but is not limited to:
 - 1.5.1** Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3** Provisions to update or correct data and information, as applicable or necessary.

1.5.4 A mutually agreeable format.

1.5.5 A mutually agreeable methods for securely transferring data and information.

The emphasis of the requirement is on “method” to provide data and information. It is intended to focus on establishing appropriate processes and procedures where necessary or applicable. Every method designated in a sub-bullet is intended to address the issues in a manner that allows the Requester to continue to receive information necessary to perform reliability tasks. It also allows the responder to agree to the manner in which data is provided (namely format of data and information and provision of the secure transfer of data and information).

Zero-defect Expectations

Data has errors. Invariably, no data set is 100% accurate. Information documents have errors and may occasionally have omissions. A standard that assumes a zero-defect expectation will not recognize these variances. The SDT has heard industry members indicate there are problems with a lack of clarity about performance expectations for data and information.

Not all data requires strict performance criterion. While for some data, high degrees of accuracy is critical. Occasionally, errors and omissions in documentation requires clarification. These errors or omissions may be discovered by the requestor or the provider. An assumed data accuracy of zero-defect does not facilitate reliability but creates significant administrative burden. Does an entity need to prove their accuracy and hold large amounts of data to demonstrate compliance? By establishing performance criterion in the specification itself, the parties can identify what is reasonable and high quality for meeting the intended use of the requestor.

The provision in 1.5.2 facilitates the inclusion performance criterion in the data request for the parties to identify which data or information is critical with respect to accuracy or availability. The SDT considered the establishment of methods to encompass the parties identifying the critical performance expectations within the specification for requested items that may require a specific performance criterion, in addition to more general performance expectations. Adding another requirement to establish provisions for correcting or updating data, and information for errors encountered, further alleviates strict zero-defect compliance.

Responders may need to have exceptions for legitimate problems with supplying accurate data or information. Proposed R1.5.3 requires the data specification to establish provisions for error correction in the data request which, in turn, will allow the parties to agree to processes that will facilitate improvements. With this provision, respondents would be more likely to actively identify potential problems, and work collaboratively with the requestor for quicker resolution. Effectively, Requirement 1.5.3 facilitates data information quality improvements.

The establishment of a conflict resolution process allows for compliance to be supported by processes, for resolving problems with data provision. This also implies the establishment of collaborative processes for the creation of the specification is beneficial, to avoid conflicts. The SDT suggests that developing collaborative processes to resolve problems as a requirement further entrenches this perspective. For example, when there are problems with meeting performance criterion of a specific requested data or information item in the specification, it may be mutually beneficial to address by using a confliction resolution process, leading to the satisfaction of the requestor, and avoiding an assessment of non-compliance for the provider.

In summary, the SDT has proposed revisions to the standards with the intent to alleviate and mitigate some of the concerns with data availability, data efficacy, and zero-defect assumptions. To that end, the proposed revisions establish performance criterion, when necessary, for requirements in the specification that require a high level of accuracy. Retention of assessments of performance and attestations on the successful use of error correction and conflict resolution processes may eliminate the retention of large quantities of data itself and mitigate the zero-defect assumptions implied by the standards.

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003

Formal Comment Period Open through June 20, 2023

[Now Available](#)

A formal comment period is open through **8 p.m. Eastern, Tuesday, June 20, 2023** for draft two of the following:

- IRO-010-5 – Reliability Coordinator Data Specification and Collection
- IRO-010-5 – Implementation Plan
- TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- TOP-003-6 – Implementation Plan

The standard drafting team's considerations of the responses received from the previous comment period are reflected in these drafts of the standards.

Reminder Regarding Corporate RBB Memberships

Under the NERC Rules of Procedure, each entity and its affiliates is collectively permitted one voting membership per Registered Ballot Body Segment. Each entity that undergoes a change in corporate structure (such as a merger or acquisition) that results in the entity or affiliated entities having more than the one permitted representative in a particular Segment must withdraw the duplicate membership(s) prior to joining new ballot pools or voting on anything as part of an existing ballot pool. Contact ballotadmin@nerc.net to assist with the removal of any duplicate registrations.

Commenting

Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments. An unofficial Word version of the comment form is posted on the [project page](#).

- *Contact NERC IT support directly at <https://support.nerc.net/> (Monday – Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.*
- *Passwords expire every **6 months** and must be reset.*
- *The SBS is **not** supported for use on mobile devices.*
- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

Additional ballots for the standards and implementation plan, as well as non-binding polls of the associated Violation Risk Factors and Violation Severity Levels will be conducted **June 9-20, 2023**.

For more information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003 observer list" in the Description Box.

North American Electric Reliability Corporation
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Suite 600, North Tower
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Comment Report

Project Name: 2021-06 Modifications to IRO-010 and TOP-003 | Draft 2
Comment Period Start Date: 5/5/2023
Comment Period End Date: 6/21/2023
Associated Ballots: 2021-06 Modifications to IRO-010 and TOP-003 Implementation Plan AB 2 OT
2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 AB 2 ST
2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 AB 2 ST

There were 64 sets of responses, including comments from approximately 179 different people from approximately 119 companies representing 10 of the Industry Segments as shown in the table on the following pages.

Questions

- 1. To support the proposed modifications, the SDT has revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.**
- 2. Provide any additional comments regarding IRO-010-5 for the SDT to consider.**
- 3. Provide any additional comments regarding TOP-003-6 for the SDT to consider.**
- 4. Provide any additional comments for the SDT to consider, if desired.**

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------------------|-----------------|------------|-------------|---|------------------------|---|-------------------------|---------------------|
| BC Hydro and Power Authority | Adrian Andreoiu | 1 | WECC | BC Hydro | Hootan Jarollahi | BC Hydro and Power Authority | 3 | WECC |
| | | | | | Helen Hamilton Harding | BC Hydro and Power Authority | 5 | WECC |
| | | | | | Adrian Andreoiu | BC Hydro and Power Authority | 1 | WECC |
| Midcontinent ISO, Inc. | Bobbi Welch | 2 | MRO,RF,SERC | ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 | Ali Miremadi | CAISO | 2 | WECC |
| | | | | | Kennedy Meier | Electric Reliability Council of Texas, Inc. | 2 | Texas RE |
| | | | | | Helen Lainis | IESO | 2 | NPCC |
| | | | | | Kathleen Goodman | ISO-NE | 2 | NPCC |
| | | | | | Bobbi Welch | MISO | 2 | RF |
| | | | | | Greg Campoli | NYISO | 2 | NPCC |
| | | | | | Elizabeth Davis | PJM | 2 | RF |
| | | | | | Charles Yeung | Southwest Power Pool, Inc. (RTO) | 2 | MRO |
| WEC Energy Group, Inc. | Christine Kane | 3 | | WEC Energy Group | Christine Kane | WEC Energy Group | 3 | RF |
| | | | | | Matthew Beilfuss | WEC Energy Group, Inc. | 4 | RF |
| | | | | | Clarice Zellmer | WEC Energy Group, Inc. | 5 | RF |
| | | | | | David Boeshaar | WEC Energy Group, Inc. | 6 | RF |
| Portland General Electric Co. | Daniel Mason | 6 | | Portland General Electric Co. | Brooke Jockin | Portland General Electric Co. | 1 | WECC |
| | | | | | Adam Menendez | Portland General Electric Co. | 3 | WECC |
| | | | | | Ryan Olson | Portland General | 5 | WECC |

| | | | | | | | | |
|--|---------------|-----------|---------------------------|--------------------|-----------------|--|-----------|------|
| | | | | | | Electric Co. | | |
| | | | | | Daniel Mason | Portland General Electric Co | 6 | WECC |
| Public Utility District No. 1 of Chelan County | Glen Pruitt | 1 | | CHPD Voters | Joyce Gundry | Public Utility District No. 1 of Chelan County | 3 | WECC |
| | | | | | Rebecca Zahler | Public Utility District No. 1 of Chelan County | 5 | WECC |
| | | | | | Anne Kronshage | Public Utility District No. 1 of Chelan County | 6 | WECC |
| Jennie Wike | Jennie Wike | | WECC | Tacoma Power | Jennie Wike | Tacoma Public Utilities | 1,3,4,5,6 | WECC |
| | | | | | John Merrell | Tacoma Public Utilities (Tacoma, WA) | 1 | WECC |
| | | | | | John Nierenberg | Tacoma Public Utilities (Tacoma, WA) | 3 | WECC |
| | | | | | Hien Ho | Tacoma Public Utilities (Tacoma, WA) | 4 | WECC |
| | | | | | Terry Gifford | Tacoma Public Utilities (Tacoma, WA) | 6 | WECC |
| | | | | | Ozan Ferrin | Tacoma Public Utilities (Tacoma, WA) | 5 | WECC |
| ACES Power Marketing | Jodirah Green | 1,3,4,5,6 | MRO,RF,SERC,Texas RE,WECC | ACES Collaborators | Bob Soloman | Hoosier Energy Electric Cooperative | 1 | RF |
| | | | | | Kevin Lyons | Central Iowa Power Cooperative | 1 | MRO |
| | | | | | Scott Brame | North Carolina Electric Membership Corporation | 3,4,5 | SERC |
| | | | | | Ryan Strom | Buckeye Power, Inc. | 1,5 | RF |

| | | | | | | | | |
|-------------------|--------------------|-------------|-----|------------|-------------------|--|---------|------|
| | | | | | Ryan Strom | Buckeye Power, Inc. | 1,5 | RF |
| Eversource Energy | Joshua London | 1 | | Eversource | Joshua London | Eversource Energy | 1 | NPCC |
| | | | | | Vicki O'Leary | Eversource Energy | 3 | NPCC |
| MRO | Jou Yang | 1,2,3,4,5,6 | MRO | MRO NSRF | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Chris Bills | City of Independence, Power and Light Department | 5 | MRO |
| | | | | | Fred Meyer | Algonquin Power Co. | 3 | MRO |
| | | | | | Christopher Bills | City of Independence Power & Light | 3,5 | MRO |
| | | | | | Larry Heckert | Alliant Energy Corporation Services, Inc. | 4 | MRO |
| | | | | | Marc Gomez | Southwestern Power Administration | 1 | MRO |
| | | | | | Matthew Harward | Southwest Power Pool, Inc. (RTO) | 2 | MRO |
| | | | | | Bryan Sherrow | Board of Public Utilities | 1 | MRO |
| | | | | | Terry Harbour | Berkshire Hathaway Energy - MidAmerican Energy Co. | 1 | MRO |
| | | | | | Terry Harbour | MidAmerican Energy Company | 1,3 | MRO |
| | | | | | Jamison Cawley | Nebraska Public Power District | 1,3,5 | MRO |
| | | | | | Seth Shoemaker | Muscatine Power & Water | 1,3,5,6 | MRO |
| Michael Brytowski | Great River Energy | 1,3,5,6 | MRO | | | | | |

| | | | | | | | | |
|--|----------------|---------|---------------------------|------------------|------------------|--|-----------|------|
| | | | | | Shonda McCain | Omaha Public Power District | 6 | MRO |
| | | | | | George E Brown | Pattern Operators LP | 5 | MRO |
| | | | | | George Brown | Acciona Energy USA | 5 | MRO |
| | | | | | Jaimin Patel | Saskatchewan Power Cooperation | 1 | MRO |
| | | | | | Kimberly Bentley | Western Area Power Administration | 1,6 | MRO |
| | | | | | Jay Sethi | Manitoba Hydro | 1,3,5,6 | MRO |
| | | | | | Michael Ayotte | ITC Holdings | 1 | MRO |
| Entergy | Julie Hall | 6 | | Entergy | Oliver Burke | Entergy - Entergy Services, Inc. | 1 | SERC |
| | | | | | Jamie Prater | Entergy | 5 | SERC |
| FirstEnergy - FirstEnergy Corporation | Mark Garza | 4 | | FE Voter | Julie Severino | FirstEnergy - FirstEnergy Corporation | 1 | RF |
| | | | | | Aaron Ghodooshim | FirstEnergy - FirstEnergy Corporation | 3 | RF |
| | | | | | Robert Loy | FirstEnergy - FirstEnergy Solutions | 5 | RF |
| | | | | | Mark Garza | FirstEnergy-FirstEnergy | 1,3,4,5,6 | RF |
| | | | | | Stacey Sheehan | FirstEnergy - FirstEnergy Corporation | 6 | RF |
| Southern Company - Southern Company Services, Inc. | Pamela Frazier | 1,3,5,6 | MRO,RF,SERC,Texas RE,WECC | Southern Company | Matt Carden | Southern Company - Southern Company Services, Inc. | 1 | SERC |
| | | | | | Joel Dembowski | Southern Company - Alabama Power Company | 3 | SERC |
| | | | | | Jim Howell, Jr. | Southern Company - | 5 | SERC |

| | | | | | | | | |
|--------------------------------------|-----------|----------------------|------|----------|-----------------------------------|--|----|------|
| | | | | | | Southern Company Generation | | |
| | | | | | Ron Carlsen | Southern Company - Southern Company Generation | 6 | SERC |
| Northeast Power Coordinating Council | Ruida Shu | 1,2,3,4,5,6,7,8,9,10 | NPCC | NPCC RSC | Gerry Dunbar | Northeast Power Coordinating Council | 10 | NPCC |
| | | | | | Alain Mukama | Hydro One Networks, Inc. | 1 | NPCC |
| | | | | | Deidre Altobell | Con Edison | 1 | NPCC |
| | | | | | Jeffrey Streifling | NB Power Corporation | 1 | NPCC |
| | | | | | Michele Tondalo | United Illuminating Co. | 1 | NPCC |
| | | | | | Stephanie Ullah-Mazzuca | Orange and Rockland | 1 | NPCC |
| | | | | | Michael Ridolfino | Central Hudson Gas & Electric Corp. | 1 | NPCC |
| | | | | | Randy Buswell | Vermont Electric Power Company | 1 | NPCC |
| | | | | | James Grant | NYISO | 2 | NPCC |
| | | | | | John Pearson | ISO New England, Inc. | 2 | NPCC |
| | | | | | Harishkumar Subramani Vijay Kumar | Independent Electricity System Operator | 2 | NPCC |
| | | | | | Randy MacDonald | New Brunswick Power Corporation | 2 | NPCC |
| | | | | | Dermot Smyth | Con Ed - Consolidated Edison Co. of New York | 1 | NPCC |
| | | | | | David Burke | Orange and Rockland | 3 | NPCC |

| | | | | | | | | |
|----------------|----------------|--|--|---|--------------------|--|----|------|
| | | | | | Peter Yost | Con Ed - Consolidated Edison Co. of New York | 3 | NPCC |
| | | | | | Salvatore Spagnolo | New York Power Authority | 1 | NPCC |
| | | | | | Sean Bodkin | Dominion - Dominion Resources, Inc. | 6 | NPCC |
| | | | | | David Kwan | Ontario Power Generation | 4 | NPCC |
| | | | | | Silvia Mitchell | NextEra Energy - Florida Power and Light Co. | 1 | NPCC |
| | | | | | Glen Smith | Entergy Services | 4 | NPCC |
| | | | | | Sean Cavote | PSEG | 4 | NPCC |
| | | | | | Jason Chandler | Con Edison | 5 | NPCC |
| | | | | | Tracy MacNicoll | Utility Services | 5 | NPCC |
| | | | | | Shivaz Chopra | New York Power Authority | 6 | NPCC |
| | | | | | Vijay Puran | New York State Department of Public Service | 6 | NPCC |
| | | | | | ALAN ADAMSON | New York State Reliability Council | 10 | NPCC |
| | | | | | David Kiguel | Independent | 7 | NPCC |
| | | | | | Joel Charlebois | AESI | 7 | NPCC |
| | | | | | John Hastings | National Grid | 1 | NPCC |
| | | | | | Michael Jones | National Grid USA | 1 | NPCC |
| | | | | | Joshua London | Eversource Energy | 1 | NPCC |
| Stephen Whaite | Stephen Whaite | | | ReliabilityFirst Ballot Body Member and Proxies | Lindsey Mannion | ReliabilityFirst | 10 | RF |
| | | | | | Stephen Whaite | ReliabilityFirst | 10 | RF |

| | | | | | | | | |
|--|-----------------|----|------|---------------|----------------|---|----|------|
| Western Electricity Coordinating Council | Steven Rueckert | 10 | | WECC | Steve Rueckert | WECC | 10 | WECC |
| | | | | | Phil O'Donnell | WECC | 10 | WECC |
| Tim Kelley | Tim Kelley | | WECC | SMUD and BANC | Nicole Looney | Sacramento Municipal Utility District | 3 | WECC |
| | | | | | Charles Norton | Sacramento Municipal Utility District | 6 | WECC |
| | | | | | Wei Shao | Sacramento Municipal Utility District | 1 | WECC |
| | | | | | Foung Mua | Sacramento Municipal Utility District | 4 | WECC |
| | | | | | Nicole Goi | Sacramento Municipal Utility District | 5 | WECC |
| | | | | | Kevin Smith | Balancing Authority of Northern California | 1 | WECC |
| Associated Electric Cooperative, Inc. | Todd Bennett | 3 | | AECI | Michael Bax | Central Electric Power Cooperative (Missouri) | 1 | SERC |
| | | | | | Adam Weber | Central Electric Power Cooperative (Missouri) | 3 | SERC |
| | | | | | Stephen Pogue | M and A Electric Power Cooperative | 3 | SERC |
| | | | | | William Price | M and A Electric Power Cooperative | 1 | SERC |
| | | | | | Peter Dawson | Sho-Me Power Electric Cooperative | 1 | SERC |
| | | | | | Mark Ramsey | N.W. Electric Power Cooperative, Inc. | 1 | NPCC |
| | | | | | John Stickley | NW Electric Power Cooperative, | 3 | SERC |

| | | | |
|-----------------|---|---|------|
| | Inc. | | |
| Tony Gott | KAMO Electric Cooperative | 3 | SERC |
| Micah Breedlove | KAMO Electric Cooperative | 1 | SERC |
| Kevin White | Northeast Missouri Electric Power Cooperative | 1 | SERC |
| Skyler Wiegmann | Northeast Missouri Electric Power Cooperative | 3 | SERC |
| Ryan Ziegler | Associated Electric Cooperative, Inc. | 1 | SERC |
| Brian Ackermann | Associated Electric Cooperative, Inc. | 6 | SERC |
| Brad Haralson | Associated Electric Cooperative, Inc. | 5 | SERC |

1. To support the proposed modifications, the SDT has revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC

Answer No

Document Name

Comment

The word “use” in VSLs does not apply to all criteria (e.g., R5.) BPA suggests a change to either “meet” or “satisfy.”

Likes 0

Dislikes 0

Response

Stephen Whaite - Stephen Whaite On Behalf of: Lindsey Mannion, ReliabilityFirst , 10; - Stephen Whaite, Group Name ReliabilityFirst Ballot Body Member and Proxies

Answer No

Document Name

Comment

As noted in the comments for questions 2 and 3, RF does not support the inclusion of the “mutually agreeable” language in the clarified IRO-010 R1 and TOP-003 R1 and R2 data specification criteria. The criteria containing the “mutually agreeable” language are referenced in the IRO-010 R1/R3 and TOP-003 R1/R2/R5 VSLs, so RF has selected a “No” response for this question.

Likes 0

Dislikes 0

Response

LaTroy Brumfield - American Transmission Company, LLC - 1

Answer No

Document Name

Comment

By adding more specific requirements to R1.5, the requestor and receiver must track progress and ensure they are meeting those requirements. This would add administrative burden for the requestor and receiver and possibly add zero defect requirements. The requirements in R1.5 appear to build upon the old requirements in TOP-003-5 R5. However, it is unclear why the original language was insufficient, so it is not clear any change is needed.

Likes 0

Dislikes 0

Response

Casey Perry - PNM Resources - 1,3 - WECC,Texas RE

Answer

No

Document Name

Comment

Recommend “and/or” statement in the Standard Requirements and VSL’s due to not clear on what information is included in the “and information” statement.

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

No

Document Name

Comment

The proposed edits to the VSL tables (IRO-010-5 / R3 and TOP-003-6 / R5), in conjunction with the requirement sub-parts referenced therein, fail to add sufficient clarity. Considering IRO-010-5 for example, the VSL table for R3 references “the criteria in Requirement R1 Parts 1.5” [should it be “Part 1.5” (no “s”)?). R1 Part 1.5 addresses “methods for the entity identified in Part 1.1 to provide data and information”. Is a method for providing data and information synonymous with a criteria for the data and information? Since R1 Part 1.5.2 is the only sub-part to mention performance criteria (as determined by the RC), was it the intent of the drafting team to make the VSL table refer to it (i.e., “...criteria in Requirement R1 Part 1.5.2”)?

With regard to the SAR’s stated purpose to “limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency”, we note that the data retention period for those that provide data and information is unchanged in these Draft 2 standards. The submitting entity is required to “retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications.” However, if the entity’s last audit period has been more than 90 days ago (highly probable), “the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit”. How does this address the unnecessary data retention concern cited in the SAR?

Likes 0

Dislikes 0

Response

Alain Mukama - Hydro One Networks, Inc. - 1

Answer No

Document Name

Comment

The addition of the words "and Information" to the VSLs does not provide a meaningful change. Further clarification is required on what "information" is being requested.

Likes 0

Dislikes 0

Response

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO

Answer Yes

Document Name

Comment

No comments

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer Yes

Document Name

Comment

AZPS Agrees with the proposed modification to the VSLs in both IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro

Answer Yes

Document Name

Comment

BC Hydro appreciates the Standard Drafting Team's efforts and the opportunity to comment. We noted that in the Violation Severity Levels for Requirements R3 of IRO-010-5 and R5 of TOP-003-6, the "obligations of the" wording was removed. Requirements R3 and R5 and their associated measures maintain the "shall satisfy the obligations of the documented specifications" wording.

BC Hydro suggest that the wording be revised to align the Requirements and VSLs for consistency; otherwise, please provide clarification on the materiality of these distinctions if they were intentional.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer Yes

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer Yes

Document Name

Comment

Southern Company supports the comments provided by EEI.

Likes 0

Dislikes 0

Response

Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF

Answer Yes

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer Yes

Document Name

Comment

WEC Energy Groups supports EEI and NAGF comments.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer Yes

Document Name

Comment

The NAGF supports the proposed VSL revisions in both IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Allie Gavin - Allie Gavin On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Allie Gavin | |
| Answer | Yes |
| Document Name | |
| Comment | |
| ITC supports EEI's comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Nicolas Turcotte - Hydro-Quebec (HQ) - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>R1 Low VRF in VSL Table: "The Reliability Coordinator did not include two or fewer of the parts ..." which is illogical since omitting zero parts would result in a violation. Consider changing to "one or two parts".</p> <p>Version history table: Version 3 indicates that FERC approved IRO-010-2 in Docket RD20-4-000. Please correct to IRO-010-3 as v3 was part of the Standards Alignment with Registration Project in RD20-4-000.</p> <p>Suggest for IRO-010-5 adds 1.5.2 which says, "Performance criteria for the availability and accuracy of data and information, as applicable." (for RCs)</p> <p>Please consider that adding a new requirement to IRO-010-5 involving the availability and accuracy of data and information may increase administrative burden.</p> | |
| Likes 0 | |
| Dislikes 0 | |

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer Yes

Document Name

Comment

EEl does not object to the changes made to the VSLs in IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer Yes

Document Name

Comment

Texas RE noticed the following in the VSLs for TOP-003-6:

- In order to be consistent, Texas RE recommends adding “and information” in the latter part of the “or” statement in the R1 and R2 severe VSL.
- It appears that in the R4 VSL, data should not be capitalized.
- In the high VSL for R5, it should state R1.5, not R15.

Texas RE noticed the following the VSLs for IRO-010-5:

- In order to be consistent, Texas RE recommends adding “and information” in the latter part of the “or” statement in the R1 severe VSL.
- In the Lower, Moderate, and High VSLs for R3, “part” should not be plural since it is only referencing Part 1.5.

Likes 0

Dislikes 0

Response

Daniel Gacek - Exelon - 1

Answer Yes

Document Name

Comment

Exelon supports the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3

Answer

Yes

Document Name

Comment

Exelon supports the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Yes

Document Name

Comment

Ameren supports EEI's comments on this project.

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer

Yes

Document Name

Comment

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer

Yes

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

Yes

Document Name

Comment

MPC supports MRO NERC Standards Review Forum comments.

Likes 0

Dislikes 0

Response

Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 3 - WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Glen Pruitt - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD Voters

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
|----------------------|--|
| Document Name | |
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| Comment |
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| Likes 0 |
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| Dislikes 0 |
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| Response |
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James Keele - Entergy - 3

| | |
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| Answer | Yes |
|---------------|-----|

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| Document Name | |
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| Comment |
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| Likes 0 |
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| Dislikes 0 |
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| |
|-----------------|
| Response |
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Michael Courchesne - ISO New England, Inc. - 2 - NPCC

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

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| Document Name | |
|----------------------|--|

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|----------------|
| Comment |
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| |
|---------|
| Likes 0 |
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| Dislikes 0 |
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| |
|-----------------|
| Response |
|-----------------|

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
|----------------------|--|
| Document Name | |
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| |
|----------------|
| Comment |
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Likes 0

Dislikes 0

Response

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Claudine Bates - Black Hills Corporation - 6

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Rachel Schuldt - Rachel Schuldt On Behalf of: Josh Combs, Black Hills Corporation, 5, 6, 1, 3; - Rachel Schuldt | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruchi Shah - AES - AES Corporation - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Israel Perez - Israel Perez On Behalf of: Mathew Weber, Salt River Project, 3, 1, 6, 5; Sarah Blankenship, Salt River Project, 3, 1, 6, 5; Thomas Johnson, Salt River Project, 3, 1, 6, 5; Timothy Singh, Salt River Project, 3, 1, 6, 5; - Israel Perez

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

| | |
|--|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Joshua London - Eversource Energy - 1, Group Name Eversource | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |

Likes 0

Dislikes 0

Response

Junji Yamaguchi - Hydro-Quebec (HQ) - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Teresa Krabe - Lower Colorado River Authority - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public

| | |
|--|-----|
| Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| | |
| Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Pedro Juarez, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC | |
| Answer | Yes |
| Document Name | |

Comment

Likes 0

Dislikes 0

Response**Stephen Stafford - Georgia Transmission Corporation - NA - Not Applicable - SERC****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Hillary Creurer - Hillary Creurer On Behalf of: Lori Frisk, Allete - Minnesota Power, Inc., 1; - Hillary Creurer****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Constantin Chitescu - Ontario Power Generation Inc. - 5****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mike Magruder - Avista - Avista Corporation - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer

Document Name

Comment

Portland General Electric Company supports comments provided by the EEI.

Likes 0

Dislikes 0

Response

2. Provide any additional comments regarding IRO-010-5 for the SDT to consider.

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer

Document Name

Comment

R1 Low VRF in VSL Table: "The Reliability Coordinator did not include two or fewer of the parts ..." which is illogical since omitting zero parts would result in a violation. Consider changing to "one or two parts".

Version history table: Version 3 indicates that FERC approved IRO-010-2 in Docket RD20-4-000. Please correct to IRO-010-3 as v3 was part of the Standards Alignment with Registration Project in RD20-4-000.

Suggest for IRO-010-5 adds 1.5.2 which says, "Performance criteria for the availability and accuracy of data and information, as applicable." (for RCs)

Please consider that adding a new requirement to IRO-010-5 involving the availability and accuracy of data and information may increase administrative burdens.

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

Document Name

Comment

MPC supports MRO NERC Standards Review Forum comments.

Likes 0

Dislikes 0

Response

Alain Mukama - Hydro One Networks, Inc. - 1

Answer

Document Name

Comment

It is not clear how broadening the scope of the standard from a data specification which is clear, to an overly broad data and information specification adds clarity. It would be more beneficial if the standard covered clear requirements for a data specification that supported Operation Planning Analysis, Real-time monitoring and Real-time Assessment criteria. Information should be clearly defined.

Likes 0

Dislikes 0

Response**Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003****Answer****Document Name****Comment**

No comment

Likes 0

Dislikes 0

Response**Alison MacKellar - Constellation - 5****Answer****Document Name****Comment**

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response**Kimberly Turco - Constellation - 6****Answer****Document Name**

Comment

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Constantin Chitescu - Ontario Power Generation Inc. - 5

Answer

Document Name

Comment

OPG supports NPCC Regional Standards Committee’s comments.

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Document Name

Comment

We suggest that the standard title reflected in the page headers be consistent with the title in section A.1.

For the Purpose statement in section A.3, we suggest that “Monitor” not be capitalized since it’s not a defined term in the NERC Glossary of Terms. We would also prefer an Oxford comma be placed after monitor – “...plan, monitor, and assess...”. This would also be consistent with the purpose statement phrasing in Draft 2 of TOP-003-6.

We believe the Project reference in section A.5 should be updated to “Project 2021-06”, rather than “Project 2019-06”.

For R1/Part 1.1, we suggest the added phrase “and identification of the entity responsible for responding to the specification” be changed to “and identification of the **entities** responsible for responding to the specification”.

For R1/Part 1.5, we suggest some minor edits and re-ordering:

1.5. **Methods and criteria** for the **entities** identified in Part 1.1 to provide data and information that includes, but is not limited to:

1.5.1 A mutually agreeable method(s) for securely transferring data and information;

1.5.2 A mutually agreeable format **for the data and information**;

1.5.3 Specific deadlines or periodicity in which data and information is to be provided;

1.5.4 Provisions to update or correct data and information, as applicable or necessary; and,

1.5.5 Performance criteria for the availability and accuracy of data and information, as applicable.

Likes 0

Dislikes 0

Response

Hillary Creurer - Hillary Creurer On Behalf of: Lori Frisk, Allete - Minnesota Power, Inc., 1; - Hillary Creurer

Answer

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Document Name

Comment

Ameren recommends section 1.5.1 to read "Mutually agreeable deadlines or periodicity in which data and information is to be provided;". Also, the proposed wording in section 1.5.5 is plurally incorrect. The wording in R3 changes from singular "specification" to plural "specifications".

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3**Answer****Document Name****Comment**

Exelon supports the comments submitted by the EEI.

Likes 0

Dislikes 0

Response**Daniel Gacek - Exelon - 1****Answer****Document Name****Comment**

Exelon supports the comments submitted by the EEI.

Likes 0

Dislikes 0

Response**Casey Perry - PNM Resources - 1,3 - WECC,Texas RE****Answer****Document Name****Comment**

PNM agrees with and supports EEI's comments related to IRO-010-5.

Likes 0

Dislikes 0

Response**Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC****Answer**

Document Name**Comment**

WECC generally supports the proposed revisions, but has a slight concern with the language in Part 1.4. The requirement is applicable to the RC, but requires a "mutually agreeable process." The RC could have difficulty complying with the language of Part 1.4 if the other identified entities will not agree to a process.

Likes 0

Dislikes 0

Response

Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer**Document Name****Comment**

1.5.5 has a grammatical error with the use of "A" (singular) and "methods" (plural). How it is corrected may change the interpretation.

Likes 0

Dislikes 0

Response

Junji Yamaguchi - Hydro-Quebec (HQ) - 5

Answer**Document Name****Comment**

1. R1 Low VRF in VSL Table: "The Reliability Coordinator did not include two or fewer of the parts ..." which is illogical since omitting zero parts would result in a violation. Consider changing to "one or two parts".

2. Version history table: Version 3 indicates that FERC approved IRO-010-2 in Docket RD20-4-000. Please correct to IRO-010-3 as v3 was part of the Standards Alignment with Registration Project in RD20-4-000.

Suggest for IRO-010-5 adds 1.5.2 which says, "Performance criteria for the availability and accuracy of data and information, as applicable." (for RCs)

Please consider that adding a new requirement to IRO-010-5 involving the availability and accuracy of data and information may increase administrative

burdens.

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE noticed the Effective Date section on both TOP-003-5 and IRO-010-5 need to be updated to reflect the implementation plan for Project 2021-06.

Texas RE noticed the applicability section is formatted inconsistently with other standards, which show:

4. Applicability

4.1 Functional Entities

4.1.1 [Functional Entity #1]

4.1.2 [Functional Entity #2]

If the SDT elects to make this change, Texas RE recommends Requirement Part 1.5 state: "Methods for the *functional* entity identified in Part 1.1 to provide the data and information that includes, but is not limited to:"

In requirement Part 1.5, "methods" should be singular.

Texas RE noticed the implementation plan contains a consideration for "developing provisions for using intermediary entities to provide data". Texas RE recommends the requirement language reflect this idea as this regularly occurs in the ERCOT region with information from the TOP to the BA. Texas RE recommends the following language:

1.6 Provisions for the identification of any data and information where the responsible respondent identified in Part 1.1 will utilize an intermediary party to pass through the data and information unaltered from the responsible entities to the Transmission Operator.

This language is also consistent with CIP-012-1, which requires protection of data even through the intermediary entity.

In order to be consistent throughout the entire standard document, Texas RE recommends Section C "Compliance" be revised to remove use of "data" where included in "data specification" (in the last three paragraphs of Section C 1.2) to be consistent with proposed Requirement language changes in

Requirements R2 and R3.

Texas RE recommends adding “and information” in the Evidence Retention Section for IR-010-5 Requirement R1: “The Reliability Coordinator shall retain its dated, current, in force documented specification for the data *and information* necessary...”.

In the Evidence Retention Section for IR-010-5, Texas RE suggests capitalizing Compliance Audit or saying simply audit in the third paragraph as in the first paragraph.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Document Name

Comment

EEl continues to have concerns with the proposed changes made to IRO-010-5 and question whether the proposed changes provide any discernible reliability benefits over the currently effective Reliability Standard. However, we offer the following edits to address our concerns with the current draft:

Requirement R1.

Part 1.1: The data and information should be specifically directed to “NERC registered entities” not entities “responsible for responding”. Entities who are not registered by NERC have no regulatory obligation to respond to data and information requests. Additionally, the identified NERC registered entity can only provide requested data and information that is under that entity’s direct control and access. To address these concern, the following suggested edits in bold are provided below:

A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, **if under the control and access of the identified NERC registered entity**, external network data and information, and identification of the **NERC registered** entity for responding to the specification as deemed necessary by the Reliability Coordinator.

Part 1.5: The methods identified should all be mutually agreed to, not just those in the subparts of Part 1.5.

Subpart 1.5.2: EEl does not support the inclusion of performance criteria for IRO-010-5 and asks that subpart 1.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary. Applying performance criteria to the delivery of data and information expands the administrative burden on entities creating a zero defect requirement that this project was intended to correct.

Measure M1: EEl suggests the following additional language to M1 (see bold text):

Each Reliability Coordinator shall make available its dated, current, in force documented specification for data and information **that conform to mutually agreed to methods, criteria, formats and secure transfer of data and information by the entities identified in Part 1.1.**

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Quebec (HQ) - 1

Answer

Document Name

Comment

R1 and R2 Low VRF in VSL Table: "The TOP/BA did not include two or fewer of the parts ..." which is illogical since omitting zero parts would result in a violation. Consider changing to "one or two parts".

Suggest for TOP-003-6 R1 adds similar language: "Performance criteria for the availability and accuracy of data and information, as applicable." (for TOPs)

Please consider that adding a new requirement to TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for quesiton #2.

Likes 0

Dislikes 0

Response

Stephen Whaite - Stephen Whaite On Behalf of: Lindsey Mannion, ReliabilityFirst , 10; - Stephen Whaite, Group Name ReliabilityFirst Ballot Body Member and Proxies

Answer

Document Name

Comment

In response to the comment RF submitted for question 3 of the previous comment period, the SDT indicated “The SDT discussed the issue [w/ requiring mutually agreeable criteria to be included in the data specifications] and notes that the legacy language includes “mutually agreeable” paradigms already, and, therefore, has decided to keep that vernacular.”

In response to the above consideration of comments, RF notes that the legacy language places the responsibility for satisfying the obligations of the data specification using “mutually agreeable” means on the specification recipient.

RF reinforces that the RC (R1) should not be responsible for ensuring its data specification is mutually agreeable to every specification recipient (potentially 100s of receiving entities). The "mutually agreeable" language should be removed from the proposed IRO-010-5 R1 subparts regarding data formats, security protocols, and conflict resolution processes. It is unclear how mutually agreeable formats, security protocols, and conflict resolution processes could be included in a data specification prior to it being distributed to the entities responsible for responding. As currently drafted, demonstrating criteria within a specification are mutually agreeable would require the creator of the specification to maintain evidence that each of the many recipients of the specification accepts each “mutually agreeable” criteria.

Likes 0

Dislikes 0

Response

Allie Gavin - Allie Gavin On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Allie Gavin

Answer

Document Name

Comment

ITC supports EEI's comments.

Likes 0

Dislikes 0

Response

Joshua London - Eversource Energy - 1, Group Name Eversource

Answer

Document Name

Comment

Eversource agrees with the comments submitted by EEI and does not support the inclusion of performance criteria for IRO-010-5 and asks that subpart 1.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary.

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Ruchi Shah - AES - AES Corporation - 5

Answer

Document Name

Comment

AESCE understands and agrees with the need for availability and accuracy of data and information under R1.5.2. However, AESCE would like to point out that criteria to ensure data accuracy must be practical to GO/GOP resources as well as mindful of the ability to demonstrate compliance with the sub-requirement.

AESCE also supports NAGF's comment regarding these changes.

Likes 0

Dislikes 0

Response

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Document Name

Comment

The NAGF is concerned with how a GO/GOP would demonstrate the accuracy of data and information under R1.5.2. While the NAGF understands the need for and supports the communication of accurate data/information, criteria to ensure data accuracy needs to be practical and cognizant of limited GO/GOP resources.

For R1.5.3, the NAGF questions the value of potentially having to correct/update historical data.

Likes 0

Dislikes 0

Response

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer

Document Name

Comment

WEC Energy Groups supports EEI and NAGF comments.

Likes 0

Dislikes 0

Response

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer

Document Name

Comment

Reclamation recommends the Project 2021-06 drafting team coordinate with the Project 2020-04 drafting team regarding use of the terms “availability” and “accuracy,” e.g., as used in IRO-010 R1.5.2. The CIP-012 terms “confidentiality,” “integrity,” and “availability” carry the same intent; therefore, for consistency, Reclamation recommends the language in the two standards should align.

Likes 0

Dislikes 0

Response

Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

Southern Company supports the comments provided by EEI.

Likes 0

Dislikes 0

Response

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

Document Name

Comment

The edits proposed do not meet the goals set forth by SER Phase 2 and the SAR. Industry would be better served not to open the standards.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

Duke Energy is concerned with how a GO/GOP would demonstrate the accuracy of data and information under R1.5.2. Please define the implied accuracy specification and communication of data and information.

For R1.5.3, please define the parameters and limits for the correction and update of historical data.

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer

Document Name

Comment

The standards in question are becoming impractical regarding compiling compliance evidence, and rather than making them even more complex in this respect (e.g. adding, "Performance criteria for the availability and accuracy of data and information") IRO-010-5 and TOP-003-06 should roll-back some of the overreach in their previous revisions. Generating unit minimum design/historical/analysis temperature should be a once-and-done input, for example, since these values will not change in the midst of a winter storm. The same should be done for cold weather operating limitations, with any real-time changes for fuel supply, emissions etc being reported by the same means that plants are already using for all (not just weather-related) issues affecting operations.

The Measures sections of IRO-010 and TOP-003 should also make it mandatory that receiving entities issue attestations for compliant units, rather than just leaving this as a possibility, if they use portal systems that swallow data inputs without leaving any electronic or hard copy record of transmittals.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

Document Name

Comment

AZPS does not have any addition comments regarding IRO-010-5 at this time.

Likes 0

Dislikes 0

Response

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO

Answer

Document Name

Comment

No comments

Likes 0

Dislikes 0

Response

Glen Pruitt - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD Voters

Answer

Document Name

Comment

No comment

Likes 0

Dislikes 0

Response

3. Provide any additional comments regarding TOP-003-6 for the SDT to consider.

Glen Pruitt - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD Voters

Answer

Document Name

Comment

The title change from Operational Reliability does seem necessary as this was vague, however, the current proposed title is only descriptive of the Specification and not the data it applies to. Also, collection seems to be tacked on at the end when it should be a descriptor of the specification. The Operational Reliability title was important to understand the scope of data and information that the specification applies to. Here are some alternative options to consider:

1. Transmission Operator and Balancing Authority Data, Information and Collection Specification for Operational Reliability
2. Transmission Operator and Balancing Authority Data, Information and Collection Specification
3. Transmission Operator and Balancing Authority Specification for Operational Reliability

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer

Document Name

Comment

While the following text was not a revision proposed by the SDT, we believe the existing phrase "in force" within M1 could be improved and clarified by using another word or phrase in its place. Potential ideas for consideration might include "currently in effect" or "as currently used in practice" so that it instead states "its dated, documented specification currently in effect for data and information" or "its dated, documented specification as currently used in practice for data and information."

Likes 0

Dislikes 0

Response

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO

Answer

Document Name

Comment

No comments

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

Document Name

Comment

AZPS does not have any addition comments regarding TOP-003-6 at this time.

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer

Document Name

Comment

See our response for Question #2 above.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

Please see the response for Question #2 in regard to TOP-003-6 R1.5.2 and R1.5.3.

Likes 0

Dislikes 0

Response

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

Document Name

Comment

The edits proposed do not meet the goals set forth by SER Phase 2 and the SAR. Industry would be better served not to open the standards.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

Southern Company supports the comments provided by EEI.

Likes 0

Dislikes 0

Response

Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer

Document Name

Comment

Reclamation recommends the Project 2021-06 drafting team coordinate with the Project 2020-04 drafting team regarding use of the terms “availability” and “accuracy,” e.g., as used in TOP-003 R1.5.2 and R2.5.2. The CIP-012 terms “confidentiality,” “integrity,” and “availability” carry the same intent; therefore, for consistency, Reclamation recommends the language in the two standards should align.

Reclamation recommends grammatical corrections to the Purpose section of TOP-003 to properly address two entities. For example:

Purpose: To ensure that each Transmission Operator and Balancing Authority has the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.

Likes 0

Dislikes 0

Response

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer

Document Name

Comment

WEC Energy Groups supports EEI and NAGF comments.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Document Name

Comment

Please see the comments for Question #2 in regard to TOP-003-6 R1.5.2 and R1.5.3.

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Ruchi Shah - AES - AES Corporation - 5

Answer

Document Name

Comment

Same response as question 2 for TOP-003-6 1.5.2 and 2.5.2.

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Joshua London - Eversource Energy - 1, Group Name Eversource

Answer

Document Name

Comment

Subpart 1.5.2: Eversource agrees with the comments submitted by EEI and does not support the inclusion of performance criteria for TOP-003-6 and asks that subpart 1.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary.

Subpart 2.5.2: Eversource agrees with the comments submitted by EEI and does not support the inclusion of performance criteria for TOP-003-6 and asks that subpart 2.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections

where necessary.

Likes 0

Dislikes 0

Response

Allie Gavin - Allie Gavin On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Allie Gavin

Answer

Document Name

Comment

ITC supports EEI's comments.

Likes 0

Dislikes 0

Response

Stephen Whaite - Stephen Whaite On Behalf of: Lindsey Mannion, ReliabilityFirst , 10; - Stephen Whaite, Group Name ReliabilityFirst Ballot Body Member and Proxies

Answer

Document Name

Comment

In response to the comment RF submitted for question 3 of the previous comment period, the SDT indicated "The SDT discussed the issue [w/ requiring mutually agreeable criteria to be included in the data specifications] and notes that the legacy language includes "mutually agreeable" paradigms already, and, therefore, has decided to keep that vernacular."

In response to the above consideration of comments, RF notes that the legacy language places the responsibility for satisfying the obligations of the data specification using "mutually agreeable" means on the specification recipient.

RF reinforces that the TOP (R1) and BA (R2) should not be responsible for ensuring its data specification is mutually agreeable to every specification recipient (potentially 100s of receiving entities). The "mutually agreeable" language should be removed from the proposed TOP-003-6 R1 and R2 subparts regarding data formats, security protocols, and conflict resolution processes. It is unclear how mutually agreeable formats, security protocols, and conflict resolution processes could be included in a data specification prior to it being distributed to the entities responsible for responding. As currently drafted, demonstrating criteria within a specification are mutually agreeable would require the creator of the specification to maintain evidence that each of the many recipients of the specification accepts each "mutually agreeable" criteria.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for quesiton #3.

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Quebec (HQ) - 1

Answer

Document Name

Comment

R1 and R2 Low VRF in VSL Table: "The TOP/BA did not include two or fewer of the parts ..." which is illogical since omitting zero parts would result in a violation. Consider changing to "one or two parts".

Suggest for TOP-003-6 R1 adds similar language: "Performance criteria for the availability and accuracy of data and information, as applicable." (for TOPs)

Please consider that adding a new requirement to TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens.

Likes 0

Dislikes 0

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Document Name

Comment

EEI continues to have concerns with the proposed changes made to TOP-003-6 and question whether the proposed changes provide any discernible

reliability benefit over the currently effective Reliability Standard. However, we offer the following edits to address our concerns with the current draft:

Requirement R1.

Part 1.1: The data and information should be specifically directed to “NERC registered entities” not entities “responsible for responding”. Entities who are not registered by NERC have no regulatory obligation to respond to data and information requests. Additionally, the identified NERC registered entity can only provide requested data and information that is under that entity’s direct control and access. To address these concern, the following suggested edits in bold are provided below:

A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, **if under the control and access of the identified NERC registered entity**, external network data and information, and identification of the **NERC registered** entity for responding to the specification as deemed necessary by the Transmission Operator.

Part 1.5: The methods identified should all be mutually agreed to, not just those in the subparts of Part 1.5.

Subpart 1.5.2: EEI does not support the inclusion of performance criteria for TOP-003-6 and asks that subpart 1.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary. Applying performance criteria to the delivery of data and information expands the administrative burden on entities creating a zero defect requirement that this project was intended to correct.

Measure M1: EEI suggests the following additional language to M1 (see bold text):

Each Transmission Operator shall make available its dated, current, in force documented specification for data and information **that conform to mutually agreed to methods, criteria, formats and secure transfer of data and information by the entities identified in Part 1.1.**

Requirement R2

Part 2.1: The data and information should be specifically directed to “NERC registered entities” not entities responsible for responding. Entities who are not registered by NERC have no regulatory obligation to respond to data and information requests. Additionally, the identified NERC registered entity can only provide requested data and information that is under that entity’s direct control and access. To address these concern, the following suggested edits in bold are provided below:

A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, **if under the control and access of the identified NERC registered entity**, external network data and information, and identification of the **NERC registered** entity for responding to the specification as deemed necessary by the Transmission Operator.

Part 2.5: The methods identified should all be mutually agreed to, not just those in the subparts of Part 1.5.

Subpart 1.5.2: EEI does not support the inclusion of performance criteria for TOP-003-6 and asks that subpart 2.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary. Applying performance criteria to the delivery of data and information expands the administrative burden on entities creating a zero defect requirement that this project was intended to correct.

Measure M2: EEI suggests the following additional language to M2 (see bold text):

Each Transmission Operator shall make available its dated, current, in force documented specification for data and information **that conform to mutually agreed to methods, criteria, formats and secure transfer of data and information by the entities identified in Part 2.1.**

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE noticed the Effective Date section on both TOP-003-5 and IRO-010-5 need to be updated to reflect the implementation plan for Project 2021-06.

Texas RE noticed the applicability section is formatted inconsistently with other standards, which show:

4. Applicability

4.1 Functional Entities

4.1.1 [Functional Entity #1]

4.1.2 [Functional Entity #2]

If the SDT elects to make this change, Texas RE recommends Requirement Part 1.5 state: “Methods for the *functional* entity identified in Part 1.1 to provide the data and information that includes, but is not limited to:”

In requirement Part 1.5.5 and Requirement 2 Part 2.55, “methods” should be singular

Texas RE noticed the implementation plan contains a consideration for “developing provisions for using intermediary entities to provide data”. Texas RE recommends the requirement language reflect this idea as this regularly occurs in the ERCOT region with information from the TOP to the BA. Texas RE recommends the following language:

2.6 Provisions for the identification of any data and information where the responsible respondent identified in Part 1.1 will utilize an intermediary party to pass through the data and information unaltered from the responsible entities to the Transmission Operator.

SDT may consider minor changes in R5 for consistency:

R5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a *data specification for data and information* in Requirement R3 or R4 shall satisfy the obligations of the documented specifications. [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations*]

In order to be consistent throughout the entire standard document, Texas RE recommends Section C Compliance section be revised to remove use of

“data” where included in “data specification” (in the last three paragraphs of Section C 1.2) to be consistent with proposed Requirement language changes in Requirements R2 and R3.

In the Evidence Retention Section for IRO-010-5 Requirement, Texas RE suggests capitalizing Compliance Audit or saying simply audit in the third and fourth paragraphs as in the first paragraph.

Likes 0

Dislikes 0

Response

Junji Yamaguchi - Hydro-Quebec (HQ) - 5

Answer

Document Name

Comment

1. R1 and R2 Low VRF in VSL Table: “The TOP/BA did not include two or fewer of the parts ...” which is illogical since omitting zero parts would result in a violation. Consider changing to “one or two parts”.

Suggest for TOP-003-6 R1 adds similar language: “Performance criteria for the availability and accuracy of data and information, as applicable.” (for TOPs)

Please consider that adding a new requirement to TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens.

Likes 0

Dislikes 0

Response

Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

1.5.5. and 2.5.5 have grammatical errors with the use of “A” (singular) and “methods” (plural). How it is corrected may change the interpretation.

Likes 0

Dislikes 0

Response

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC

Answer

Document Name

Comment

Similar to the comment above, WECC generally supports the proposed revisions, but has concern with the language in Parts 1.4. and 2.4. Since this requirement is applicable to the TOP (1.4) and BA (2.4), but requires a "mutually agreeable process," the TOP or BA could have difficulty complying if the other identified entities will not agree to a process.

Likes 0

Dislikes 0

Response

Casey Perry - PNM Resources - 1,3 - WECC, Texas RE

Answer

Document Name

Comment

PNM agrees with and supports EEI's comments related to TOP-003-6.

Likes 0

Dislikes 0

Response

Daniel Gacek - Exelon - 1

Answer

Document Name

Comment

Exelon supports the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

Kinte Whitehead - Exelon - 3

Answer

Document Name

Comment

Exelon supports the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer

Document Name

Comment

Ameren recommends section 1.5.1 to read "Mutually agreeable deadlines or periodicity in which data and information is to be provided;". Also,we believe, the proposed wording in section 1.5.5 is plurally incorrect. Ameren also recommends section 2.5.1 to read "Mutually agreeable deadlines or periodicity in which data and information is to be provided;". Also, the proposed wording in section 2.5.5 is plurally incorrect.

Likes 0

Dislikes 0

Response

Hillary Creurer - Hillary Creurer On Behalf of: Lori Frisk, Allete - Minnesota Power, Inc., 1; - Hillary Creurer

Answer

Document Name

Comment

Minnesota Power agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Document Name

Comment

We suggest the Purpose statement in section A.3 be phrased as follows – “*To ensure that the Transmission Operator and Balancing Authority have the data and information **they** need to plan, monitor, and assess the operation of **their** Transmission Operator Area **and** Balancing Authority Area, **respectively.**”*

We believe the Project reference in section A.5 should be updated to “Project 2021-06”, rather than “Project 2019-06”.

For R1/Part 1.1, we suggest the added phrase “and identification of the entity responsible for responding to the specification” be changed to “and identification of the **entities** responsible for responding to the specification”.

For R1/Part 1.5, we suggest some minor edits and re-ordering:

*1.5. Methods **and** criteria for the **entities** identified in Part 1.1 to provide data and information that includes, but is not limited to:*

1.5.1 A mutually agreeable method(s) for securely transferring data and information;

*1.5.2 A mutually agreeable format **for the data and information**;*

1.5.3 Specific deadlines or periodicity in which data and information is to be provided;

1.5.4 Provisions to update or correct data and information, as applicable or necessary; and,

1.5.5 Performance criteria for the availability and accuracy of data and information, as applicable.

For R2/Part 2.1, we suggest the added phrase “and identification of the entity responsible for responding to the specification” be changed to “and identification of the **entities** responsible for responding to the specification”.

For R2/Part 2.5, we suggest some minor edits and re-ordering:

*2.5. Methods **and** criteria for the **entities** identified in Part 1.1 to provide data and information that includes, but is not limited to:*

2.5.1 A mutually agreeable method(s) for securely transferring data and information;

*2.5.2 A mutually agreeable format **for the data and information**;*

2.5.3 Specific deadlines or periodicity in which data and information is to be provided;

2.5.4 Provisions to update or correct data and information, as applicable or necessary; and,

2.5.5 Performance criteria for the availability and accuracy of data and information, as applicable.

Likes 0

Dislikes 0

Response

Constantin Chitescu - Ontario Power Generation Inc. - 5

Answer

Document Name

Comment

OPG supports NPCC Regional Standards Committee's comments.

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer

Document Name

Comment

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003

Answer

Document Name

Comment

No comment

Likes 0

Dislikes 0

Response

Alain Mukama - Hydro One Networks, Inc. - 1

Answer

Document Name

Comment

It is not clear how broadening the scope of the standard from a data specification which is clear, to an overly broad data and information specification adds clarity. It would be more beneficial if the standard covered clear requirements for a data specification that supported Operation Planning Analysis, Real-time monitoring and Real-time Assessment criteria. Information should be clearly defined.

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

Document Name

Comment

MPC supports MRO NERC Standards Review Forum comments.

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer

Document Name

Comment

R1 and R2 Low VRF in VSL Table: "The TOP/BA did not include two or fewer of the parts ..." which is illogical since omitting zero parts would result in a violation. Consider changing to "one or two parts".

Suggest for TOP-003-6 R1 adds similar language: "Performance criteria for the availability and accuracy of data and information, as applicable." (for TOPs)

Please consider that adding a new requirement to TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens.

Likes 0

Dislikes 0

Response

4. Provide any additional comments for the SDT to consider, if desired.

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer

Document Name

Comment

Project 2022-04 updates CIP-012 by adding "availability" per FERC Order 886. We request that updates to IRO-010 and TOP-003's respond to this FERC Order, if they do not already respond. Another alternative is coordination between the two SDTs.

Please consider that adding new requirements to IRO-010-5 and TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens, which was not the intent of this project.

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

Document Name

Comment

MPC supports MRO NERC Standards Review Forum comments.

Likes 0

Dislikes 0

Response

Alain Mukama - Hydro One Networks, Inc. - 1

Answer

Document Name

Comment

An item that is missing is identifying who is accountable for receiving and distributing data in accordance with a data specification submitted by an entity. There should be a consistent approach on how a Transmission Operator receives external data and information needed to support its Operational Planning Analyses, Real-time monitoring and Real-time Assessments. Either the BA or RC should be accountable for distribution of data

required for a TOP to perform its operational planning analysis, Real-time monitoring and Real-time Assessments so that it is consistent between all entities. The purpose of these two standards is to ensure that all entities have the data they need to perform their functions. Consistency should be considered as well as clear requirements and limits instead of broad definitions.

Likes 0

Dislikes 0

Response

Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003

Answer

Document Name

Comment

No comment

Likes 0

Dislikes 0

Response

Alison MacKellar - Constellation - 5

Answer

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Kimberly Turco - Constellation - 6

Answer

Document Name

Comment

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Constantin Chitescu - Ontario Power Generation Inc. - 5

Answer

Document Name

Comment

OPG supports NPCC Regional Standards Committee's comments.

Likes 0

Dislikes 0

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Document Name

Comment

No additional comments.

Likes 0

Dislikes 0

Response

Hillary Creurer - Hillary Creurer On Behalf of: Lori Frisk, Allete - Minnesota Power, Inc., 1; - Hillary Creurer

Answer

Document Name

Comment

Minnesota Power agrees with MRO's NERC Standards Review Forum (NSRF) comments.

Likes 0

Dislikes 0

Response

Bret Galbraith - Seminole Electric Cooperative, Inc. - 6

Answer

Document Name

Comment

Seminole requests:

(1) The Standard Drafting Team to elaborate more on Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions within the technical rationale so that entities can make sure they are capturing all proper analyses.

Likes 0

Dislikes 0

Response

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC

Answer

Document Name

Comment

No additional comments

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Document Name

Comment

We believe the updates made in this draft revision are in line with the SAR and clarify the requirements surrounding data specifications. Furthermore, we believe this revision provides needed clarity to the Violation Severity Levels by aligning them with the revised requirement language.

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

Response

Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power

Answer

Document Name

Comment

Tacoma Power supports MRO NSRF's comments.

Likes 0

Dislikes 0

Response

Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

The primary purpose of the SAR is to simplify administrative burdens, reduce zero-defect expectations and limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency. While the MRO NSRF commends the efforts by the SDT, there are no meaningful updates to the standards which achieve those goals in the new drafts. The nominal changes in language, or relocation of legacy language, doesn't achieve the overarching objectives of the SAR. Without such deliberate updates, consider maintaining the status quo of the current versions of the standards and cancelling the project in its current form. If the SDT elects to proceed, consider the additional comments:

The MRO NSRF still has concerns with the addition of the performance criteria of 'availability' within TOP-003 requirements 1.5.2, 2.5.2 and IRO-010 1.5.2 that without appropriate bounding language or allowances for unavailability (equipment/component failure, maintenance, et cetera). A data requestor may request 100% availability (allowable via the technical rationales), which would then create a 'zero defect' requirement.

Additionally, within the same requirements, MRO NSRF has similar concerns with the performance criteria of 'accuracy' without associated bounding language clearly describing its scope. Without clarification, the interpretation of the term 'accuracy' could vary widely between REs and/or Registered

Entities, fostering incongruities in CMEP monitoring activities. For example, ‘accuracy’ as currently stated could refer either to the comprehensiveness of the overall data set or the precision of each individual data point, but the administrative burden for each is very different.

The MRO NSRF continues to see overlapping areas within the new drafts (IRO-010-5/TOP-003-6 1.5.2 and 1.5.5, TOP-003-6 2.5.2 and 2.5.5) and CIP-012-1 as well as Project 2020-04. Secure data transfer resides within CIP-012 and incorporating it into IRO-010-5 and TOP-003-6 continues to raise the risk of double jeopardy between those standards and CIP-012 in cases of Real Time Monitoring and Real Time Assessment data. The SDT should also coordinate with the Project 2020-04 SDT to ensure no conflicted interpretation of the term “availability” is likely to arise.

MRO NSRF recommends the removal of IRO-010-5 1.4 and TOP-003-5 1.4 and 2.4, as it is unnecessary and too broad. The term “resolving conflicts” could relate to a host of issues outside of the intention of the SDT. The new draft standards already contain provisions to update and correct data and information via 1.5.2 and 2.5.2. The SDT’s white paper also used these as an example of the use of the conflict resolution process, making the publication of an additional conflict resolution process unnecessary. Such a requirement, as described in the Technical Rationales, increases the administrative burden of these standards, rather than lessening. To the extent that two entities require conflict resolution, that can and is done outside of a compliance requirement.

While “mutually agreeable” appears occasionally throughout the NERC Reliability Standards and is a generally understood term, the SDT’s White Paper interpretation of its use within the context of IRO-010-5 and TOP-003-6 increases the administrative burden, compliance responsibility, and data retention requirements related to these standards if documentation regarding collaboration with each entity must be maintained. Mutually Agreeable (page 10 of white paper): The repeated use of the term “mutual agreed upon” is intentional to facilitate collaboration between requestors and respondents in preparing the data specification to ensure the specification is feasible, reasonable, and sufficient. The retention of the word mutual for these requirements suggests that a data specification should be developed collaboratively, to address issues and concerns around the provision and protection of content of the respondent data can be addressed in the specification itself. As such, the MRO NSRF recommends the SDT clarify what administrative or evidence burden is intended by that term within the technical rationale.

Likes 1 Wike Jennie On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry

Dislikes 0

Response

Junji Yamaguchi - Hydro-Quebec (HQ) - 5

Answer

Document Name

Comment

In the previous draft, the SDT agreed with many of our points in regards to inconsistencies with respect to IRO-010 R1 and R2 (low VRF) and R3 (medium VRF) as well as the VSL levels for elements 1.1 through 1.4 and indicated that these would be addressed in Draft 2. We would appreciate any clarifications as to why they seem not to have been addressed.

To adjust to the current draft and to correct an error in the comment, we re-iterate here our comments from the last draft.

Despite FERC having accepted the VRF for the previous version of this standard, the VRF for R1 (low) seems to us inconsistent with respect to the

VRF for R3 (medium). The requirement for an RC (in IRO-010 for example) to identify information essential to reliability (R1.1) cannot logically be less important than an entity's communication of that same information to the RC. Indeed, since an RC's obligation applies to potentially many entities in its Area, it is more impactful for the RC Area's reliability that the RC correctly identify the information needed to satisfy its own reliability obligations than for a single respondent to fail to communicate the information. The VRF for R1 should be moved to Medium or the VRF for R3 should be lowered to Low. Per the VRF and VSL justification document, this inconsistency does not respect Guideline 2.

A similar inconsistency is present for the proposed VSL. As proposed, the VSL for R3 attributes a lower VSL to any single violation of elements 1.1 through 1.4. Meanwhile, a failure to identify a single information per 1.1, 1.2 or 1.3 does not trigger the VSL for R1 which requires that at least two sub-requirements must be violated to qualify for VSL-low.

So, for example, a failure to report information asked for in the specification as per R1.1 or R1.2 or R1.3 is potentially a VRF-medium, VSL-low violation of R3, whereas the failure to identify that same information under R1 would be a VRF-low, VSL-none violation. Since the VSL is not even low, the latter is arguably not a violation at all.

We consider that an identification violation of R1.1, R1.2 or R1.3 individually should be at least as severe as a reporting violation of the same sub-requirements for a non-RC entity via R3. That is, a single identification violation of R1.1, R1.2 or R1.3 should be "lower". Or, the VSL text for R3 should be aligned with the VSL text of R1.

That said, the way R1.5 is written now, a failure to identify in R1.1, R1.2 and R1.3 may perhaps generally trigger a failure to correctly identify an associated administrative communication through in R1.5, thereby triggering a two-element failure and thus a VSL-moderate violation for a failure to identify. In the same way, the failure to communicate per R3 an information specified in R1.1 will likely also be a failure to respect the administrative communication means specified in R1.5, also "promoting" the VSL by one level.

Likes 0

Dislikes 0

Response

Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1

Answer

Document Name

Comment

We believe the updates made in this draft revision are in line with the SAR and clarify the requirements surrounding data specifications. Furthermore, we believe this revision provides needed clarity to the Violation Severity Levels by aligning them with the revised requirement language.

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Quebec (HQ) - 1

Answer

Document Name

Comment

In the previous draft, the SDT agreed with many of our points in regards to inconsistencies with respect to IRO-010 R1 and R2 (low VRF) and R3 (medium VRF) as well as the VSL levels for elements 1.1 through 1.4 and indicated that these would be addressed in Draft 2. We would appreciate any clarifications as to why they seem not to have been addressed.

To adjust to the current draft and to correct an error in the comment, we re-iterate here our comments from the last draft.

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A similar inconsistency is present for the proposed VSL. As proposed, the VSL for R3 attributes a lower VSL to any single violation of elements 1.1 through 1.4. Meanwhile, a failure to identify a single information per 1.1, 1.2 or 1.3 does not trigger the VSL for R1 which requires that at least two sub-requirements must be violated to qualify for VSL-low.

So, for example, a failure to report information asked for in the specification as per R1.1 or R1.2 or R1.3 is potentially a VRF-medium, VSL-low violation of R3, whereas the failure to identify that same information under R1 would be a VRF-low, VSL-none violation. Since the VSL is not even low, the latter is arguably not a violation at all.

We consider that an identification violation of R1.1, R1.2 or R1.3 individually should be at least as severe as a reporting violation of the same sub-requirements for a non-RC entity via R3. That is, a single identification violation of R1.1, R1.2 or R1.3 should be “lower”. Or, the VSL text for R3 should be aligned with the VSL text of R1.

That said, the way R1.5 is written now, a failure to identify in R1.1, R1.2 and R1.3 may perhaps generally trigger a failure to correctly identify an associated administrative communication through in R1.5, thereby triggering a two-element failure and thus a VSL-moderate violation for a failure to identify. In the same way, the failure to communicate per R3 an information specified in R1.1 will likely also be a failure to respect the administrative communication means specified in R1.5, also “promoting” the VSL by one level.

Likes 0

Dislikes 0

Response

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

Document Name

Comment

Evergy supports and incorporates by reference the comments of the MRO NSRF for question #4.

Likes 0

Dislikes 0

Response

Stephen Whaite - Stephen Whaite On Behalf of: Lindsey Mannion, ReliabilityFirst , 10; - Stephen Whaite, Group Name ReliabilityFirst Ballot Body Member and Proxies

Answer

Document Name

Comment

RF thanks the Standard Drafting Team for its consideration of Draft 1 comments and appreciates the opportunity to comment the proposed Draft 2 standard revisions.

Likes 0

Dislikes 0

Response

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Ruchi Shah - AES - AES Corporation - 5

Answer

Document Name

Comment

No additional comments here.

Likes 0

Dislikes 0

Response

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer

Document Name

Comment

Portland General Electric Company does not believe the proposed changes to IRO-010 and TOP-003 provide meaningful improvement on the currently enforceable version of these standards. Given the number of other Standard Development projects responsible entities are currently responding to, IRO-010 and TOP-003 should not be modified at this time.

Likes 0

Dislikes 0

Response

Diana Torres - Imperial Irrigation District - 6

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Document Name

Comment

The NAGF has no additional comments.

Likes 0

Dislikes 0

Response

Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer

Document Name

Comment

Southern Company does not have any further comments.

Likes 0

Dislikes 0

Response

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

Document Name

Comment

BPA appreciates the SDT's explanation that they tried to focus on process. However, process over results is an ineffective way to ensure reliability.

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer

Document Name

Comment

No additional comments

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

Answer

Document Name

Comment

While outside the scope of the current SAR, AECl agrees that TOP-003 R1.3 and its subparts as well as IRO -010-3 R1.3 and its subparts be retired once the recent obligations associated with Project 2021-07 (Extreme Cold Weather) have become enforceable.

Likes 0

Dislikes 0

Response

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

Document Name

Comment

AZPS does not have any additional comments for the SDT at this time.

Likes 0

Dislikes 0

Response

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO

Answer

Document Name

Comment

No comments

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer

Document Name

Comment

While outside the scope of the current SAR, AEP once again recommends that TOP-003 R1.3 and its subparts be deleted once the recent obligations associated with Project 2021-07 (Extreme Cold Weather) have become enforceable. The most recent revisions in Project 2021-07 were developed in the spirit that the standard be flexible and that its obligations be less prescriptive in nature. We believe this same approach should also be taken for TOP-003 in Project 2021-06 as well.

| | |
|---------|--|
| Likes 1 | Associated Electric Cooperative, Inc., 3, Bennett Todd |
|---------|--|

| | |
|------------|--|
| Dislikes 0 | |
|------------|--|

Response

Glen Pruitt - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD Voters

Answer

Document Name

Comment

No Comments

| | |
|---------|--|
| Likes 0 | |
|---------|--|

| | |
|------------|--|
| Dislikes 0 | |
|------------|--|

Response

Consideration of Comments

| | |
|-----------------------------------|--|
| Project Name: | 2021-06 Modifications to IRO-010 and TOP-003 Draft 2 |
| Comment Period Start Date: | 5/5/2023 |
| Comment Period End Date: | 6/21/2023 |
| Associated Ballot(s): | 2021-06 Modifications to IRO-010 and TOP-003 Implementation Plan AB 2 OT 2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 AB 2 ST 2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 AB 2 ST |

There were 64 sets of responses, including comments from approximately 179 different people from approximately 119 companies representing 10 of the Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the [project page](#).

If you feel that your comment has been overlooked, let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, contact Director, Standards Development [Latrice Harkness](#) (via email) or at (404) 858-8088.

Questions

1. To support the proposed modifications, the SDT has revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.
2. Provide any additional comments regarding IRO-010-5 for the SDT to consider.
3. Provide any additional comments regarding TOP-003-6 for the SDT to consider.
4. Provide any additional comments for the SDT to consider, if desired.

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|------------------------------|-----------------|------------|-------------|---|------------------------|---|-------------------------|---------------------|
| BC Hydro and Power Authority | Adrian Andreoiu | 1 | WECC | BC Hydro | Hootan Jarollahi | BC Hydro and Power Authority | 3 | WECC |
| | | | | | Helen Hamilton Harding | BC Hydro and Power Authority | 5 | WECC |
| | | | | | Adrian Andreoiu | BC Hydro and Power Authority | 1 | WECC |
| Midcontinent ISO, Inc. | Bobbi Welch | 2 | MRO,RF,SERC | ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 | Ali Miremadi | CAISO | 2 | WECC |
| | | | | | Kennedy Meier | Electric Reliability Council of Texas, Inc. | 2 | Texas RE |
| | | | | | Helen Lainis | IESO | 2 | NPCC |
| | | | | | Kathleen Goodman | ISO-NE | 2 | NPCC |
| | | | | | Bobbi Welch | MISO | 2 | RF |
| | | | | | Greg Campoli | NYISO | 2 | NPCC |
| | | | | | Elizabeth Davis | PJM | 2 | RF |
| | | | | | Charles Yeung | Southwest Power Pool, Inc. (RTO) | 2 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--|----------------|------------|--------|-------------------------------|-------------------|--|-------------------------|---------------------|
| WEC Energy Group, Inc. | Christine Kane | 3 | | WEC Energy Group | Christine Kane | WEC Energy Group | 3 | RF |
| | | | | | Matthew Beilfuss | WEC Energy Group, Inc. | 4 | RF |
| | | | | | Clarice Zellmer | WEC Energy Group, Inc. | 5 | RF |
| | | | | | David Boeshaar | WEC Energy Group, Inc. | 6 | RF |
| Portland General Electric Co. | Daniel Mason | 6 | | Portland General Electric Co. | Brooke Jockin | Portland General Electric Co. | 1 | WECC |
| | | | | | Adam Menendez | Portland General Electric Co. | 3 | WECC |
| | | | | | Ryan Olson | Portland General Electric Co. | 5 | WECC |
| | | | | | Daniel Mason | Portland General Electric Co. | 6 | WECC |
| Public Utility District No. 1 of Chelan County | Glen Pruitt | 1 | | CHPD Voters | Joyce Gundry | Public Utility District No. 1 of Chelan County | 3 | WECC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|-------------|------------|--------|--------------|-------------------|--|-------------------------|---------------------|
| | | | | | Rebecca Zahler | Public Utility District No. 1 of Chelan County | 5 | WECC |
| | | | | | Anne Kronshage | Public Utility District No. 1 of Chelan County | 6 | WECC |
| Jennie Wike | Jennie Wike | | WECC | Tacoma Power | Jennie Wike | Tacoma Public Utilities | 1,3,4,5,6 | WECC |
| | | | | | John Merrell | Tacoma Public Utilities (Tacoma, WA) | 1 | WECC |
| | | | | | John Nierenberg | Tacoma Public Utilities (Tacoma, WA) | 3 | WECC |
| | | | | | Hien Ho | Tacoma Public Utilities (Tacoma, WA) | 4 | WECC |
| | | | | | Terry Gifford | Tacoma Public Utilities (Tacoma, WA) | 6 | WECC |
| | | | | | Ozan Ferrin | Tacoma Public Utilities (Tacoma, WA) | 5 | WECC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|----------------------|---------------|-------------|---------------------------|--------------------|-------------------|--|-------------------------|---------------------|
| ACES Power Marketing | Jodirah Green | 1,3,4,5,6 | MRO,RF,SERC,Texas RE,WECC | ACES Collaborators | Bob Soloman | Hoosier Energy Electric Cooperative | 1 | RF |
| | | | | | Kevin Lyons | Central Iowa Power Cooperative | 1 | MRO |
| | | | | | Scott Brame | North Carolina Electric Membership Corporation | 3,4,5 | SERC |
| | | | | | Ryan Strom | Buckeye Power, Inc. | 1,5 | RF |
| | | | | | Ryan Strom | Buckeye Power, Inc. | 1,5 | RF |
| Eversource Energy | Joshua London | 1 | | Eversource | Joshua London | Eversource Energy | 1 | NPCC |
| | | | | | Vicki O'Leary | Eversource Energy | 3 | NPCC |
| MRO | Jou Yang | 1,2,3,4,5,6 | MRO | MRO NSRF | Bobbi Welch | Midcontinent ISO, Inc. | 2 | MRO |
| | | | | | Chris Bills | City of Independence, Power and | 5 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|--|-------------------------|---------------------|
| | | | | | | Light Department | | |
| | | | | | Fred Meyer | Algonquin Power Co. | 3 | MRO |
| | | | | | Christopher Bills | City of Independence Power & Light | 3,5 | MRO |
| | | | | | Larry Heckert | Alliant Energy Corporation Services, Inc. | 4 | MRO |
| | | | | | Marc Gomez | Southwestern Power Administration | 1 | MRO |
| | | | | | Matthew Harward | Southwest Power Pool, Inc. (RTO) | 2 | MRO |
| | | | | | Bryan Sherrow | Board of Public Utilities | 1 | MRO |
| | | | | | Terry Harbour | Berkshire Hathaway Energy - MidAmerican Energy Co. | 1 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|-----------------------------------|-------------------------|---------------------|
| | | | | | Terry Harbour | MidAmerican Energy Company | 1,3 | MRO |
| | | | | | Jamison Cawley | Nebraska Public Power District | 1,3,5 | MRO |
| | | | | | Seth Shoemaker | Muscatine Power & Water | 1,3,5,6 | MRO |
| | | | | | Michael Brytowski | Great River Energy | 1,3,5,6 | MRO |
| | | | | | Shonda McCain | Omaha Public Power District | 6 | MRO |
| | | | | | George E Brown | Pattern Operators LP | 5 | MRO |
| | | | | | George Brown | Acciona Energy USA | 5 | MRO |
| | | | | | Jaimin Patel | Saskatchewan Power Cooperation | 1 | MRO |
| | | | | | Kimberly Bentley | Western Area Power Administration | 1,6 | MRO |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|---------------------------------------|----------------|------------|---------------------------|------------------|-------------------|---------------------------------------|-------------------------|---------------------|
| | | | | | Jay Sethi | Manitoba Hydro | 1,3,5,6 | MRO |
| | | | | | Michael Ayotte | ITC Holdings | 1 | MRO |
| Entergy | Julie Hall | 6 | | Entergy | Oliver Burke | Entergy - Entergy Services, Inc. | 1 | SERC |
| | | | | | Jamie Prater | Entergy | 5 | SERC |
| FirstEnergy - FirstEnergy Corporation | Mark Garza | 4 | | FE Voter | Julie Severino | FirstEnergy - FirstEnergy Corporation | 1 | RF |
| | | | | | Aaron Ghodooshim | FirstEnergy - FirstEnergy Corporation | 3 | RF |
| | | | | | Robert Loy | FirstEnergy - FirstEnergy Solutions | 5 | RF |
| | | | | | Mark Garza | FirstEnergy-FirstEnergy | 1,3,4,5,6 | RF |
| | | | | | Stacey Sheehan | FirstEnergy - FirstEnergy Corporation | 6 | RF |
| Southern Company - Southern | Pamela Frazier | 1,3,5,6 | MRO,RF,SERC,Texas RE,WECC | Southern Company | Matt Carden | Southern Company - Southern | 1 | SERC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--------------------------------------|-----------|----------------------|--------|------------|-------------------|--|-------------------------|---------------------|
| Company Services, Inc. | | | | | | Company Services, Inc. | | |
| | | | | | Joel Dembowski | Southern Company - Alabama Power Company | 3 | SERC |
| | | | | | Jim Howell, Jr. | Southern Company - Southern Company Generation | 5 | SERC |
| | | | | | Ron Carlsen | Southern Company - Southern Company Generation | 6 | SERC |
| Northeast Power Coordinating Council | Ruida Shu | 1,2,3,4,5,6,7,8,9,10 | NPCC | NPCC RSC | Gerry Dunbar | Northeast Power Coordinating Council | 10 | NPCC |
| | | | | | Alain Mukama | Hydro One Networks, Inc. | 1 | NPCC |
| | | | | | Deidre Altobell | Con Edison | 1 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-----------------------------------|---|-------------------------|---------------------|
| | | | | | Jeffrey Streifling | NB Power Corporation | 1 | NPCC |
| | | | | | Michele Tondalo | United Illuminating Co. | 1 | NPCC |
| | | | | | Stephanie Ullah-Mazzuca | Orange and Rockland | 1 | NPCC |
| | | | | | Michael Ridolfino | Central Hudson Gas & Electric Corp. | 1 | NPCC |
| | | | | | Randy Buswell | Vermont Electric Power Company | 1 | NPCC |
| | | | | | James Grant | NYISO | 2 | NPCC |
| | | | | | John Pearson | ISO New England, Inc. | 2 | NPCC |
| | | | | | Harishkumar Subramani Vijay Kumar | Independent Electricity System Operator | 2 | NPCC |
| | | | | | Randy MacDonald | New Brunswick Power Corporation | 2 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|--------------------|--|-------------------------|---------------------|
| | | | | | Dermot Smyth | Con Ed - Consolidated Edison Co. of New York | 1 | NPCC |
| | | | | | David Burke | Orange and Rockland | 3 | NPCC |
| | | | | | Peter Yost | Con Ed - Consolidated Edison Co. of New York | 3 | NPCC |
| | | | | | Salvatore Spagnolo | New York Power Authority | 1 | NPCC |
| | | | | | Sean Bodkin | Dominion - Dominion Resources, Inc. | 6 | NPCC |
| | | | | | David Kwan | Ontario Power Generation | 4 | NPCC |
| | | | | | Silvia Mitchell | NextEra Energy - Florida Power and Light Co. | 1 | NPCC |
| | | | | | Glen Smith | Entergy Services | 4 | NPCC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|----------------|------------|--------|------------------------------|-------------------|---|-------------------------|---------------------|
| | | | | | Sean Cavote | PSEG | 4 | NPCC |
| | | | | | Jason Chandler | Con Edison | 5 | NPCC |
| | | | | | Tracy MacNicoll | Utility Services | 5 | NPCC |
| | | | | | Shivaz Chopra | New York Power Authority | 6 | NPCC |
| | | | | | Vijay Puran | New York State Department of Public Service | 6 | NPCC |
| | | | | | ALAN ADAMSON | New York State Reliability Council | 10 | NPCC |
| | | | | | David Kiguel | Independent | 7 | NPCC |
| | | | | | Joel Charlebois | AESI | 7 | NPCC |
| | | | | | John Hastings | National Grid | 1 | NPCC |
| | | | | | Michael Jones | National Grid USA | 1 | NPCC |
| | | | | | Joshua London | Eversource Energy | 1 | NPCC |
| Stephen Whaite | Stephen Whaite | | | ReliabilityFirst Ballot Body | Lindsey Mannion | ReliabilityFirst | 10 | RF |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|--|-----------------|------------|--------|--------------------|-------------------|--|-------------------------|---------------------|
| | | | | Member and Proxies | Stephen Whaite | ReliabilityFirst | 10 | RF |
| Western Electricity Coordinating Council | Steven Rueckert | 10 | | WECC | Steve Rueckert | WECC | 10 | WECC |
| | | | | | Phil O'Donnell | WECC | 10 | WECC |
| Tim Kelley | Tim Kelley | | WECC | SMUD and BANC | Nicole Looney | Sacramento Municipal Utility District | 3 | WECC |
| | | | | | Charles Norton | Sacramento Municipal Utility District | 6 | WECC |
| | | | | | Wei Shao | Sacramento Municipal Utility District | 1 | WECC |
| | | | | | Foung Mua | Sacramento Municipal Utility District | 4 | WECC |
| | | | | | Nicole Goi | Sacramento Municipal Utility District | 5 | WECC |
| | | | | | Kevin Smith | Balancing Authority of Northern California | 1 | WECC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|---------------------------------------|--------------|------------|--------|------------|-------------------|---|-------------------------|---------------------|
| Associated Electric Cooperative, Inc. | Todd Bennett | 3 | | AECI | Michael Bax | Central Electric Power Cooperative (Missouri) | 1 | SERC |
| | | | | | Adam Weber | Central Electric Power Cooperative (Missouri) | 3 | SERC |
| | | | | | Stephen Pogue | M and A Electric Power Cooperative | 3 | SERC |
| | | | | | William Price | M and A Electric Power Cooperative | 1 | SERC |
| | | | | | Peter Dawson | Sho-Me Power Electric Cooperative | 1 | SERC |
| | | | | | Mark Ramsey | N.W. Electric Power Cooperative, Inc. | 1 | NPCC |
| | | | | | John Stickley | NW Electric Power Cooperative, Inc. | 3 | SERC |

| Organization Name | Name | Segment(s) | Region | Group Name | Group Member Name | Group Member Organization | Group Member Segment(s) | Group Member Region |
|-------------------|------|------------|--------|------------|-------------------|---|-------------------------|---------------------|
| | | | | | Tony Gott | KAMO Electric Cooperative | 3 | SERC |
| | | | | | Micah Breedlove | KAMO Electric Cooperative | 1 | SERC |
| | | | | | Kevin White | Northeast Missouri Electric Power Cooperative | 1 | SERC |
| | | | | | Skyler Wiegmann | Northeast Missouri Electric Power Cooperative | 3 | SERC |
| | | | | | Ryan Ziegler | Associated Electric Cooperative, Inc. | 1 | SERC |
| | | | | | Brian Ackermann | Associated Electric Cooperative, Inc. | 6 | SERC |
| | | | | | Brad Haralson | Associated Electric Cooperative, Inc. | 5 | SERC |

| | |
|---|----|
| <p>1. To support the proposed modifications, the SDT has revised the VSLs in both IRO-010-5 and TOP-003-6 to account for the clarified data specification criteria. Do you agree? If you do not agree, or if you agree but have comments or suggestions for the SDT please provide your recommendation and explanation.</p> | |
| <p>Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC</p> | |
| Answer | No |
| Document Name | |
| <p>Comment</p> | |
| <p>The word “use” in VSLs does not apply to all criteria (e.g., R5.) BPA suggests a change to either “meet” or “satisfy.”</p> | |
| Likes | 0 |
| Dislikes | 0 |
| <p>Response</p> | |
| <p>Thank you for your comment. The standard drafting team (SDT) has revised the VSL to incorporate your suggestion.</p> | |
| <p>Stephen Whaite - Stephen Whaite On Behalf of: Lindsey Mannion, ReliabilityFirst , 10; - Stephen Whaite, Group Name ReliabilityFirst Ballot Body Member and Proxies</p> | |
| Answer | No |
| Document Name | |
| <p>Comment</p> | |
| <p>As noted in the comments for questions 2 and 3, RF does not support the inclusion of the “mutually agreeable” language in the clarified IRO-010 R1 and TOP-003 R1 and R2 data specification criteria. The criteria containing the “mutually agreeable” language are referenced in the IRO-010 R1/R3 and TOP-003 R1/R2/R5 VSLs, so RF has selected a “No” response for this question.</p> | |

| | |
|---|----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. The use of "mutually agreeable" language is legacy language pertaining to conflict resolution, transfers, and format. Since these concepts are already approved by FERC as a necessary part of these requirements, the SDT decided to retain. | |
| LaTroy Brumfield - American Transmission Company, LLC - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| By adding more specific requirements to R1.5, the requestor and receiver must track progress and ensure they are meeting those requirements. This would add administrative burden for the requestor and receiver and possibly add zero defect requirements. The requirements in R1.5 appear to build upon the old requirements in TOP-003-5 R5. However, it is unclear why the original language was insufficient, so it is not clear any change is needed. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. The SDT reviewed the noted concerns but believes any additional administrative burden will provide both clarity of expectations and removal of a zero-defect policy for the providers of the data and information as well as provide adequate accuracy and availability to meet the needs of the requestor. | |
| Casey Perry - PNM Resources - 1,3 - WECC,Texas RE | |
| Answer | No |
| Document Name | |
| Comment | |

Recommend “and/or” statement in the Standard Requirements and VSL’s due to not clear on what information is included in the “and information” statement.

Likes 0

Dislikes 0

Response

Thank you for your comment. The SDT discussed the concern and determined to keep the language as currently written, based on the understanding that the requestor's specification must include both the data and information it needs to perform its operational reliability tasks.

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

No

Document Name

Comment

The proposed edits to the VSL tables (IRO-010-5 / R3 and TOP-003-6 / R5), in conjunction with the requirement sub-parts referenced therein, fail to add sufficient clarity. Considering IRO-010-5 for example, the VSL table for R3 references “the criteria in Requirement R1 Parts 1.5” [should it be “Part 1.5” (no “s”)]. R1 Part 1.5 addresses “methods for the entity identified in Part 1.1 to provide data and information”. Is a method for providing data and information synonymous with a criteria for the data and information? Since R1 Part 1.5.2 is the only sub-part to mention performance criteria (as determined by the RC), was it the intent of the drafting team to make the VSL table refer to it (i.e., “...criteria in Requirement R1 Part 1.5.2”)?

With regard to the SAR’s stated purpose to “limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency”, we note that the data retention period for those that provide data and information is unchanged in these Draft 2 standards. The submitting entity is required to “retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications.” However, if the entity’s last audit period has been more than 90 days ago (highly probable), “the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit”. How does this address the unnecessary data retention concern cited in the SAR?

| | |
|---|----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comment. The SDT agrees with your comments regarding singular use of Part, and that using "criteria" may create potential ambiguities and updated the VSL to clarify. In considering the recommendations for data retention in the SAR relating to keeping evidence for an entire audit period, the SDT also considered a subsequent order from FERC rejecting proposed revisions to the NERC Rules of Procedure relating to evidence retention. See N. Am. Elec. Reliability Corp., 179 FERC 61,129 (2022). In that order, FERC stated, "[W]e find that the proposed changes to evidence retention...could result in time periods for which a registered entity may not have sufficient evidence needed to demonstrate compliance. Further, establishing an evidence retention period shorter than the audit period itself, or less than the periods outlined in the Reliability Standards, weakens the incentive for registered entities to remain compliant and demonstrate that compliance with all applicable Reliability Standards at all times." (P 37). Based on the above, the SDT determined not to modify the existing data retention provisions at this time.</p> | |
| Alain Mukama - Hydro One Networks, Inc. - 1 | |
| Answer | No |
| Document Name | |
| Comment | |
| <p>The addition of the words "and Information" to the VSLs does not provide a meaningful change. Further clarification is required on what "information" is being requested.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comment. The drafting team added "and information" to capture types of information not typically associated with the industry's perception of "data" being the "bits and bytes" and how telemetry and SCADA, for example, statuses are perceived. Please see the SDT's white paper for further explanation of the topic.</p> | |
| Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO | |

| | |
|---|-----|
| Answer | Yes |
| Document Name | |
| Comment | |
| No comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| AZPS Agrees with the proposed modification to the VSLs in both IRO-010-5 and TOP-003-6. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro | |
| Answer | Yes |
| Document Name | |
| Comment | |

BC Hydro appreciates the Standard Drafting Team’s efforts and the opportunity to comment. We noted that in the Violation Severity Levels for Requirements R3 of IRO-010-5 and R5 of TOP-003-6, the “obligations of the” wording was removed. Requirements R3 and R5 and their associated measures maintain the “shall satisfy the obligations of the documented specifications” wording.

BC Hydro suggest that the wording be revised to align the Requirements and VSLs for consistency; otherwise, please provide clarification on the materiality of these distinctions if they were intentional.

| | |
|-------|---|
| Likes | 0 |
|-------|---|

| | |
|----------|---|
| Dislikes | 0 |
|----------|---|

Response

Thank you for your comment. Please see changes made to the VSL for R3 and R5.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

Comment

None.

| | |
|-------|---|
| Likes | 0 |
|-------|---|

| | |
|----------|---|
| Dislikes | 0 |
|----------|---|

Response

Thank you for your support.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

| | |
|---------------|-----|
| Answer | Yes |
|---------------|-----|

| | |
|----------------------|--|
| Document Name | |
|----------------------|--|

| | |
|---|-----|
| Comment | |
| Southern Company supports the comments provided by EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment and support. | |
| Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| N/A | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group | |
| Answer | Yes |
| Document Name | |
| Comment | |
| WEC Energy Groups supports EEI and NAGF comments. | |

| | |
|---|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | Yes |
| Document Name | |
| Comment | |
| The NAGF supports the proposed VSL revisions in both IRO-010-5 and TOP-003-6. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | Yes |
| Document Name | |
| Comment | |
| None | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |

| | |
|---|-----|
| Thank you for your support. | |
| Allie Gavin - Allie Gavin On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Allie Gavin | |
| Answer | Yes |
| Document Name | |
| Comment | |
| ITC supports EEI's comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Nicolas Turcotte - Hydro-Quebec (HQ) - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| <p>R1 Low VRF in VSL Table: "The Reliability Coordinator did not include two or fewer of the parts ..." which is illogical since omitting zero parts would result in a violation. Consider changing to "one or two parts".</p> <p>Version history table: Version 3 indicates that FERC approved IRO-010-2 in Docket RD20-4-000. Please correct to IRO-010-3 as v3 was part of the Standards Alignment with Registration Project in RD20-4-000.</p> <p>Suggest for IRO-010-5 adds 1.5.2 which says, "Performance criteria for the availability and accuracy of data and information, as applicable." (for RCs)</p> | |

Please consider that adding a new requirement to IRO-010-5 involving the availability and accuracy of data and information may increase administrative burden.

Likes 0

Dislikes 0

Response

Thank you for your comment. The SDT accepts your suggested change to the VSL table and the version table will be reconciled for the final ballot. The SDT reviewed the noted concerns but believes any additional administrative burden will provide both clarity of expectations and removal of a zero-defect policy for the providers of the data and information as well as provide adequate accuracy and availability to meet the needs of the requestor.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Yes

Document Name

Comment

EEl does not object to the changes made to the VSLs in IRO-010-5 and TOP-003-6.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Yes

Document Name

Comment

Texas RE noticed the following in the VSLs for TOP-003-6:

- In order to be consistent, Texas RE recommends adding “and information” in the latter part of the “or” statement in the R1 and R2 severe VSL.
- It appears that in the R4 VSL, data should not be capitalized.
- In the high VSL for R5, it should state R1.5, not R15.

Texas RE noticed the following the VSLs for IRO-010-5:

- In order to be consistent, Texas RE recommends adding “and information” in the latter part of the “or” statement in the R1 severe VSL.
- In the Lower, Moderate, and High VSLs for R3, “part” should not be plural since it is only referencing Part 1.5.

Likes 0

Dislikes 0

Response

Thank you for your comment. The SDT agrees and has made conforming changes regarding data not being capitalized. The SDT discussed the concern and determined to keep the language as currently written, based on the understanding that the requestor's specification must include both the data and information it needs to perform its operational reliability tasks.

Daniel Gacek - Exelon - 1

Answer

Yes

Document Name

Comment

Exelon supports the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

| | |
|--|-----|
| Thank you for your support. | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by the EEI. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Ameren supports EEI's comments on this project. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | Yes |

| | |
|---|-----|
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Kimberly Turco on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | Yes |
| Document Name | |

| | |
|---|-----|
| Comment | |
| MPC supports MRO NERC Standards Review Forum comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 3 - WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Thomas Foltz - AEP - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |

| | |
|---|-----|
| Response | |
| Thank you for your support. | |
| Glen Pruitt - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD Voters | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Julie Hall - Entergy - 6, Group Name Entergy | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | Yes |
| Document Name | |

| Comment | |
|--|-----|
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| James Keele - Entergy - 3 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Michael Courchesne - ISO New England, Inc. - 2 - NPCC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |

| | |
|--|-----|
| Thank you for your support. | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Gordon Joncic - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|---|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Richard Jackson - U.S. Bureau of Reclamation - 1,5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Claudine Bates - Black Hills Corporation - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |

| | |
|--|-----|
| Sheila Suurmeier - Black Hills Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Micah Runner - Black Hills Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Rachel Schuldt - Rachel Schuldt On Behalf of: Josh Combs, Black Hills Corporation, 5, 6, 1, 3; - Rachel Schuldt | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |

| | |
|--|-----|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Ruchi Shah - AES - AES Corporation - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |

Israel Perez - Israel Perez On Behalf of: Mathew Weber, Salt River Project, 3, 1, 6, 5; Sarah Blankenship, Salt River Project, 3, 1, 6, 5; Thomas Johnson, Salt River Project, 3, 1, 6, 5; Timothy Singh, Salt River Project, 3, 1, 6, 5; - Israel Perez

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Thank you for your support.

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Thank you for your support.

Joshua London - Eversource Energy - 1, Group Name Eversource

Answer Yes

Document Name

Comment

| | |
|---|-----|
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |

| | |
|--|-----|
| Thank you for your support. | |
| Junji Yamaguchi - Hydro-Quebec (HQ) - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Teresa Krabe - Lower Colorado River Authority - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | Yes |
| Document Name | |
| Comment | |

| | |
|--|-----|
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|--|-----|
| Thank you for your support. | |
| Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Pedro Juarez, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Stephen Stafford - Georgia Transmission Corporation - NA - Not Applicable - SERC | |
| Answer | Yes |

| | |
|---|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Hillary Creurer - Hillary Creurer On Behalf of: Lori Frisk, Allete - Minnesota Power, Inc., 1; - Hillary Creurer | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Constantin Chitescu - Ontario Power Generation Inc. - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |

| | |
|---|-----|
| Response | |
| Thank you for your support. | |
| Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Dwanique Spiller - Berkshire Hathaway - NV Energy - 5 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 | |
| Answer | Yes |

| | |
|---|-----|
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Mike Magruder - Avista - Avista Corporation - 1 | |
| Answer | Yes |
| Document Name | |
| Comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | |
| Document Name | |
| Comment | |
| Portland General Electric Company supports comments provided by the EEI. | |
| Likes 0 | |

Dislikes 0

Response

Thank you for your support.

| | |
|--|---|
| 2. Provide any additional comments regarding IRO-010-5 for the SDT to consider. | |
| Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | |
| Document Name | |
| Comment | |
| <p>R1 Low VRF in VSL Table: “The Reliability Coordinator did not include two or fewer of the parts ...” which is illogical since omitting zero parts would result in a violation. Consider changing to “one or two parts”.</p> <p>Version history table: Version 3 indicates that FERC approved IRO-010-2 in Docket RD20-4-000. Please correct to IRO-010-3 as v3 was part of the Standards Alignment with Registration Project in RD20-4-000.</p> <p>Suggest for IRO-010-5 adds 1.5.2 which says, “Performance criteria for the availability and accuracy of data and information, as applicable.” (for RCs)</p> <p>Please consider that adding a new requirement to IRO-010-5 involving the availability and accuracy of data and information may increase administrative burdens.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comment. The SDT team accepts your suggested change to the VSL table and the version table will be reconciled for the final ballot. The SDT reviewed the noted concerns but believes any additional administrative burden will provide both clarity of expectations and removal of a zero-defect policy for the providers of the data and information as well as provide adequate accuracy and availability to meet the needs of the requestor.</p> | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |

| | |
|---|--|
| Answer | |
| Document Name | |
| Comment | |
| MPC supports MRO NERC Standards Review Forum comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Alain Mukama - Hydro One Networks, Inc. - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| It is not clear how broadening the scope of the standard from a data specification which is clear, to an overly broad data and information specification adds clarity. It would be more beneficial if the standard covered clear requirements for a data specification that supported Operation Planning Analysis, Real-time monitoring and Real-time Assessment criteria. Information should be clearly defined. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. The SDT is not proposing any substantive changes and believes the current language is not overly broad but sufficient to achieve the stated purpose of the standard. | |
| Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003 | |

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| No comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Alison MacKellar - Constellation - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Alison Mackellar on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Kimberly Turco - Constellation - 6 | |
| Answer | |
| Document Name | |

| | |
|--|---|
| Comment | |
| Constellation has no additional comments. | |
| Kimberly Turco on behalf of Constellation Segments 5 and 6 | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comments. | |
| Constantin Chitescu - Ontario Power Generation Inc. - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| OPG supports NPCC Regional Standards Committee’s comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |
| Answer | |
| Document Name | |
| Comment | |

We suggest that the standard title reflected in the page headers be consistent with the title in section A.1.

For the Purpose statement in section A.3, we suggest that “Monitor” not be capitalized since it’s not a defined term in the NERC Glossary of Terms. We would also prefer an Oxford comma be placed after monitor – “...plan, monitor, and assess...”. This would also be consistent with the purpose statement phrasing in Draft 2 of TOP-003-6.

We believe the Project reference in section A.5 should be updated to “Project 2021-06”, rather than “Project 2019-06”.

For R1/Part 1.1, we suggest the added phrase “and identification of the entity responsible for responding to the specification” be changed to “and identification of the **entities** responsible for responding to the specification”.

For R1/Part 1.5, we suggest some minor edits and re-ordering:

*1.5. Methods **and criteria** for the **entities** identified in Part 1.1 to provide data and information that includes, but is not limited to:*

1.5.1 A mutually agreeable method(s) for securely transferring data and information;

*1.5.2 A mutually agreeable format **for the data and information**;*

1.5.3 Specific deadlines or periodicity in which data and information is to be provided;

1.5.4 Provisions to update or correct data and information, as applicable or necessary; and,

1.5.5 Performance criteria for the availability and accuracy of data and information, as applicable.

| | |
|----------|---|
| Likes | 0 |
| Dislikes | 0 |

Response

Thank you for your support. The SDT reviewed the comments and made structural, grammatical or errata non-substantive changes as necessary.

Hillary Creurer - Hillary Creurer On Behalf of: Lori Frisk, Allele - Minnesota Power, Inc., 1; - Hillary Creurer

| | |
|---|--|
| Answer | |
| Document Name | |
| Comment | |
| Minnesota Power agrees with EEI's comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| Ameren recommends section 1.5.1 to read "Mutually agreeable deadlines or periodicity in which data and information is to be provided;". Also, the proposed wording in section 1.5.5 is plurally incorrect. The wording in R3 changes from singular "specification" to plural "specifications". | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. For Section 1.5.1, the SDT considers requirement R1.4 to address any need to resolve conflicts including any disagreements on deadlines or periodicity and is not proposing to modify the requirement as suggested. The SDT recognizes that the identification of deadlines or periodicity is best determined by the requestor who is responsible for the reliability tasks for which the data and information is needed. The grammar in Requirement 1.5.5, Requirement 3, and the associated measures have been corrected. | |

| | |
|--|--|
| Kinte Whitehead - Exelon - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by the EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Daniel Gacek - Exelon - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by the EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Casey Perry - PNM Resources - 1,3 - WECC,Texas RE | |
| Answer | |
| Document Name | |

| Comment | |
|--|---|
| PNM agrees with and supports EEI's comments related to IRO-010-5. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC | |
| Answer | |
| Document Name | |
| Comment | |
| WECC generally supports the proposed revisions, but has a slight concern with the language in Part 1.4. The requirement is applicable to the RC, but requires a "mutually agreeable process." The RC could have difficulty complying with the language of Part 1.4 if the other identified entities will not agree to a process. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF | |
| Answer | |
| Document Name | |
| Comment | |

| | |
|--|---|
| 1.5.5 has a grammatical error with the use of “A” (singular) and “methods” (plural). How it is corrected may change the interpretation. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. The grammar in Requirement 1.5.5 has been corrected. | |
| Junji Yamaguchi - Hydro-Quebec (HQ) - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>1. R1 Low VRF in VSL Table: “The Reliability Coordinator did not include two or fewer of the parts ...” which is illogical since omitting zero parts would result in a violation. Consider changing to “one or two parts”.</p> <p>2. Version history table: Version 3 indicates that FERC approved IRO-010-2 in Docket RD20-4-000. Please correct to IRO-010-3 as v3 was part of the Standards Alignment with Registration Project in RD20-4-000.</p> <p>Suggest for IRO-010-5 adds 1.5.2 which says, “Performance criteria for the availability and accuracy of data and information, as applicable.” (for RCs)</p> <p>Please consider that adding a new requirement to IRO-010-5 involving the availability and accuracy of data and information may increase administrative burdens.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. The SDT accepts your suggested change to the VSL table and the version table will be reconciled for the final ballot. The SDT reviewed the noted concerns but believes any additional administrative burden will provide both clarity of | |

expectations and removal of a zero-defect policy for the providers of the data and information as well as provide adequate accuracy and availability to meet the needs of the requestor.

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE noticed the Effective Date section on both TOP-003-5 and IRO-010-5 need to be updated to reflect the implementation plan for Project 2021-06.

Texas RE noticed the applicability section is formatted inconsistently with other standards, which show:

4. Applicability

4.1 Functional Entities

4.1.1 [Functional Entity #1]

4.1.2 [Functional Entity #2]

If the SDT elects to make this change, Texas RE recommends Requirement Part 1.5 state: “Methods for the *functional* entity identified in Part 1.1 to provide the data and information that includes, but is not limited to:”

In requirement Part 1.5, “methods” should be singular.

Texas RE noticed the implementation plan contains a consideration for “developing provisions for using intermediary entities to provide data”. Texas RE recommends the requirement language reflect this idea as this regularly occurs in the ERCOT region with information from the TOP to the BA. Texas RE recommends the following language:

1.6 Provisions for the identification of any data and information where the responsible respondent identified in Part 1.1 will utilize an intermediary party to pass through the data and information unaltered from the responsible entities to the Transmission Operator.

This language is also consistent with CIP-012-1, which requires protection of data even through the intermediary entity.

In order to be consistent throughout the entire standard document, Texas RE recommends Section C “Compliance” be revised to remove use of “data” where included in “data specification” (in the last three paragraphs of Section C 1.2) to be consistent with proposed Requirement language changes in Requirements R2 and R3.

Texas RE recommends adding “and information” in the Evidence Retention Section for IR-010-5 Requirement R1: “The Reliability Coordinator shall retain its dated, current, in force documented specification for the data *and information* necessary...”.

In the Evidence Retention Section for IR-010-5, Texas RE suggests capitalizing Compliance Audit or saying simply audit in the third paragraph as in the first paragraph.

Likes 0

Dislikes 0

Response

Thank you for your support. The SDT has made grammatical and inconsistency changes where appropriate. The SDT did not reinsert the usage of "intermediary entities" as commenters in previous drafts were not supportive and stated that entities could manage such situations outside of a NERC Reliability Standard requirement.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Document Name

Comment

EI continues to have concerns with the proposed changes made to IRO-010-5 and question whether the proposed changes provide any discernible reliability benefits over the currently effective Reliability Standard. However, we offer the following edits to address our concerns with the current draft:

Requirement R1.

Part 1.1: The data and information should be specifically directed to “NERC registered entities” not entities “responsible for responding”. Entities who are not registered by NERC have no regulatory obligation to respond to data and information requests. Additionally, the identified NERC registered entity can only provide requested data and information that is under that entity’s direct control and access. To address these concern, the following suggested edits in bold are provided below:

A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, **if under the control and access of the identified NERC registered entity**, external network data and information, and identification of the **NERC registered** entity for responding to the specification as deemed necessary by the Reliability Coordinator.

Part 1.5: The methods identified should all be mutually agreed to, not just those in the subparts of Part 1.5.

Subpart 1.5.2: EEI does not support the inclusion of performance criteria for IRO-010-5 and asks that subpart 1.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary. Applying performance criteria to the delivery of data and information expands the administrative burden on entities creating a zero defect requirement that this project was intended to correct.

Measure M1: EEI suggests the following additional language to M1 (see bold text):

Each Reliability Coordinator shall make available its dated, current, in force documented specification for data and information **that conform to mutually agreed to methods, criteria, formats and secure transfer of data and information by the entities identified in Part 1.1.**

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT decided against specifying NERC registered entities since this will be inconsistent with other reliability standards. Section A 4 1 identifies the NERC functional entities. The SDT believes the mutually agreeable process for resolving conflicts in Requirement R1.4 will facilitate resolution of any conflicts. Regarding language 1.5, this process for resolution in conflict would address any issues of infusible request of data and information. Therefore, the SDT is not proposing to make these changes to Requirement R1.5.

| | |
|--|--|
| Nicolas Turcotte - Hydro-Quebec (HQ) - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>R1 and R2 Low VRF in VSL Table: “The TOP/BA did not include two or fewer of the parts ...” which is illogical since omitting zero parts would result in a violation. Consider changing to “one or two parts”.</p> <p>Suggest for TOP-003-6 R1 adds similar language: “Performance criteria for the availability and accuracy of data and information, as applicable.” (for TOPs)</p> <p>Please consider that adding a new requirement to TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>Thank you for your support. The SDT reviewed the noted concerns for VSL table and have made changes where appropriate. The SDT believes any additional administrative burden will provide both providing clarity of expectations and removal of a zero defect policy for the providers of the data and information as well as provide adequate accuracy and availability to meet the needs of the requestor.</p> | |
| <p>Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster</p> | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for quesiton #2.</p> | |

| | |
|---|---|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Stephen Whaite - Stephen Whaite On Behalf of: Lindsey Mannion, ReliabilityFirst , 10; - Stephen Whaite, Group Name ReliabilityFirst Ballot Body Member and Proxies | |
| Answer | |
| Document Name | |
| Comment | |
| <p>In response to the comment RF submitted for question 3 of the previous comment period, the SDT indicated “The SDT discussed the issue [w/ requiring mutually agreeable criteria to be included in the data specifications] and notes that the legacy language includes “mutually agreeable” paradigms already, and, therefore, has decided to keep that vernacular.”</p> <p>In response to the above consideration of comments, RF notes that the legacy language places the responsibility for satisfying the obligations of the data specification using “mutually agreeable” means on the specification recipient.</p> <p>RF reinforces that the RC (R1) should not be responsible for ensuring its data specification is mutually agreeable to every specification recipient (potentially 100s of receiving entities). The "mutually agreeable" language should be removed from the proposed IRO-010-5 R1 subparts regarding data formats, security protocols, and conflict resolution processes. It is unclear how mutually agreeable formats, security protocols, and conflict resolution processes could be included in a data specification prior to it being distributed to the entities responsible for responding. As currently drafted, demonstrating criteria within a specification are mutually agreeable would require the creator of the specification to maintain evidence that each of the many recipients of the specification accepts each “mutually agreeable” criteria.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |

Thank you for your support. The SDT is not proposing to make any changes. The SDT believes that most data and information is already being communicated via the existing specifications under IRO-010 and TOP-003 today. The SDT believes that locating and documenting the mutually agreeable formats and methods for securely transferring data and information in the data specification helps to provide clarity both for existing recipients of the specification and new entities as well. The format and security of the data an information must typically be addressed to allow for the provision of this information and is typically already agreed to and in place today. The mutually agreeable conflict resolution process is similarly required today just not documented in the specification. This process will help to alleviate conflicts between what is requested in Requirements R1.5.1, R1.5.2 and R1.5.3 by the requestor and concerns raised by the providers (e.g., infeasibility of meeting the periodicity or deadlines) of the data and information.

Allie Gavin - Allie Gavin On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Allie Gavin

Answer

Document Name

Comment

ITC supports EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your support.

Joshua London - Eversource Energy - 1, Group Name Eversource

Answer

Document Name

Comment

Eversource agrees with the comments submitted by EEI and does not support the inclusion of performance criteria for IRO-010-5 and asks that subpart 1.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary.

Likes 0

Dislikes 0

Response

Thank you for your support.

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Thank you for your response.

Ruchi Shah - AES - AES Corporation - 5

Answer

Document Name

Comment

AESCE understands and agrees with the need for availability and accuracy of data and information under R1.5.2. However, AESCE would like to point out that criteria to ensure data accuracy must be practical to GO/GOP resources as well as mindful of the ability to demonstrate compliance with the sub-requirement.

AESCE also supports NAGF's comment regarding these changes.

Likes 0

Dislikes 0

Response

Thank you for your support. The SDT believes the mutually agreeable process for resolving conflicts in Requirement R1.4 will facilitate resolution of any conflicts and balance the needs for reliability and GO/GOP resource impact.

Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co.

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Thank you for your response.

Diana Torres - Imperial Irrigation District - 6

Answer

Document Name

Comment

| | |
|---|---|
| None | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your response. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | |
| Document Name | |
| Comment | |
| None. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your response. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | |
| Document Name | |
| Comment | |
| The NAGF is concerned with how a GO/GOP would demonstrate the accuracy of data and information under R1.5.2. While the NAGF understands the need for and supports the communication of accurate data/information, criteria to ensure data accuracy needs to be practical and cognizant of limited GO/GOP resources. | |

For R1.5.3, the NAGF questions the value of potentially having to correct/update historical data.

Likes 0

Dislikes 0

Response

Thank you for your support. The SDT believes the mutually agreeable process for resolving conflicts in Requirement R1.4 will facilitate resolution of any conflicts and balance the needs for reliability and GO/GOP resource impact. Requirement R1.5.3 recognizes the variety of different types of data and information, some of which does require duplicating or correct data and information (e.g., models, status, capability, limitations, etc.) and is not prescriptive to allow for flexibility to account for such variety. The SDT included "as applicable or necessary" to allow for instances where it may not be appropriate or needed (e.g., static data and information that never changes).

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer

Document Name

Comment

WEC Energy Groups supports EEI and NAGF comments.

Likes 0

Dislikes 0

Response

Thank you for your comments

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer

Document Name

Comment

Reclamation recommends the Project 2021-06 drafting team coordinate with the Project 2020-04 drafting team regarding use of the terms “availability” and “accuracy,” e.g., as used in IRO-010 R1.5.2. The CIP-012 terms “confidentiality,” “integrity,” and “availability” carry the same intent; therefore, for consistency, Reclamation recommends the language in the two standards should align.

Likes 0

Dislikes 0

Response

Thank you for your support. While the SDT acknowledges that there is potential for some overlap between the standards proposed by this committee and CIP-012-2 with regards to the availability of Real-time Assessment and real-time monitoring data, CIP-012 does not include Operational Planning Analysis or balancing authority analysis in its applicability and is not redundant. It is possible that a CIP-012 violation could result in a failure to meet the performance criteria set forth in a required data specification and potential violations for both TOP-003-6 and IRO-010-5. This situation is not unique to these standards and violations should be evaluated on a case-by-case basis by the ERO in its enforcement.

Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

Thank you for your response.

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| Southern Company supports the comments provided by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. Please see response to EEI's comment. | |
| Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | |
| Document Name | |
| Comment | |
| The edits proposed do not meet the goals set forth by SER Phase 2 and the SAR. Industry would be better served not to open the standards. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. The SDT is not proposing any substantive changes and believes the current language does meet the goals set forth by the SAR and documented its comprehensive review of requirements identified in SER Phase 2. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | |
| Document Name | |

Comment

Duke Energy is concerned with how a GO/GOP would demonstrate the accuracy of data and information under R1.5.2. Please define the implied accuracy specification and communication of data and information.

For R1.5.3, please define the parameters and limits for the correction and update of historical data.

Likes 0

Dislikes 0

Response

Thank you for your support. For Requirement R1.5.2, while some information may not have an applicable "accuracy" component for design or calibration, most data could have an accuracy requirement (e.g., 3% (typical of relay grade telemetry), 1% (typical of metering grade telemetry)).

Requirement R1.5.3 recognizes the variety of different types of data and information, some of which does require updating or correct data and information (e.g., models, status, capability, limitations, etc.) and is not prescriptive to allow for flexibility to account for such variety. The SDT included "as applicable or necessary" to allow for instances where it may not be appropriate or needed (e.g., static data and information that never changes). The requirement also does not specify an update of "historical" data but is flexible as needed to facilitate the needs for the RC, BA, or TOP to conduct their required reliability tasks (e.g., if historical data correction is needed to facilitate future forecast applications).

Donald Lock - Talen Generation, LLC - 5

Answer

Document Name

Comment

The standards in question are becoming impractical regarding compiling compliance evidence, and rather than making them even more complex in this respect (e.g. adding, "Performance criteria for the availability and accuracy of data and information") IRO-010-5 and TOP-003-06 should roll-back some of the overreach in their previous revisions. Generating unit minimum design/historical/analysis temperature should be a once-and-done input, for example, since these values will not change in the midst of a winter storm. The same

should be done for cold weather operating limitations, with any real-time changes for fuel supply, emissions etc being reported by the same means that plants are already using for all (not just weather-related) issues affecting operations.

The Measures sections of IRO-010 and TOP-003 should also make it mandatory that receiving entities issue attestations for compliant units, rather than just leaving this as a possibility, if they use portal systems that swallow data inputs without leaving any electronic or hard copy record of transmittals.

Likes 0

Dislikes 0

Response

Thank you for your support. The SDT reviewed the noted concerns but has not proposed any additional edits for these concerns. The SDT included performance criteria for the availability and accuracy of data and information requirements to allow for the data specification to clearly identify the non-zero-defect policy for data and information as appropriate. While there may be some data and information that requires infrequent or no updates, some data information, including cold weather limitations may be updated annually or even within a season if a major cold weather event occurs to facilitate Balancing Authority analysis needs as determined by the BA. Additionally the SDT does not believe it is appropriate to include requirements in the measure sections and did not have any clear SAR scope to require attestations for compliance means from the requestors of the data information which would be overly burdensome and administrative for RC, BAs, and TOPs for all providers of the data and information.

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

Document Name

Comment

AZPS does not have any addition comments regarding IRO-010-5 at this time.

Likes 0

Dislikes 0

Response

| | |
|---|--|
| Thank you for your support. | |
| Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO | |
| Answer | |
| Document Name | |
| Comment | |
| No comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Glen Pruitt - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD Voters | |
| Answer | |
| Document Name | |
| Comment | |
| No comment | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |

| | |
|--|--|
| 3. Provide any additional comments regarding TOP-003-6 for the SDT to consider. | |
| Glen Pruitt - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD Voters | |
| Answer | |
| Document Name | |
| Comment | |
| <p>The title change from Operational Reliability does seem necessary as this was vague, however, the current proposed title is only descriptive of the Specification and not the data it applies to. Also, collection seems to be tacked on at the end when it should be a descriptor of the specification. The Operational Reliability title was important to understand the scope of data and information that the specification applies to. Here are some alternative options to consider:</p> <ol style="list-style-type: none"> 1. Transmission Operator and Balancing Authority Data, Information and Collection Specification for Operational Reliability 2. Transmission Operator and Balancing Authority Data, Information and Collection Specification 3. Transmission Operator and Balancing Authority Specification for Operational Reliability | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. The SDT has made additional edits to the proposed title. | |
| Thomas Foltz - AEP - 5 | |
| Answer | |
| Document Name | |
| Comment | |

While the following text was not a revision proposed by the SDT, we believe the existing phrase “in force” within M1 could be improved and clarified by using another word or phrase in its place. Potential ideas for consideration might include “currently in effect” or “as currently used in practice” so that it instead states “its dated, documented specification currently in effect for data and information” or “its dated, documented specification as currently used in practice for data and information.”

Likes 0

Dislikes 0

Response

Thank you for your comments. The SDT and decided against the suggestion since it is legacy language from other related standards.

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO

Answer

Document Name

Comment

No comments

Likes 0

Dislikes 0

Response

Thank you for your response.

Marcus Bortman - APS - Arizona Public Service Co. - 6

Answer

Document Name

Comment

| | |
|---|---|
| AZPS does not have any addition comments regarding TOP-003-6 at this time. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support and comment. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| See our response for Question #2 above. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |
| Answer | |
| Document Name | |
| Comment | |
| Please see the response for Question #2 in regard to TOP-003-6 R1.5.2 and R1.5.3. | |
| Likes | 0 |

| | |
|--|---|
| Dislikes | 0 |
| Response | |
| <p>Thank you for your support. For Requirement R1.5.2, while some information may not have an applicable "accuracy" component for design or calibration, most data could have an accuracy requirement (e.g., 3% (typical of relay grade telemetry), 1% (typical of metering grade telemetry)).</p> <p>Requirement R1.5.3 recognizes the variety of different types of data and information, some of which does require updating or correct data and information (e.g., models, status, capability, limitations, etc.) and is not prescriptive to allow for flexibility to account for such variety. The SDT included "as applicable or necessary" to allow for instances where it may not be appropriate or needed (e.g., static data and information that never changes). The requirement also does not specify an update of "historical" data but is flexible as needed to facilitate the needs for the RC, BA, or TOP to conduct their required reliability tasks (e.g., if historical data correction is needed to facilitate future forecast applications).</p> | |
| Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | |
| Document Name | |
| Comment | |
| <p>The edits proposed do not meet the goals set forth by SER Phase 2 and the SAR. Industry would be better served not to open the standards.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your support. The SDT is not proposing any substantive changes and believes the current language does meet the goals set forth by the SAR and documented its comprehensive review of requirements identified in SER Phase 2.</p> | |
| Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company | |

| | |
|---|--|
| Answer | |
| Document Name | |
| Comment | |
| Southern Company supports the comments provided by EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF | |
| Answer | |
| Document Name | |
| Comment | |
| N/A | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Richard Jackson - U.S. Bureau of Reclamation - 1,5 | |
| Answer | |
| Document Name | |
| Comment | |

Reclamation recommends the Project 2021-06 drafting team coordinate with the Project 2020-04 drafting team regarding use of the term’s “availability” and “accuracy,” e.g., as used in TOP-003 R1.5.2 and R2.5.2. The CIP-012 terms “confidentiality,” “integrity,” and “availability” carry the same intent; therefore, for consistency, Reclamation recommends the language in the two standards should align.

Reclamation recommends grammatical corrections to the Purpose section of TOP-003 to properly address two entities. For example:

Purpose: To ensure that each Transmission Operator and Balancing Authority has the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.

Likes 0

Dislikes 0

Response

Thank you for your support. While the SDT acknowledges that there is potential for some overlap between the standards proposed by this committee and CIP-012-2 with regards to the availability of Real-time Assessment and real-time monitoring data, CIP-012 does not include Operational Planning Analysis or balancing authority analysis in its applicability and is not redundant. It is possible that a CIP-012 violation could result in a failure to meet the performance criteria set forth in a required data specification and potential violations for both TOP-003-6 and IRO-010-5. This situation is not unique to these standards and violations should be evaluated on a case-by-case basis by the ERO in its enforcement. The SDT made changes to the purpose section as well.

Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group

Answer

Document Name

Comment

WEC Energy Groups supports EEI and NAGF comments.

Likes 0

Dislikes 0

Response

| | |
|---|--|
| Thank you for your support. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | |
| Document Name | |
| Comment | |
| Please see the comments for Question #2 in regard to TOP-003-6 R1.5.2 and R1.5.3. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter | |
| Answer | |
| Document Name | |
| Comment | |
| None. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Diana Torres - Imperial Irrigation District - 6 | |
| Answer | |

| | |
|---|--|
| Document Name | |
| Comment | |
| None | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | |
| Document Name | |
| Comment | |
| N/A | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Ruchi Shah - AES - AES Corporation - 5 | |
| Answer | |
| Document Name | |
| Comment | |

| | |
|--|---|
| Same response as question 2 for TOP-003-6 1.5.2 and 2.5.2. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. The SDT believes the mutually agreeable process for resolving conflicts in Requirement R1.4 will facilitate resolution and balance the needs for reliability and GO/GOP resource impact. | |
| Donna Wood - Tri-State G and T Association, Inc. - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| N/A | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your response. | |
| Joshua London - Eversource Energy - 1, Group Name Eversource | |
| Answer | |
| Document Name | |
| Comment | |

Subpart 1.5.2: Eversource agrees with the comments submitted by EEI and does not support the inclusion of performance criteria for TOP-003-6 and asks that subpart 1.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary.

Subpart 2.5.2: Eversource agrees with the comments submitted by EEI and does not support the inclusion of performance criteria for TOP-003-6 and asks that subpart 2.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary.

Likes 0

Dislikes 0

Response

Thank you for your support. The SDT is not proposing to remove Requirement R1.5.2 and R2.5.2 as this allows clarity on accuracy and availability of data and information requirements to allow for a non-zero defect compliance approach as requested in the SAR.

Allie Gavin - Allie Gavin On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Allie Gavin

Answer

Document Name

Comment

ITC supports EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please see the response to EEI's comment.

Stephen Whaite - Stephen Whaite On Behalf of: Lindsey Mannion, ReliabilityFirst , 10; - Stephen Whaite, Group Name ReliabilityFirst Ballot Body Member and Proxies

| | |
|---|---|
| Answer | |
| Document Name | |
| Comment | |
| <p>In response to the comment RF submitted for question 3 of the previous comment period, the SDT indicated “The SDT discussed the issue [w/ requiring mutually agreeable criteria to be included in the data specifications] and notes that the legacy language includes “mutually agreeable” paradigms already, and, therefore, has decided to keep that vernacular.”</p> <p>In response to the above consideration of comments, RF notes that the legacy language places the responsibility for satisfying the obligations of the data specification using “mutually agreeable” means on the specification recipient.</p> <p>RF reinforces that the TOP (R1) and BA (R2) should not be responsible for ensuring its data specification is mutually agreeable to every specification recipient (potentially 100s of receiving entities). The "mutually agreeable" language should be removed from the proposed TOP-003-6 R1 and R2 subparts regarding data formats, security protocols, and conflict resolution processes. It is unclear how mutually agreeable formats, security protocols, and conflict resolution processes could be included in a data specification prior to it being distributed to the entities responsible for responding. As currently drafted, demonstrating criteria within a specification are mutually agreeable would require the creator of the specification to maintain evidence that each of the many recipients of the specification accepts each “mutually agreeable” criteria.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your support. The SDT is not proposing to make any changes and believes that most data and information is already being communicated via the existing specifications under IRO-010 and TOP-003 today. The SDT believes that locating and documenting the mutually agreeable formats and methods for securely transferring data and information in the data specification helps to provide clarity both for existing recipients of the specification and new entities as well. The format and security of the data an information must typically be addressed to allow for the provision of this information and is typically already agreed to and in place today. The mutually agreeable conflict resolution process is similarly required today just not documented in the specification. This process will help to alleviate conflicts between what is requested in Requirements R1.5.1, R1.5.2 and R1.5.3 by the requestor and concerns raised by the providers (e.g., infeasibility of meeting the periodicity or deadlines) of the data and information.</p> | |

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for quesiton #3.

Likes 0

Dislikes 0

Response

Thank you for your support.

Nicolas Turcotte - Hydro-Quebec (HQ) - 1

Answer

Document Name

Comment

R1 and R2 Low VRF in VSL Table: “The TOP/BA did not include two or fewer of the parts ...” which is illogical since omitting zero parts would result in a violation. Consider changing to “one or two parts”.

Suggest for TOP-003-6 R1 adds similar language: “Performance criteria for the availability and accuracy of data and information, as applicable.” (for TOPs)

Please consider that adding a new requirement to TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens.

Likes 0

Dislikes 0

Response

Thank you for your support. The SDT made changes to the VSL table where appropriate. The SDT believes any additional administrative burden will provide both providing clarity of expectations and removal of a zero defect policy for the providers of the data and information as well as provide adequate accuracy and availability to meet the needs of the requestor.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

Document Name

Comment

EEI continues to have concerns with the proposed changes made to TOP-003-6 and question whether the proposed changes provide any discernible reliability benefit over the currently effective Reliability Standard. However, we offer the following edits to address our concerns with the current draft:

Requirement R1.

Part 1.1: The data and information should be specifically directed to “NERC registered entities” not entities “responsible for responding”. Entities who are not registered by NERC have no regulatory obligation to respond to data and information requests. Additionally, the identified NERC registered entity can only provide requested data and information that is under that entity’s direct control and access. To address these concern, the following suggested edits in bold are provided below:

A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, **if under the control and access of the identified NERC registered entity**, external network data and information, and identification of the **NERC registered** entity for responding to the specification as deemed necessary by the Transmission Operator.

Part 1.5: The methods identified should all be mutually agreed to, not just those in the subparts of Part 1.5.

Subpart 1.5.2: EEI does not support the inclusion of performance criteria for TOP-003-6 and asks that subpart 1.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary. Applying

performance criteria to the delivery of data and information expands the administrative burden on entities creating a zero defect requirement that this project was intended to correct.

Measure M1: EEI suggests the following additional language to M1 (see bold text):

Each Transmission Operator shall make available its dated, current, in force documented specification for data and information **that conform to mutually agreed to methods, criteria, formats and secure transfer of data and information by the entities identified in Part 1.1.**

Requirement R2

Part 2.1: The data and information should be specifically directed to “NERC registered entities” not entities responsible for responding. Entities who are not registered by NERC have no regulatory obligation to respond to data and information requests. Additionally, the identified NERC registered entity can only provide requested data and information that is under that entity’s direct control and access. To address these concern, the following suggested edits in bold are provided below:

A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, **if under the control and access of the identified NERC registered entity**, external network data and information, and identification of the **NERC registered** entity for responding to the specification as deemed necessary by the Transmission Operator.

Part 2.5: The methods identified should all be mutually agreed to, not just those in the subparts of Part 1.5.

Subpart 1.5.2: EEI does not support the inclusion of performance criteria for TOP-003-6 and asks that subpart 2.5.2 be deleted. The focus of the standard should be the receipt of correct data and information, with provisions to make corrections where necessary. Applying performance criteria to the delivery of data and information expands the administrative burden on entities creating a zero defect requirement that this project was intended to correct.

Measure M2: EEI suggests the following additional language to M2 (see bold text):

Each Transmission Operator shall make available its dated, current, in force documented specification for data and information **that conform to mutually agreed to methods, criteria, formats and secure transfer of data and information by the entities identified in Part 2.1.**

| | |
|---|---|
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comments. The SDT decided against specifying NERC registered entities since this will be inconsistent with other reliability standards. Section A 4 1 identifies the NERC functional entities. The SDT believes the mutually agreeable process for resolving conflicts in Requirement R1.4 will facilitate resolution of any conflicts. Regarding language 1.5, this process for resolution in conflict would address any issues of infeasible request of data and information. Therefore, the SDT is not proposing to make these changes to Requirement R1.5.</p> | |
| Rachel Coyne - Texas Reliability Entity, Inc. - 10 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Texas RE noticed the Effective Date section on both TOP-003-5 and IRO-010-5 need to be updated to reflect the implementation plan for Project 2021-06.</p> <p>Texas RE noticed the applicability section is formatted inconsistently with other standards, which show:</p> <p>4. Applicability</p> <p>4.1 Functional Entities</p> <p>4.1.1 [Functional Entity #1]</p> <p>4.1.2 [Functional Entity #2]</p> <p>If the SDT elects to make this change, Texas RE recommends Requirement Part 1.5 state: “Methods for the <i>functional</i> entity identified in Part 1.1 to provide the data and information that includes, but is not limited to:”</p> <p>In requirement Part 1.5.5 and Requirement 2 Part 2.55, “methods” should be singular</p> | |

Texas RE noticed the implementation plan contains a consideration for “developing provisions for using intermediary entities to provide data”. Texas RE recommends the requirement language reflect this idea as this regularly occurs in the ERCOT region with information from the TOP to the BA. Texas RE recommends the following language:

2.6 Provisions for the identification of any data and information where the responsible respondent identified in Part 1.1 will utilize an intermediary party to pass through the data and information unaltered from the responsible entities to the Transmission Operator.

SDT may consider minor changes in R5 for consistency:

R5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a *data specification for data and information* in Requirement R3 or R4 shall satisfy the obligations of the documented specifications. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*

In order to be consistent throughout the entire standard document, Texas RE recommends Section C Compliance section be revised to remove use of “data” where included in “data specification” (in the last three paragraphs of Section C 1.2) to be consistent with proposed Requirement language changes in Requirements R2 and R3.

In the Evidence Retention Section for IRO-010-5 Requirement, Texas RE suggests capitalizing Compliance Audit or saying simply audit in the third and fourth paragraphs as in the first paragraph.

Likes 0

Dislikes 0

Response

Thank you for your support. The SDT made grammatical and inconsistency changes where appropriate. The SDT did not reinsert the usage of "intermediary entities" as commenters in previous drafts were not supportive and stated that entities could manage such situations outside of a NERC Reliability Standard requirement.

Junji Yamaguchi - Hydro-Quebec (HQ) - 5

Answer

Document Name

Comment

1. R1 and R2 Low VRF in VSL Table: “The TOP/BA did not include two or fewer of the parts ...” which is illogical since omitting zero parts would result in a violation. Consider changing to “one or two parts”.

Suggest for TOP-003-6 R1 adds similar language: “Performance criteria for the availability and accuracy of data and information, as applicable.” (for TOPs)

Please consider that adding a new requirement to TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens.

Likes 0

Dislikes 0

Response

Thank you for your comment. The SDT accepts your suggested change to the VSL table and it will be reconciled for the final ballot. The SDT believes any additional administrative burden will provide both clarity of expectations and removal of a zero defect policy for the providers of the data and information as well as provide adequate accuracy and availability to meet the needs of the requestor.

Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

1.5.5. and 2.5.5 have grammatical errors with the use of “A” (singular) and “methods” (plural). How it is corrected may change the interpretation.

Likes 0

Dislikes 0

Response

Thank you for your support. The grammar in Requirement 1.5.5 has been corrected.

| | |
|--|--|
| Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Similar to the comment above, WECC generally supports the proposed revisions, but has concern with the language in Parts 1.4. and 2.4. Since this requirement is applicable to the TOP (1.4) and BA (2.4), but requires a "mutually agreeable process," the TOP or BA could have difficulty complying if the other identified entities will not agree to a process.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your support. | |
| Casey Perry - PNM Resources - 1,3 - WECC,Texas RE | |
| Answer | |
| Document Name | |
| Comment | |
| <p>PNM agrees with and supports EEI's comments related to TOP-003-6.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. Please see response to EEI's comment. | |
| Daniel Gacek - Exelon - 1 | |
| Answer | |

| | |
|--|--|
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by the EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. Please see response to EEI's comment. | |
| Kinte Whitehead - Exelon - 3 | |
| Answer | |
| Document Name | |
| Comment | |
| Exelon supports the comments submitted by the EEI. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. Please see response to EEI's comment. | |
| David Jendras Sr - Ameren - Ameren Services - 3 | |
| Answer | |
| Document Name | |
| Comment | |

Ameren recommends section 1.5.1 to read "Mutually agreeable deadlines or periodicity in which data and information is to be provided;". Also, we believe, the proposed wording in section 1.5.5 is plurally incorrect. Ameren also recommends section 2.5.1 to read "Mutually agreeable deadlines or periodicity in which data and information is to be provided;". Also, the proposed wording in section 2.5.5 is plurally incorrect.

| | |
|----------|---|
| Likes | 0 |
| Dislikes | 0 |

Response

Thank you for your support. For Section 1.5.1/2.5.1, the SDT considers requirement R1.4 and R2.4 to address any need to resolve conflicts including any disagreements on deadlines or periodicity and is not proposing to modify the requirement as suggested. The SDT recognizes that the identification of deadlines or periodicity is best determined by the requestor who is responsible for the reliability tasks for which the data and information is needed. The grammar in Requirement 1.5.5 and Requirement 2.5.5, and the associated measures have been corrected.

Hillary Creurer - Hillary Creurer On Behalf of: Lori Frisk, Allete - Minnesota Power, Inc., 1; - Hillary Creurer

Answer

Document Name

Comment

Minnesota Power agrees with EEI's comments.

| | |
|----------|---|
| Likes | 0 |
| Dislikes | 0 |

Response

Thank you for your response. Please see response to EEI's comment.

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Document Name

Comment

We suggest the Purpose statement in section A.3 be phrased as follows – *“To ensure that the Transmission Operator and Balancing Authority have the data and information **they** need to plan, monitor, and assess the operation of **their** Transmission Operator Area **and** Balancing Authority Area, **respectively.**”*

We believe the Project reference in section A.5 should be updated to “Project 2021-06”, rather than “Project 2019-06”.

For R1/Part 1.1, we suggest the added phrase “and identification of the entity responsible for responding to the specification” be changed to “and identification of the **entities** responsible for responding to the specification”.

For R1/Part 1.5, we suggest some minor edits and re-ordering:

*1.5. Methods **and criteria** for the **entities** identified in Part 1.1 to provide data and information that includes, but is not limited to:*

1.5.1 A mutually agreeable method(s) for securely transferring data and information;

*1.5.2 A mutually agreeable format **for the data and information**;*

1.5.3 Specific deadlines or periodicity in which data and information is to be provided;

1.5.4 Provisions to update or correct data and information, as applicable or necessary; and,

1.5.5 Performance criteria for the availability and accuracy of data and information, as applicable.

For R2/Part 2.1, we suggest the added phrase “and identification of the entity responsible for responding to the specification” be changed to “and identification of the **entities** responsible for responding to the specification”.

For R2/Part 2.5, we suggest some minor edits and re-ordering:

*2.5. Methods **and criteria** for the **entities** identified in Part 1.1 to provide data and information that includes, but is not limited to:*

2.5.1 A mutually agreeable method(s) for securely transferring data and information;

- 2.5.2 A mutually agreeable format **for the data and information**;
- 2.5.3 Specific deadlines or periodicity in which data and information is to be provided;
- 2.5.4 Provisions to update or correct data and information, as applicable or necessary; and,
- 2.5.5 Performance criteria for the availability and accuracy of data and information, as applicable.

Likes 0

Dislikes 0

Response

Thank you for your support. The SDT made structural, grammatical or errata non-substantive changes as necessary.

Constantin Chitescu - Ontario Power Generation Inc. - 5

Answer

Document Name

Comment

OPG supports NPCC Regional Standards Committee’s comments.

Likes 0

Dislikes 0

Response

Thank you for your support.

Kimberly Turco - Constellation - 6

Answer

Document Name

Comment

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Thank you for your support.

Alison MacKellar - Constellation - 5

Answer

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Thank you for your support.

Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003

Answer

Document Name

Comment

| | |
|---|---|
| No comment | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Alain Mukama - Hydro One Networks, Inc. - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| It is not clear how broadening the scope of the standard from a data specification which is clear, to an overly broad data and information specification adds clarity. It would be more beneficial if the standard covered clear requirements for a data specification that supported Operation Planning Analysis, Real-time monitoring and Real-time Assessment criteria. Information should be clearly defined. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. The SDT is not proposing any substantive changes and believes the current language is not overly broad but sufficient to achieve the stated purpose of the standard. | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | |
| Document Name | |
| Comment | |

| | |
|--|---|
| MPC supports MRO NERC Standards Review Forum comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your support. | |
| Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | |
| Document Name | |
| Comment | |
| <p>R1 and R2 Low VRF in VSL Table: “The TOP/BA did not include two or fewer of the parts ...” which is illogical since omitting zero parts would result in a violation. Consider changing to “one or two parts”.</p> <p>Suggest for TOP-003-6 R1 adds similar language: “Performance criteria for the availability and accuracy of data and information, as applicable.” (for TOPs)</p> <p>Please consider that adding a new requirement to TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comment. The SDT accepts your suggested change to the VSL table and it will be reconciled for the final ballot. The SDT believes any additional administrative burden will provide both clarity of expectations and removal of a zero defect policy for the providers of the data and information as well as provide adequate accuracy and availability to meet the needs of the requestor.</p> | |

| | |
|--|--|
| 4. Provide any additional comments for the SDT to consider, if desired. | |
| Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC | |
| Answer | |
| Document Name | |
| Comment | |
| <p>Project 2022-04 updates CIP-012 by adding “availability” per FERC Order 886. We request that updates to IRO-010 and TOP-003’s respond to this FERC Order, if they do not already respond. Another alternative is coordination between the two SDTs.</p> <p>Please consider that adding new requirements to IRO-010-5 and TOP-003-6 involving the availability and accuracy of data and information may increase administrative burdens, which was not the intent of this project.</p> | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| <p>Thank you for your support. While the SDT acknowledges that there is potential for some overlap between the standards proposed by this committee and CIP-012-2 with regards to the availability of Real-time Assessment and real-time monitoring data, CIP-012 does not include Operational Planning Analysis or balancing authority analysis in its applicability and is not redundant. It is possible that a CIP-012 violation could result in a failure to meet the performance criteria set forth in a required data specification and potential violations for both TOP-003-6 and IRO-010-5. This situation is not unique to these standards and violations should be evaluated on a case-by-case basis by the ERO in its enforcement.</p> | |
| Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman | |
| Answer | |
| Document Name | |
| Comment | |

| | |
|---|---|
| MPC supports MRO NERC Standards Review Forum comments. | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. | |
| Alain Mukama - Hydro One Networks, Inc. - 1 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>An item that is missing is identifying who is accountable for receiving and distributing data in accordance with a data specification submitted by an entity. There should be a consistent approach on how a Transmission Operator receives external data and information needed to support its Operational Planning Analyses, Real-time monitoring and Real-time Assessments. Either the BA or RC should be accountable for distribution of data required for a TOP to perform its operational planning analysis, Real-time monitoring and Real-time Assessments so that it is consistent between all entities. The purpose of these two standards is to ensure that all entities have the data they need to perform their functions. Consistency should be considered as well as clear requirements and limits instead of broad definitions.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| Thank you for your comment. The SDT drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability. | |

Bobbi Welch - Midcontinent ISO, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee 2021-06 Modifications to IRO-010_TOP-003

Answer

Document Name

Comment

No comment

Likes 0

Dislikes 0

Response

Thank you for your response.

Alison MacKellar - Constellation - 5

Answer

Document Name

Comment

Constellation has no additional comments.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

Response

Thank you for your comment.

Kimberly Turco - Constellation - 6

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| Constellation has no additional comments. | |
| Kimberly Turco on behalf of Constellation Segments 5 and 6 | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Constantin Chitescu - Ontario Power Generation Inc. - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| OPG supports NPCC Regional Standards Committee's comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC | |
| Answer | |
| Document Name | |

Comment

No additional comments.

Likes 0

Dislikes 0

Response

Thank you for your response.

Hillary Creurer - Hillary Creurer On Behalf of: Lori Frisk, Allete - Minnesota Power, Inc., 1; - Hillary Creurer

Answer

Document Name

Comment

Minnesota Power agrees with MRO's NERC Standards Review Forum (NSRF) comments.

Likes 0

Dislikes 0

Response

Thank you for your comments.

Bret Galbraith - Seminole Electric Cooperative, Inc. - 6

Answer

Document Name

Comment

Seminole requests:

(1) The Standard Drafting Team to elaborate more on Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions within the technical rationale so that entities can make sure they are capturing all proper analyses.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC

Answer

Document Name

Comment

No additional comments

Likes 0

Dislikes 0

Response

Thank you for your comment.

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators

Answer

Document Name

Comment

We believe the updates made in this draft revision are in line with the SAR and clarify the requirements surrounding data specifications. Furthermore, we believe this revision provides needed clarity to the Violation Severity Levels by aligning them with the revised requirement language.

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power

Answer

Document Name

Comment

Tacoma Power supports MRO NSRF's comments.

Likes 0

Dislikes 0

Response

Thank you for your comments.

Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer

Document Name

Comment

The primary purpose of the SAR is to simplify administrative burdens, reduce zero-defect expectations and limit unnecessary data retention requirements that do not contribute to BES reliability and resiliency. While the MRO NSRF commends the efforts by the SDT, there are no meaningful updates to the standards which achieve those goals in the new drafts. The nominal changes in language, or relocation of legacy language, doesn't achieve the overarching objectives of the SAR. Without such deliberate updates, consider maintaining the status quo of the current versions of the standards and cancelling the project in its current form. If the SDT elects to proceed, consider the additional comments:

The MRO NSRF still has concerns with the addition of the performance criteria of 'availability' within TOP-003 requirements 1.5.2, 2.5.2 and IRO-010 1.5.2 that without appropriate bounding language or allowances for unavailability (equipment/component failure, maintenance, et cetera). A data requestor may request 100% availability (allowable via the technical rationales), which would then create a 'zero defect' requirement.

Additionally, within the same requirements, MRO NSRF has similar concerns with the performance criteria of 'accuracy' without associated bounding language clearly describing its scope. Without clarification, the interpretation of the term 'accuracy' could vary widely between REs and/or Registered Entities, fostering incongruities in CMEP monitoring activities. For example, 'accuracy' as currently stated could refer either to the comprehensiveness of the overall data set or the precision of each individual data point, but the administrative burden for each is very different.

The MRO NSRF continues to see overlapping areas within the new drafts (IRO-010-5/TOP-003-6 1.5.2 and 1.5.5, TOP-003-6 2.5.2 and 2.5.5) and CIP-012-1 as well as Project 2020-04. Secure data transfer resides within CIP-012 and incorporating it into IRO-010-5 and TOP-003-6 continues to raise the risk of double jeopardy between those standards and CIP-012 in cases of Real Time Monitoring and Real Time Assessment data. The SDT should also coordinate with the Project 2020-04 SDT to ensure no conflicted interpretation of the term "availability" is likely to arise.

MRO NSRF recommends the removal of IRO-010-5 1.4 and TOP-003-5 1.4 and 2.4, as it is unnecessary and too broad. The term "resolving conflicts" could relate to a host of issues outside of the intention of the SDT. The new draft standards already contain provisions to update and correct data and information via 1.5.2 and 2.5.2. The SDT's white paper also used these as an example of the use of the conflict resolution process, making the publication of an additional conflict resolution process unnecessary. Such a requirement, as described in the Technical Rationales, increases the administrative burden of these standards, rather than lessening. To the extent that two entities require conflict resolution, that can and is done outside of a compliance requirement.

While “mutually agreeable” appears occasionally throughout the NERC Reliability Standards and is a generally understood term, the SDT’s White Paper interpretation of its use within the context of IRO-010-5 and TOP-003-6 increases the administrative burden, compliance responsibility, and data retention requirements related to these standards if documentation regarding collaboration with each entity must be maintained. Mutually Agreeable (page 10 of white paper): The repeated use of the term “mutual agreed upon” is intentional to facilitate collaboration between requestors and respondents in preparing the data specification to ensure the specification is feasible, reasonable, and sufficient. The retention of the word mutual for these requirements suggests that a data specification should be developed collaboratively, to address issues and concerns around the provision and protection of content of the respondent data can be addressed in the specification itself. As such, the MRO NSRF recommends the SDT clarify what administrative or evidence burden is intended by that term within the technical rationale.

| | |
|------------|--|
| Likes 1 | Wike Jennie On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry |
| Dislikes 0 | |

Response

Thank you for your support. While the SDT acknowledges that there is potential for some overlap between the standards proposed by this committee and CIP-012-2 with regards to the availability of Real-time Assessment and real-time monitoring data, CIP-012 does not include Operational Planning Analysis or balancing authority analysis in its applicability and is not redundant. It is possible that a CIP-012 violation could result in a failure to meet the performance criteria set forth in a required data specification and potential violations for both TOP-003-6 and IRO-010-5. This situation is not unique to these standards and violations should be evaluated on a case-by-case basis by the ERO in its enforcement.

Junji Yamaguchi - Hydro-Quebec (HQ) - 5

| | |
|---------------|--|
| Answer | |
| Document Name | |

Comment

In the previous draft, the SDT agreed with many of our points in regards to inconsistencies with respect to IRO-010 R1 and R2 (low VRF) and R3 (medium VRF) as well as the VSL levels for elements 1.1 through 1.4 and indicated that these would be addressed in Draft 2. We would appreciate any clarifications as to why they seem not to have been addressed.

To adjust to the current draft and to correct an error in the comment, we re-iterate here our comments from the last draft.

Despite FERC having accepted the VRF for the previous version of this standard, the VRF for R1 (low) seems to us inconsistent with respect to the VRF for R3 (medium). The requirement for an RC (in IRO-010 for example) to identify information essential to reliability (R1.1) cannot logically be less important than an entity’s communication of that same information to the RC. Indeed, since an RC’s obligation applies to potentially many entities in its Area, it is more impactful for the RC Area’s reliability that the RC correctly identify the information needed to satisfy its own reliability obligations than for a single respondent to fail to communicate the information. The VRF for R1 should be moved to Medium or the VRF for R3 should be lowered to Low. Per the VRF and VSL justification document, this inconsistency does not respect Guideline 2.

A similar inconsistency is present for the proposed VSL. As proposed, the VSL for R3 attributes a lower VSL to any single violation of elements 1.1 through 1.4. Meanwhile, a failure to identify a single information per 1.1, 1.2 or 1.3 does not trigger the VSL for R1 which requires that at least two sub-requirements must be violated to qualify for VSL-low.

So, for example, a failure to report information asked for in the specification as per R1.1 or R1.2 or R1.3 is potentially a VRF-medium, VSL-low violation of R3, whereas the failure to identify that same information under R1 would be a VRF-low, VSL-none violation. Since the VSL is not even low, the latter is arguably not a violation at all.

We consider that an identification violation of R1.1, R1.2 or R1.3 individually should be at least as severe as a reporting violation of the same sub-requirements for a non-RC entity via R3. That is, a single identification violation of R1.1, R1.2 or R1.3 should be “lower”. Or, the VSL text for R3 should be aligned with the VSL text of R1.

That said, the way R1.5 is written now, a failure to identify in R1.1, R1.2 and R1.3 may perhaps generally trigger a failure to correctly identify an associated administrative communication through in R1.5, thereby triggering a two-element failure and thus a VSL-moderate violation for a failure to identify. In the same way, the failure to communicate per R3 an information specified in R1.1 will likely also be a failure to respect the administrative communication means specified in R1.5, also “promoting” the VSL by one level.

| | |
|----------|---|
| Likes | 0 |
| Dislikes | 0 |

Response

The SDT reviewed the historical record for implementation of IRO-010 and determined that the VRF levels for both R1 and R3 were approved by FERC in 2015 in Docket #RM15-16-000. The SDT has decided to keep the VRF levels as currently in place.

Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1

Answer

Document Name

Comment

We believe the updates made in this draft revision are in line with the SAR and clarify the requirements surrounding data specifications. Furthermore, we believe this revision provides needed clarity to the Violation Severity Levels by aligning them with the revised requirement language.

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Nicolas Turcotte - Hydro-Quebec (HQ) - 1

Answer

Document Name

Comment

In the previous draft, the SDT agreed with many of our points in regards to inconsistencies with respect to IRO-010 R1 and R2 (low VRF) and R3 (medium VRF) as well as the VSL levels for elements 1.1 through 1.4 and indicated that these would be addressed in Draft 2. We would appreciate any clarifications as to why they seem not to have been addressed.

To adjust to the current draft and to correct an error in the comment, we re-iterate here our comments from the last draft.

Despite FERC having accepted the VRF for the previous version of this standard, the VRF for R1 (low) seems to us inconsistent with respect to the VRF for R3 (medium). The requirement for an RC (in IRO-010 for example) to identify information essential to reliability (R1.1) cannot logically be less important than an entity’s communication of that same information to the RC. Indeed, since an RC’s obligation applies to potentially many entities in its Area, it is more impactful for the RC Area’s reliability that the RC correctly identify the information needed to satisfy its own reliability obligations than for a single respondent to fail to communicate the information. The VRF for R1 should be moved to Medium or the VRF for R3 should be lowered to Low. Per the VRF and VSL justification document, this inconsistency does not respect Guideline 2.

A similar inconsistency is present for the proposed VSL. As proposed, the VSL for R3 attributes a lower VSL to any single violation of elements 1.1 through 1.4. Meanwhile, a failure to identify a single information per 1.1, 1.2 or 1.3 does not trigger the VSL for R1 which requires that at least two sub-requirements must be violated to qualify for VSL-low.

So, for example, a failure to report information asked for in the specification as per R1.1 or R1.2 or R1.3 is potentially a VRF-medium, VSL-low violation of R3, whereas the failure to identify that same information under R1 would be a VRF-low, VSL-none violation. Since the VSL is not even low, the latter is arguably not a violation at all.

We consider that an identification violation of R1.1, R1.2 or R1.3 individually should be at least as severe as a reporting violation of the same sub-requirements for a non-RC entity via R3. That is, a single identification violation of R1.1, R1.2 or R1.3 should be “lower”. Or, the VSL text for R3 should be aligned with the VSL text of R1.

That said, the way R1.5 is written now, a failure to identify in R1.1, R1.2 and R1.3 may perhaps generally trigger a failure to correctly identify an associated administrative communication through in R1.5, thereby triggering a two-element failure and thus a VSL-moderate violation for a failure to identify. In the same way, the failure to communicate per R3 an information specified in R1.1 will likely also be a failure to respect the administrative communication means specified in R1.5, also “promoting” the VSL by one level.

| | |
|----------|---|
| Likes | 0 |
| Dislikes | 0 |

Response

Thank you for your comment. The SDT reviewed the historical record for implementation of IRO-010 and determined that the VRF levels for both R1 and R3 were approved by FERC in 2015 in Docket #RM15-16-000. The SDT decided to keep the VRF levels as currently in place.

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

Answer

Document Name

Comment

Evergy supports and incorporates by reference the comments of the MRO NSRF for quesiton #4.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Stephen Whaite - Stephen Whaite On Behalf of: Lindsey Mannion, ReliabilityFirst , 10; - Stephen Whaite, Group Name ReliabilityFirst Ballot Body Member and Proxies

Answer

Document Name

Comment

RF thanks the Standard Drafting Team for its consideration of Draft 1 comments and appreciates the opportunity to comment the proposed Draft 2 standard revisions.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Donna Wood - Tri-State G and T Association, Inc. - 1

| | |
|---|--|
| Answer | |
| Document Name | |
| Comment | |
| N/A | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Ruchi Shah - AES - AES Corporation - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| No additional comments here. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Daniel Mason - Portland General Electric Co. - 6, Group Name Portland General Electric Co. | |
| Answer | |
| Document Name | |
| Comment | |

Portland General Electric Company does not believe the proposed changes to IRO-010 and TOP-003 provide meaningful improvement on the currently enforceable version of these standards. Given the number of other Standard Development projects responsible entities are currently responding to, IRO-010 and TOP-003 should not be modified at this time.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Diana Torres - Imperial Irrigation District - 6

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Thank you for your comment.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Document Name

Comment

None.

| | |
|---|--|
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF | |
| Answer | |
| Document Name | |
| Comment | |
| The NAGF has no additional comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF | |
| Answer | |
| Document Name | |
| Comment | |
| N/A | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |

| | |
|---|--|
| Thank you for your comment. | |
| Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company | |
| Answer | |
| Document Name | |
| Comment | |
| Southern Company does not have any further comments. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC | |
| Answer | |
| Document Name | |
| Comment | |
| BPA appreciates the SDT's explanation that they tried to focus on process. However, process over results is an ineffective way to ensure reliability. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF | |

| | |
|--|--|
| Answer | |
| Document Name | |
| Comment | |
| None. | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Donald Lock - Talen Generation, LLC - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| No additional comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your comment. | |
| Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI | |
| Answer | |
| Document Name | |
| Comment | |

| | |
|--|---|
| <p>While outside the scope of the current SAR, AECL agrees that TOP-003 R1.3 and its subparts as well as IRO-010-3 R1.3 and its subparts be retired once the recent obligations associated with Project 2021-07 (Extreme Cold Weather) have become enforceable.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your comment. While the SDT agrees that the subparts in TOP-003, IRO-010 and EOP-012 have overlap, EOP-012 is applicable only to the GO/GOP in preparation for extreme cold weather. Those subparts in TOP-003 and IRO-010 allow for the RC, TOP and BA to utilize that data as part of their Operational Planning Analysis, Real-time monitoring, Real-time Assessments and BA analysis functions.</p> | |
| Marcus Bortman - APS - Arizona Public Service Co. - 6 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>AZPS does not have any additional comments for the SDT at this time.</p> | |
| Likes | 0 |
| Dislikes | 0 |
| Response | |
| <p>Thank you for your response.</p> | |
| Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO | |
| Answer | |
| Document Name | |
| Comment | |

| | |
|--|--|
| No comments | |
| Likes 0 | |
| Dislikes 0 | |
| Response | |
| Thank you for your response. | |
| Thomas Foltz - AEP - 5 | |
| Answer | |
| Document Name | |
| Comment | |
| <p>While outside the scope of the current SAR, AEP once again recommends that TOP-003 R1.3 and its subparts be deleted once the recent obligations associated with Project 2021-07 (Extreme Cold Weather) have become enforceable. The most recent revisions in Project 2021-07 were developed in the spirit that the standard be flexible and that its obligations be less prescriptive in nature. We believe this same approach should also be taken for TOP-003 in Project 2021-06 as well.</p> | |
| Likes 1 | Associated Electric Cooperative, Inc., 3, Bennett Todd |
| Dislikes 0 | |
| Response | |
| <p>Thank you for your comment. While the SDT agrees that the subparts in TOP-003, IRO-010 and EOP-012 have overlap, EOP-012 is applicable only to the GO/GOP in preparation for extreme cold weather. The subparts in TOP-003 and IRO-010 allow for the RC, TOP and BA to utilize that data as part of their Operational Planning Analysis, Real-time monitoring, Real-time Assessments and BA analysis functions.</p> | |
| Glen Pruitt - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD Voters | |
| Answer | |
| Document Name | |

Comment

No Comments

Likes 0

Dislikes 0

Response

Thank you for your response.

End of Report

Reminder

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003 | Draft 2

Additional Ballots and Non-binding Poll Open through June 20, 2023

[Now Available](#)

The additional ballots and non-binding poll of the associated Violation Risk Factors and Violation Severity Levels are open through **8 p.m. Eastern, Tuesday, June 20, 2023** for draft two of the following:

- IRO-010-5 – Reliability Coordinator Data Specification and Collection
- TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- Implementation Plan

The standard drafting team's considerations of the responses received from the last comment period are reflected in this draft of the standard.

Reminder Regarding Corporate RBB Memberships

Under the NERC Rules of Procedure, each entity and its affiliates is collectively permitted one voting membership per Registered Ballot Body Segment. Each entity that undergoes a change in corporate structure (such as a merger or acquisition) that results in the entity or affiliated entities having more than the one permitted representative in a particular Segment must withdraw the duplicate membership(s) prior to joining new ballot pools or voting on anything as part of an existing ballot pool. Contact ballotadmin@nerc.net to assist with the removal of any duplicate registrations.

Balloting

Members of the ballot pools associated with this project can log in and submit their votes by accessing the Standards Balloting and Commenting System (SBS) [here](#).

Note: Votes cast in previous ballots, will not carry over to additional ballots. It is the responsibility of the registered voter in the ballot pools to place votes again. To ensure a quorum is reached, if you do not want to vote affirmative or negative, cast an abstention.

- Contact NERC IT support directly at <https://support.nerc.net/> (Monday – Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.
- Passwords expire every **6 months** and must be reset.
- The SBS is **not** supported for use on mobile devices.

- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

The ballot results will be announced and posted on the project page. The drafting team will review all responses received during the comment period and determine the next steps of the project.

For information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003 observer list" in the Description Box.

North American Electric Reliability Corporation
3353 Peachtree Rd, NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003

Formal Comment Period Open through June 20, 2023

[Now Available](#)

A formal comment period is open through **8 p.m. Eastern, Tuesday, June 20, 2023** for draft two of the following:

- IRO-010-5 – Reliability Coordinator Data Specification and Collection
- IRO-010-5 – Implementation Plan
- TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- TOP-003-6 – Implementation Plan

The standard drafting team's considerations of the responses received from the previous comment period are reflected in these drafts of the standards.

Reminder Regarding Corporate RBB Memberships

Under the NERC Rules of Procedure, each entity and its affiliates is collectively permitted one voting membership per Registered Ballot Body Segment. Each entity that undergoes a change in corporate structure (such as a merger or acquisition) that results in the entity or affiliated entities having more than the one permitted representative in a particular Segment must withdraw the duplicate membership(s) prior to joining new ballot pools or voting on anything as part of an existing ballot pool. Contact ballotadmin@nerc.net to assist with the removal of any duplicate registrations.

Commenting

Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments. An unofficial Word version of the comment form is posted on the [project page](#).

- *Contact NERC IT support directly at <https://support.nerc.net/> (Monday – Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.*
- *Passwords expire every **6 months** and must be reset.*
- *The SBS is **not** supported for use on mobile devices.*
- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

Additional ballots for the standards and implementation plan, as well as non-binding polls of the associated Violation Risk Factors and Violation Severity Levels will be conducted **June 9-20, 2023**.

For more information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593. [Subscribe to this project's observer mailing list](#) by selecting "NERC Email Distribution Lists" from the "Service" drop-down menu and specify "Project 2021-06 Modifications to IRO-010 and TOP-003 observer list" in the Description Box.

North American Electric Reliability Corporation
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Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

BALLOT RESULTS

Comment: View Comment Results (/CommentResults/Index/283)

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 AB 2 ST

Voting Start Date: 6/9/2023 12:01:00 AM

Voting End Date: 6/21/2023 8:00:00 PM

Ballot Type: ST

Ballot Activity: AB

Ballot Series: 2

Total # Votes: 242

Total Ballot Pool: 292

Quorum: 82.88

Quorum Established Date: 6/21/2023 12:11:34 PM

Weighted Segment Value: 74.89

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 42 | 0.656 | 22 | 0.344 | 0 | 6 | 10 |
| Segment: 2 | 7 | 0.6 | 6 | 0.6 | 0 | 0 | 0 | 0 | 1 |
| Segment: 3 | 65 | 1 | 34 | 0.68 | 16 | 0.32 | 0 | 4 | 11 |
| Segment: 4 | 16 | 0.8 | 7 | 0.7 | 1 | 0.1 | 0 | 1 | 7 |
| Segment: 5 | 71 | 1 | 39 | 0.696 | 17 | 0.304 | 0 | 3 | 12 |
| Segment: 6 | 46 | 1 | 24 | 0.686 | 11 | 0.314 | 0 | 2 | 9 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 10 | 6 | 0.5 | 4 | 0.4 | 1 | 0.1 | 0 | 1 | 0 |
| Totals: | 292 | 5.9 | 156 | 4.418 | 68 | 1.482 | 0 | 18 | 50 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allele - Minnesota Power, Inc. | Lori Frisk | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Affirmative | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Affirmative | N/A |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------------|------------------|-------------|----------------------|
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Negative | Comments Submitted |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Affirmative | N/A |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Third-Party Comments |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | None | N/A |
| 1 | Colorado Springs Utilities | Corey Walker | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Third-Party Comments |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Elizabeth Weber | | None | N/A |
| 1 | Duke Energy | Katherine Street | | Affirmative | N/A |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Negative | Comments Submitted |
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|---------------------|------------------|-------------|----------------------|
| 1 | FirstEnergy - FirstEnergy Corporation | Theresa Ciancio | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | Third-Party Comments |
| 1 | Great River Energy | Gordon Pietsch | | Affirmative | N/A |
| 1 | Hydro One Networks, Inc. | Alain Mukama | | Negative | Comments Submitted |
| 1 | Hydro-Quebec (HQ) | Nicolas Turcotte | | Affirmative | N/A |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | Affirmative | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | Affirmative | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | None | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | Matt Lewis | | Affirmative | N/A |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Manitoba Hydro | Nazra Gladu | | Affirmative | N/A |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------|-------------------------|---------------|----------------------|
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Third-Party Comments |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |
| 1 | National Grid USA | Michael Jones | | Negative | Third-Party Comments |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | Third-Party Comments |
| 1 | New York Power Authority | Salvatore Spagnolo | | Affirmative | N/A |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Third-Party Comments |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Third-Party Comments |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | Negative | Third-Party Comments |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | None | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|--------------------|
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Negative | Comments Submitted |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | Comments Submitted |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Chelan County | Glen Pruitt | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | None | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | Comments Submitted |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | None | N/A |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | Jennie Wike | Negative | Comments Submitted |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | Affirmative | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|-----------------------------------|------------------|-------------|----------------------|
| 1 | Western Area Power Administration | Sean Erickson | Kimberly Bentley | Negative | Third-Party Comments |
| 1 | Xcel Energy, Inc. | Eric Barry | | Affirmative | N/A |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Kennedy Meier | | Affirmative | N/A |
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Affirmative | N/A |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | Affirmative | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Affirmative | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Affirmative | N/A |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Abstain | N/A |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Lovita Griffin | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | Rachel Schuldt | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|----------------------|
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | None | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Third-Party Comments |
| 3 | Cowlitz County PUD | Russell Noble | | None | N/A |
| 3 | Dominion - Dominion Virginia Power | Bill Garvey | | None | N/A |
| 3 | DTE Energy - Detroit Edison Company | Daniel Herring | | Affirmative | N/A |
| 3 | Duke Energy - Florida Power Corporation | Marcelo Pesantez | | Affirmative | N/A |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | None | N/A |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Negative | Comments Submitted |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Affirmative | N/A |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | | Marilyn Williams | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | Lakeland Electric | Steven Marshall | | Affirmative | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | Third-Party Comments |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Third-Party Comments |
| 3 | National Grid USA | Brian Shanahan | | Negative | Third-Party Comments |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | Third-Party Comments |
| 3 | New York Power Authority | David Rivera | | Affirmative | N/A |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | None | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | Affirmative | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Third-Party Comments |
| 3 | Omaha Public Power District | David Heins | | Negative | Third-Party Comments |
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Negative | Comments Submitted |
| 3 | Portland General Electric Co. | Adam Menendez | | None | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Affirmative | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Negative | Third-Party Comments |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Rayburn Country Electric Cooperative, Inc. | Frank Owens | | None | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | Vicky Budreau | | None | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrod Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|--------------------|
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | Comments Submitted |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Ryan Walter | | None | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |
| 3 | Xcel Energy, Inc. | Nicholas Friebel | | Affirmative | N/A |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | None | N/A |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Abstain | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | None | N/A |
| 4 | DTE Energy | Patricia Ireland | | Affirmative | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | None | N/A |
| 4 | LaGen | Wayne Messina | | None | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | Affirmative | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------------|-------------------------|---------------|--------------------|
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | Affirmative | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | Seminole Electric Cooperative, Inc. | Ken Habgood | | None | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | | Negative | Comments Submitted |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Affirmative | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amaranos | | Affirmative | N/A |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Affirmative | N/A |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Negative | Comments Submitted |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|----------------------|
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | Third-Party Comments |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | Negative | Third-Party Comments |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | None | N/A |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Affirmative | N/A |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | None | N/A |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Affirmative | N/A |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Negative | Third-Party Comments |
| 5 | Hydro-Quebec (HQ) | Junji Yamaguchi | | Affirmative | N/A |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------|------------------|-------------|----------------------|
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Brittany Millard | | Negative | Third-Party Comments |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Affirmative | N/A |
| 5 | Manitoba Hydro | Kristy-Lee Young | | Affirmative | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Third-Party Comments |
| 5 | National Grid USA | Robin Berry | | Negative | Third-Party Comments |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Negative | Third-Party Comments |
| 5 | New York Power Authority | Zahid Qayyum | | Affirmative | N/A |
| 5 | NextEra Energy | Richard Vendetti | | None | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | | Affirmative | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Third-Party Comments |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|----------------------|
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Affirmative | N/A |
| 5 | Orlando Utilities Commission | Dania Colon | | None | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | Negative | Third-Party Comments |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | None | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | Affirmative | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | Negative | Third-Party Comments |
| 5 | Public Utility District No. 1 of Chelan County | Rebecca Zahler | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Nikkee Hebdon | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Thomas Johnson | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | None | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Affirmative | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | Negative | Comments Submitted |
| 5 | Tri-State G and T Association, Inc. | Sergio Banuelos | | Affirmative | N/A |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 5 | Xcel Energy, Inc. | Gerry Huitt | Joseph Gatten | Affirmative | N/A |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Affirmative | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Affirmative | N/A |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Abstain | N/A |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Affirmative | N/A |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirschak | | None | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Third-Party Comments |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | None | N/A |
| 6 | Duke Energy | John Sturgeon | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|----------------------|
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Eergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | Third-Party Comments |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | None | N/A |
| 6 | Manitoba Hydro | Kelly Bertholet | | Affirmative | N/A |
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | Third-Party Comments |
| 6 | New York Power Authority | Shelly Dineen | | Affirmative | N/A |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | Affirmative | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Third-Party Comments |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|----------------|-------------------------|---------------|----------------------|
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Negative | Comments Submitted |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | Affirmative | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | Negative | Third-Party Comments |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | Mike Stussy | | None | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Marty Watson | | None | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | Comments Submitted |
| 6 | Southern Indiana Gas and Electric Co. | Kati Barr | | Affirmative | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | Jennie Wike | Negative | Comments Submitted |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | None | N/A |
| 6 | Xcel Energy, Inc. | Steve Szablya | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|--------------------|
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | Stephen Whaite | Negative | Comments Submitted |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Affirmative | N/A |

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BALLOT RESULTS

Comment: [View Comment Results \(/CommentResults/Index/283\)](#)

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 AB 2 ST

Voting Start Date: 6/9/2023 12:01:00 AM

Voting End Date: 6/21/2023 8:00:00 PM

Ballot Type: ST

Ballot Activity: AB

Ballot Series: 2

Total # Votes: 244

Total Ballot Pool: 292

Quorum: 83.56

Quorum Established Date: 6/21/2023 12:04:56 PM

Weighted Segment Value: 74.43

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 42 | 0.646 | 23 | 0.354 | 0 | 5 | 10 |
| Segment: 2 | 7 | 0.6 | 6 | 0.6 | 0 | 0 | 0 | 0 | 1 |
| Segment: 3 | 66 | 1 | 35 | 0.673 | 17 | 0.327 | 0 | 3 | 11 |
| Segment: 4 | 15 | 0.8 | 7 | 0.7 | 1 | 0.1 | 0 | 1 | 6 |
| Segment: 5 | 71 | 1 | 39 | 0.696 | 17 | 0.304 | 0 | 3 | 12 |
| Segment: 6 | 46 | 1 | 25 | 0.676 | 12 | 0.324 | 0 | 1 | 8 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 10 | 6 | 0.5 | 4 | 0.4 | 1 | 0.1 | 0 | 1 | 0 |
| Totals: | 292 | 5.9 | 158 | 4.391 | 71 | 1.509 | 0 | 15 | 48 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allele - Minnesota Power, Inc. | Lori Frisk | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Affirmative | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Affirmative | N/A |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------------|------------------|-------------|----------------------|
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Negative | Comments Submitted |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Affirmative | N/A |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Third-Party Comments |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | None | N/A |
| 1 | Colorado Springs Utilities | Corey Walker | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Third-Party Comments |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Elizabeth Weber | | None | N/A |
| 1 | Duke Energy | Katherine Street | | Affirmative | N/A |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Negative | Comments Submitted |
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|---------------------|------------------|-------------|----------------------|
| 1 | FirstEnergy - FirstEnergy Corporation | Theresa Ciancio | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | Third-Party Comments |
| 1 | Great River Energy | Gordon Pietsch | | Affirmative | N/A |
| 1 | Hydro One Networks, Inc. | Alain Mukama | | Negative | Comments Submitted |
| 1 | Hydro-Quebec (HQ) | Nicolas Turcotte | | Affirmative | N/A |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | Affirmative | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | Affirmative | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | None | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | Matt Lewis | | Affirmative | N/A |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Manitoba Hydro | Nazra Gladu | | Affirmative | N/A |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------|-------------------------|---------------|----------------------|
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Third-Party Comments |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |
| 1 | National Grid USA | Michael Jones | | Negative | Third-Party Comments |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | Third-Party Comments |
| 1 | New York Power Authority | Salvatore Spagnolo | | Affirmative | N/A |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Third-Party Comments |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Third-Party Comments |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | Negative | Third-Party Comments |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | None | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------------|------------------|-------------|--------------------|
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Negative | Comments Submitted |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | Comments Submitted |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Chelan County | Glen Pruitt | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | None | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Negative | Comments Submitted |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | Comments Submitted |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | None | N/A |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | Jennie Wike | Negative | Comments Submitted |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | Affirmative | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|-----------------------------------|------------------|-------------|----------------------|
| 1 | Western Area Power Administration | Sean Erickson | Kimberly Bentley | Negative | Third-Party Comments |
| 1 | Xcel Energy, Inc. | Eric Barry | | Affirmative | N/A |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Kennedy Meier | | Affirmative | N/A |
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Affirmative | N/A |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | Affirmative | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Affirmative | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Affirmative | N/A |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Abstain | N/A |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Lovita Griffin | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | Rachel Schuldt | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|----------------------|
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | None | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Third-Party Comments |
| 3 | Cowlitz County PUD | Russell Noble | | None | N/A |
| 3 | Dominion - Dominion Virginia Power | Bill Garvey | | None | N/A |
| 3 | DTE Energy - Detroit Edison Company | Daniel Herring | | Affirmative | N/A |
| 3 | Duke Energy - Florida Power Corporation | Marcelo Pesantez | | Affirmative | N/A |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | None | N/A |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Negative | Comments Submitted |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Affirmative | N/A |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | | Marilyn Williams | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | KAMO Electric Cooperative | Tony Gott | | Affirmative | N/A |
| 3 | Lakeland Electric | Steven Marshall | | Affirmative | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | Third-Party Comments |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Third-Party Comments |
| 3 | National Grid USA | Brian Shanahan | | Negative | Third-Party Comments |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | Third-Party Comments |
| 3 | New York Power Authority | David Rivera | | Affirmative | N/A |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | None | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | Affirmative | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Third-Party Comments |
| 3 | Omaha Public Power District | David Heins | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------|------------------|-------------|----------------------|
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | Negative | Third-Party Comments |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Negative | Comments Submitted |
| 3 | Portland General Electric Co. | Adam Menendez | | None | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Affirmative | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Negative | Third-Party Comments |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Rayburn Country Electric Cooperative, Inc. | Frank Owens | | None | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | Vicky Budreau | | None | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Negative | Comments Submitted |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrod Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD | Holly Chaney | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|--------------------|
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | Comments Submitted |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Ryan Walter | | None | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |
| 3 | Xcel Energy, Inc. | Nicholas Friebel | | Affirmative | N/A |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | None | N/A |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Abstain | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | None | N/A |
| 4 | DTE Energy | Patricia Ireland | | Affirmative | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | None | N/A |
| 4 | LaGen | Wayne Messina | | None | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | Affirmative | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------------|-------------------------|---------------|----------------------|
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | Affirmative | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | | Negative | Comments Submitted |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Affirmative | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Affirmative | N/A |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Affirmative | N/A |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Negative | Comments Submitted |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | Abstain | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | Third-Party Comments |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|----------------------|
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | Negative | Third-Party Comments |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | None | N/A |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Affirmative | N/A |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | None | N/A |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Affirmative | N/A |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Negative | Third-Party Comments |
| 5 | Hydro-Quebec (HQ) | Junji Yamaguchi | | Affirmative | N/A |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Brittany Millard | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|---------------------|-------------------------|---------------|----------------------|
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Affirmative | N/A |
| 5 | Manitoba Hydro | Kristy-Lee Young | | Affirmative | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Third-Party Comments |
| 5 | National Grid USA | Robin Berry | | Negative | Third-Party Comments |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Negative | Third-Party Comments |
| 5 | New York Power Authority | Zahid Qayyum | | Affirmative | N/A |
| 5 | NextEra Energy | Richard Vendetti | | None | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | | Affirmative | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Third-Party Comments |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | Negative | Third-Party Comments |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|----------------------|
| 5 | Orlando Utilities Commission | Dania Colon | | None | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | Negative | Third-Party Comments |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | None | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | Affirmative | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | Negative | Third-Party Comments |
| 5 | Public Utility District No. 1 of Chelan County | Rebecca Zahler | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Nikkee Hebdon | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Thomas Johnson | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | None | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | Comments Submitted |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|----------------------|
| 5 | Talen Generation, LLC | Donald Lock | | Negative | Comments Submitted |
| 5 | Tri-State G and T Association, Inc. | Sergio Banuelos | | Affirmative | N/A |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 5 | Xcel Energy, Inc. | Gerry Huitt | Joseph Gatten | Affirmative | N/A |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Affirmative | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Affirmative | N/A |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Abstain | N/A |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Affirmative | N/A |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirschak | | None | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Third-Party Comments |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | None | N/A |
| 6 | Duke Energy | John Sturgeon | | Affirmative | N/A |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------|-------------------------|---------------|----------------------|
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Eergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | Third-Party Comments |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | None | N/A |
| 6 | Manitoba Hydro | Kelly Bertholet | | Affirmative | N/A |
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | Third-Party Comments |
| 6 | New York Power Authority | Shelly Dineen | | Affirmative | N/A |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | Affirmative | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Third-Party Comments |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Third-Party Comments |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|----------------|-------------------------|---------------|----------------------|
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | Affirmative | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | Negative | Third-Party Comments |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | Mike Stussy | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Marty Watson | | None | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Negative | Comments Submitted |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | Comments Submitted |
| 6 | Southern Indiana Gas and Electric Co. | Kati Barr | | Affirmative | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | Jennie Wike | Negative | Comments Submitted |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | None | N/A |
| 6 | Xcel Energy, Inc. | Steve Szablya | | None | N/A |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|-----------------|------------------|-------------|--------------------|
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | Stephen Whaite | Negative | Comments Submitted |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Affirmative | N/A |

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BALLOT RESULTS

Comment: [View Comment Results \(/CommentResults/Index/283\)](#)

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 Implementation Plan AB 2 OT

Voting Start Date: 6/9/2023 12:01:00 AM

Voting End Date: 6/21/2023 8:00:00 PM

Ballot Type: OT

Ballot Activity: AB

Ballot Series: 2

Total # Votes: 241

Total Ballot Pool: 289

Quorum: 83.39

Quorum Established Date: 6/21/2023 12:05:03 PM

Weighted Segment Value: 78.38

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 46 | 0.719 | 18 | 0.281 | 0 | 6 | 10 |
| Segment: 2 | 7 | 0.6 | 6 | 0.6 | 0 | 0 | 0 | 0 | 1 |
| Segment: 3 | 65 | 1 | 37 | 0.725 | 14 | 0.275 | 0 | 4 | 10 |
| Segment: 4 | 14 | 0.7 | 6 | 0.6 | 1 | 0.1 | 0 | 1 | 6 |
| Segment: 5 | 70 | 1 | 41 | 0.774 | 12 | 0.226 | 1 | 3 | 13 |
| Segment: 6 | 46 | 1 | 27 | 0.75 | 9 | 0.25 | 0 | 2 | 8 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 10 | 6 | 0.4 | 3 | 0.3 | 1 | 0.1 | 0 | 2 | 0 |
| Totals: | 289 | 5.7 | 166 | 4.468 | 55 | 1.232 | 1 | 19 | 48 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allele - Minnesota Power, Inc. | Lori Frisk | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Affirmative | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Affirmative | N/A |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|----------------------|
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Affirmative | N/A |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Affirmative | N/A |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Affirmative | N/A |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Third-Party Comments |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | None | N/A |
| 1 | Colorado Springs Utilities | Corey Walker | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Third-Party Comments |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Elizabeth Weber | | None | N/A |
| 1 | Duke Energy | Katherine Street | | Affirmative | N/A |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Affirmative | N/A |
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|----------------------|
| 1 | FirstEnergy - FirstEnergy Corporation | Theresa Ciancio | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |
| 1 | Glencoe Light and Power Commission | Terry Volkman | | Negative | Third-Party Comments |
| 1 | Great River Energy | Gordon Pietsch | | Affirmative | N/A |
| 1 | Hydro One Networks, Inc. | Alain Mukama | | Negative | Comments Submitted |
| 1 | Hydro-Quebec (HQ) | Nicolas Turcotte | | Affirmative | N/A |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | Affirmative | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | Affirmative | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | None | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | Matt Lewis | | Affirmative | N/A |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Manitoba Hydro | Nazra Gladu | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------|------------------|-------------|----------------------|
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Third-Party Comments |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |
| 1 | National Grid USA | Michael Jones | | Negative | Third-Party Comments |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | Third-Party Comments |
| 1 | New York Power Authority | Salvatore Spagnolo | | Affirmative | N/A |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Third-Party Comments |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Third-Party Comments |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | Negative | Third-Party Comments |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | None | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|--------------------|
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Negative | Comments Submitted |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | Comments Submitted |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Chelan County | Glen Pruitt | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | None | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | Comments Submitted |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | None | N/A |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | Jennie Wike | Affirmative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | Affirmative | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|-----------------------------------|------------------|-------------|----------------------|
| 1 | Western Area Power Administration | Sean Erickson | Kimberly Bentley | Negative | Third-Party Comments |
| 1 | Xcel Energy, Inc. | Eric Barry | | Affirmative | N/A |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Kennedy Meier | | Affirmative | N/A |
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Affirmative | N/A |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | Affirmative | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Affirmative | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Affirmative | N/A |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Abstain | N/A |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Lovita Griffin | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | Rachel Schuldt | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|----------------------|
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | None | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Third-Party Comments |
| 3 | Cowlitz County PUD | Russell Noble | | None | N/A |
| 3 | Dominion - Dominion Virginia Power | Bill Garvey | | None | N/A |
| 3 | DTE Energy - Detroit Edison Company | Daniel Herring | | Affirmative | N/A |
| 3 | Duke Energy - Florida Power Corporation | Marcelo Pesantez | | Affirmative | N/A |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | None | N/A |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Affirmative | N/A |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Affirmative | N/A |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | KAMO Electric Cooperative | Tony Gott | | Affirmative | N/A |
| 3 | Lakeland Electric | Steven Marshall | | Affirmative | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | Third-Party Comments |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Third-Party Comments |
| 3 | National Grid USA | Brian Shanahan | | Negative | Third-Party Comments |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | Third-Party Comments |
| 3 | New York Power Authority | David Rivera | | Affirmative | N/A |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | None | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | Affirmative | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Third-Party Comments |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|----------------------|
| 3 | Omaha Public Power District | David Heins | | Negative | Third-Party Comments |
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | Negative | Third-Party Comments |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Negative | Comments Submitted |
| 3 | Portland General Electric Co. | Adam Menendez | | None | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Affirmative | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Affirmative | N/A |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | Vicky Budreau | | None | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrold Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|--------------------|
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | Comments Submitted |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Ryan Walter | | None | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |
| 3 | Xcel Energy, Inc. | Nicholas Friebel | | Affirmative | N/A |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | None | N/A |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Abstain | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | None | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | None | N/A |
| 4 | LaGen | Wayne Messina | | None | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | Affirmative | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | None | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------------|------------------|-------------|----------------------|
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | Affirmative | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | | Affirmative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Affirmative | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Affirmative | N/A |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Affirmative | N/A |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Affirmative | N/A |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | Abstain | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | Third-Party Comments |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------|------------------|-------------|----------------------|
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | Negative | Third-Party Comments |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | None | N/A |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Affirmative | N/A |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | None | N/A |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Affirmative | N/A |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Affirmative | N/A |
| 5 | Hydro-Quebec (HQ) | Junji Yamaguchi | | Affirmative | N/A |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Brittany Millard | | Negative | Third-Party Comments |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|----------------------|
| 5 | Lower Colorado River Authority | Teresa Krabe | | Affirmative | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Third-Party Comments |
| 5 | National Grid USA | Robin Berry | | Negative | Third-Party Comments |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Negative | Third-Party Comments |
| 5 | New York Power Authority | Zahid Qayyum | | Affirmative | N/A |
| 5 | NextEra Energy | Richard Vendetti | | None | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | | Affirmative | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Third-Party Comments |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | Negative | Third-Party Comments |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Affirmative | N/A |
| 5 | Orlando Utilities Commission | Dania Colon | | None | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|----------------------|
| 5 | Pattern Operators LP | George E Brown | | Negative | Third-Party Comments |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | None | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | Affirmative | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Rebecca Zahler | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Nikkee Hebdon | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Thomas Johnson | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | None | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | Comments Submitted |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Affirmative | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | None | N/A |
| 5 | Tri-State G and T Association, Inc. | Sergio Banuelos | | Affirmative | N/A |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------------|------------------|-------------|----------------------|
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 5 | Xcel Energy, Inc. | Gerry Huitt | Joseph Gatten | Negative | No Comment Submitted |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Affirmative | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Affirmative | N/A |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Abstain | N/A |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Affirmative | N/A |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirchak | | None | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Third-Party Comments |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | None | N/A |
| 6 | Duke Energy | John Sturgeon | | Affirmative | N/A |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|----------------------|
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | Third-Party Comments |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | None | N/A |
| 6 | Manitoba Hydro | Kelly Bertholet | | Affirmative | N/A |
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | Third-Party Comments |
| 6 | New York Power Authority | Shelly Dineen | | Affirmative | N/A |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | Affirmative | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Third-Party Comments |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Third-Party Comments |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Negative | Comments Submitted |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------|-------------------------|---------------|--------------------|
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | Affirmative | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | Mike Stussy | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Marty Watson | | None | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | Comments Submitted |
| 6 | Southern Indiana Gas and Electric Co. | Kati Barr | | Affirmative | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | Jennie Wike | Affirmative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | None | N/A |
| 6 | Xcel Energy, Inc. | Steve Szablya | | None | N/A |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|-----------------|------------------|-------------|--------------------|
| 10 | ReliabilityFirst | Lindsey Mannion | Stephen Whaite | Negative | Comments Submitted |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Abstain | N/A |

Showing 1 to 289 of 289 entries

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Next

BALLOT RESULTS

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 Non-binding Poll AB 2 NB

Voting Start Date: 6/9/2023 12:01:00 AM

Voting End Date: 6/21/2023 8:00:00 PM

Ballot Type: NB

Ballot Activity: AB

Ballot Series: 2

Total # Votes: 224

Total Ballot Pool: 279

Quorum: 80.29

Quorum Established Date: 6/21/2023 1:15:54 PM

Weighted Segment Value: 73.08

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes | Negative Fraction | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|----------------|-------------------|---------|---------|
| Segment: 1 | 78 | 1 | 35 | 0.648 | 19 | 0.352 | 12 | 12 |
| Segment: 2 | 6 | 0.5 | 5 | 0.5 | 0 | 0 | 0 | 1 |
| Segment: 3 | 63 | 1 | 27 | 0.711 | 11 | 0.289 | 11 | 14 |
| Segment: 4 | 14 | 0.6 | 5 | 0.5 | 1 | 0.1 | 2 | 6 |
| Segment: 5 | 69 | 1 | 37 | 0.771 | 11 | 0.229 | 7 | 14 |
| Segment: 6 | 42 | 1 | 20 | 0.769 | 6 | 0.231 | 8 | 8 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes | Negative Fraction | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|----------------|-------------------|---------|---------|
| Segment: 10 | 6 | 0.5 | 4 | 0.4 | 1 | 0.1 | 1 | 0 |
| Totals: | 279 | 5.6 | 133 | 4.299 | 49 | 1.301 | 42 | 55 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allele - Minnesota Power, Inc. | Lori Frisk | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Abstain | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Affirmative | N/A |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------------|------------------|-------------|--------------------|
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Negative | Comments Submitted |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Affirmative | N/A |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Comments Submitted |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | None | N/A |
| 1 | Colorado Springs Utilities | Corey Walker | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Comments Submitted |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Elizabeth Weber | | None | N/A |
| 1 | Duke Energy | Katherine Street | | Affirmative | N/A |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Negative | Comments Submitted |
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |
| 1 | FirstEnergy - FirstEnergy Corporation | Theresa Ciancio | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|--------------------|
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | Comments Submitted |
| 1 | Great River Energy | Gordon Pietsch | | Affirmative | N/A |
| 1 | Hydro One Networks, Inc. | Alain Mukama | | Negative | Comments Submitted |
| 1 | Hydro-Quebec (HQ) | Nicolas Turcotte | | Negative | Comments Submitted |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | Affirmative | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | Affirmative | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | None | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Lower Colorado River Authority | Matt Lewis | | Affirmative | N/A |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Comments Submitted |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |
| 1 | National Grid USA | Michael Jones | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|--------------------|
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Abstain | N/A |
| 1 | New York Power Authority | Salvatore Spagnolo | | Affirmative | N/A |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Abstain | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Comments Submitted |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Comments Submitted |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | None | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Negative | Comments Submitted |
| 1 | Portland General Electric Co. | Brooke Jockin | | Abstain | N/A |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | None | N/A |
| 1 | Public Utility District No. 1 of Chelan County | Glen Pruitt | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|--------------------|
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | None | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Affirmative | N/A |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | None | N/A |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | Jennie Wike | Negative | Comments Submitted |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | Abstain | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Affirmative | N/A |
| 1 | VELCO -Vermont Electric Power Company, Inc. | Randall Buswell | | Abstain | N/A |
| 1 | Western Area Power Administration | Sean Erickson | Kimberly Bentley | Negative | Comments Submitted |
| 1 | Xcel Energy, Inc. | Eric Barry | | None | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Kennedy Meier | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|-----------------------------------|------------------|-------------|--------------------|
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Affirmative | N/A |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | Affirmative | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Abstain | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Affirmative | N/A |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Abstain | N/A |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Lovita Griffin | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | Rachel Schuldt | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | None | N/A |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | None | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|--------------------|
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Comments Submitted |
| 3 | Cowlitz County PUD | Russell Noble | | None | N/A |
| 3 | Dominion - Dominion Virginia Power | Bill Garvey | | None | N/A |
| 3 | DTE Energy - Detroit Edison Company | Marvin Johnson | | None | N/A |
| 3 | Duke Energy - Florida Power Corporation | Marcelo Pesantez | | Affirmative | N/A |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | None | N/A |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Negative | Comments Submitted |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Affirmative | N/A |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | KAMO Electric Cooperative | Tony Gott | | Affirmative | N/A |
| 3 | Lakeland Electric | Steven Marshall | | Abstain | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Abstain | N/A |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|--------------------|
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Comments Submitted |
| 3 | National Grid USA | Brian Shanahan | | Negative | Comments Submitted |
| 3 | Nebraska Public Power District | Tony Eddleman | | Abstain | N/A |
| 3 | New York Power Authority | David Rivera | | Affirmative | N/A |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | None | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | Abstain | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Comments Submitted |
| 3 | Omaha Public Power District | David Heins | | Negative | Comments Submitted |
| 3 | Owensboro Municipal Utilities | William Berry | | Abstain | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|--------------------|
| 3 | Portland General Electric Co. | Adam Menendez | | None | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | None | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Abstain | N/A |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | Vicky Budreau | | None | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrod Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Affirmative | N/A |
| 3 | Tennessee Valley Authority | Ian Grant | | None | N/A |
| 3 | Tri-State G and T Association, Inc. | Ryan Walter | | None | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |
| 3 | Xcel Energy, Inc. | Nicholas Friebel | | None | N/A |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|--------------------|-------------------------|---------------|--------------------|
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Abstain | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | None | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | None | N/A |
| 4 | LaGen | Wayne Messina | | None | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | Abstain | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | None | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | Affirmative | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | | Affirmative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Abstain | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|--------------------|
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Affirmative | N/A |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Negative | Comments Submitted |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | Abstain | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Affirmative | N/A |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | Negative | Comments Submitted |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | None | N/A |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------|------------------|-------------|--------------------|
| 5 | Edison International - Southern California Edison Company | Selene Willis | | None | N/A |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Affirmative | N/A |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Negative | Comments Submitted |
| 5 | Hydro-Quebec (HQ) | Junji Yamaguchi | | Negative | Comments Submitted |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Brittany Millard | | Abstain | N/A |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Affirmative | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Comments Submitted |
| 5 | National Grid USA | Robin Berry | | Negative | Comments Submitted |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Abstain | N/A |
| 5 | New York Power Authority | Zahid Qayyum | | Affirmative | N/A |
| 5 | NextEra Energy | Richard Vendetti | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|---------------------|-------------------------|---------------|--------------------|
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | | Affirmative | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Comments Submitted |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | Negative | Comments Submitted |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Affirmative | N/A |
| 5 | Orlando Utilities Commission | Dania Colon | | None | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | Negative | Comments Submitted |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | None | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | None | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | Abstain | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Rebecca Zahler | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------|-------------------------|---------------|--------------------|
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Nikkee Hebdon | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Thomas Johnson | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | None | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Affirmative | N/A |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Affirmative | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | None | N/A |
| 5 | Tri-State G and T Association, Inc. | Sergio Banuelos | | Affirmative | N/A |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Abstain | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Affirmative | N/A |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Abstain | N/A |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|--------------------|
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Affirmative | N/A |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Comments Submitted |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | None | N/A |
| 6 | Duke Energy | John Sturgeon | | Affirmative | N/A |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Abstain | N/A |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | None | N/A |
| 6 | New York Power Authority | Shelly Dineen | | Affirmative | N/A |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Abstain | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | Abstain | N/A |
| 6 | NRG - NRG Energy Inc. | Martin Sidor | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|--------------------|
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Comments Submitted |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Comments Submitted |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Abstain | N/A |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | None | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | Abstain | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | Mike Stussy | | None | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Marty Watson | | None | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Affirmative | N/A |
| 6 | Southern Indiana Gas and Electric Co. | Kati Barr | | Affirmative | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | Jennie Wike | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|--------------------|
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | None | N/A |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | Stephen Whaite | Negative | Comments Submitted |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Affirmative | N/A |

Showing 1 to 279 of 279 entries

Previous 1 Next

BALLOT RESULTS

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 Non-binding Poll AB 2 NB

Voting Start Date: 6/9/2023 12:01:00 AM

Voting End Date: 6/21/2023 8:00:00 PM

Ballot Type: NB

Ballot Activity: AB

Ballot Series: 2

Total # Votes: 223

Total Ballot Pool: 276

Quorum: 80.8

Quorum Established Date: 6/21/2023 12:59:26 PM

Weighted Segment Value: 71.74

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes | Negative Fraction | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|----------------|-------------------|---------|---------|
| Segment: 1 | 78 | 1 | 35 | 0.636 | 20 | 0.364 | 11 | 12 |
| Segment: 2 | 6 | 0.5 | 5 | 0.5 | 0 | 0 | 0 | 1 |
| Segment: 3 | 62 | 1 | 27 | 0.692 | 12 | 0.308 | 10 | 13 |
| Segment: 4 | 14 | 0.6 | 5 | 0.5 | 1 | 0.1 | 2 | 6 |
| Segment: 5 | 67 | 1 | 36 | 0.766 | 11 | 0.234 | 7 | 13 |
| Segment: 6 | 42 | 1 | 20 | 0.741 | 7 | 0.259 | 7 | 8 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes | Negative Fraction | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|----------------|-------------------|---------|---------|
| Segment: 10 | 6 | 0.5 | 4 | 0.4 | 1 | 0.1 | 1 | 0 |
| Totals: | 276 | 5.6 | 132 | 4.235 | 52 | 1.365 | 39 | 53 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|--------------------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allele - Minnesota Power, Inc. | Lori Frisk | | Negative | Comments Submitted |
| 1 | Ameren - Ameren Services | Tamara Evey | | Abstain | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Affirmative | N/A |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------------|------------------|-------------|--------------------|
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | Comments Submitted |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Negative | Comments Submitted |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Affirmative | N/A |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | Comments Submitted |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | None | N/A |
| 1 | Colorado Springs Utilities | Corey Walker | | Affirmative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | Comments Submitted |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Elizabeth Weber | | None | N/A |
| 1 | Duke Energy | Katherine Street | | Affirmative | N/A |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Negative | Comments Submitted |
| 1 | Eversource Energy | Joshua London | | Negative | Comments Submitted |
| 1 | Exelon | Daniel Gacek | | Negative | Comments Submitted |
| 1 | FirstEnergy - FirstEnergy Corporation | Theresa Ciancio | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|--------------------|
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | Comments Submitted |
| 1 | Great River Energy | Gordon Pietsch | | Affirmative | N/A |
| 1 | Hydro One Networks, Inc. | Alain Mukama | | Negative | Comments Submitted |
| 1 | Hydro-Quebec (HQ) | Nicolas Turcotte | | Negative | Comments Submitted |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | Affirmative | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | Affirmative | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | None | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Lower Colorado River Authority | Matt Lewis | | Affirmative | N/A |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | Comments Submitted |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | Comments Submitted |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |
| 1 | National Grid USA | Michael Jones | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|--------------------|
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Abstain | N/A |
| 1 | New York Power Authority | Salvatore Spagnolo | | Affirmative | N/A |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Abstain | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | Comments Submitted |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | Comments Submitted |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | None | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Negative | Comments Submitted |
| 1 | Portland General Electric Co. | Brooke Jockin | | Abstain | N/A |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | None | N/A |
| 1 | Public Utility District No. 1 of Chelan County | Glen Pruitt | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|--------------------|
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | None | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Negative | Comments Submitted |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Affirmative | N/A |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | None | N/A |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | Jennie Wike | Negative | Comments Submitted |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | Abstain | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Affirmative | N/A |
| 1 | VELCO -Vermont Electric Power Company, Inc. | Randall Buswell | | Abstain | N/A |
| 1 | Western Area Power Administration | Sean Erickson | Kimberly Bentley | Negative | Comments Submitted |
| 1 | Xcel Energy, Inc. | Eric Barry | | None | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Kennedy Meier | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|-----------------------------------|------------------|-------------|--------------------|
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Affirmative | N/A |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | Affirmative | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Abstain | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Affirmative | N/A |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Abstain | N/A |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Lovita Griffin | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | Comments Submitted |
| 3 | Black Hills Corporation | Josh Combs | Rachel Schuldt | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | None | N/A |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | None | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|--------------------|
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | Comments Submitted |
| 3 | Cowlitz County PUD | Russell Noble | | None | N/A |
| 3 | Dominion - Dominion Virginia Power | Bill Garvey | | None | N/A |
| 3 | DTE Energy - Detroit Edison Company | Marvin Johnson | | None | N/A |
| 3 | Duke Energy - Florida Power Corporation | Marcelo Pesantez | | Affirmative | N/A |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | None | N/A |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Negative | Comments Submitted |
| 3 | Eversource Energy | Vicki O'Leary | | Negative | Comments Submitted |
| 3 | Exelon | Kinte Whitehead | | Negative | Comments Submitted |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Affirmative | N/A |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | KAMO Electric Cooperative | Tony Gott | | Affirmative | N/A |
| 3 | Lakeland Electric | Steven Marshall | | Abstain | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Abstain | N/A |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|--------------------|
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | Comments Submitted |
| 3 | National Grid USA | Brian Shanahan | | Negative | Comments Submitted |
| 3 | Nebraska Public Power District | Tony Eddleman | | Abstain | N/A |
| 3 | New York Power Authority | David Rivera | | Affirmative | N/A |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | None | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | Abstain | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | Comments Submitted |
| 3 | Omaha Public Power District | David Heins | | Negative | Comments Submitted |
| 3 | Owensboro Municipal Utilities | William Berry | | Abstain | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------|-------------------------|---------------|--------------------|
| 3 | Portland General Electric Co. | Adam Menendez | | None | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | None | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Maria Pardo | | Abstain | N/A |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | Vicky Budreau | | None | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Negative | Comments Submitted |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrod Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Affirmative | N/A |
| 3 | Tennessee Valley Authority | Ian Grant | | None | N/A |
| 3 | Tri-State G and T Association, Inc. | Ryan Walter | | None | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | Comments Submitted |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | None | N/A |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|--------------------|-------------------------|---------------|--------------------|
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | None | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | None | N/A |
| 4 | LaGen | Wayne Messina | | None | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | Abstain | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | None | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | Affirmative | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | Comments Submitted |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | | Affirmative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Abstain | N/A |
| 5 | APS - Arizona Public Service Co. | Michelle Amarantos | | Affirmative | N/A |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|------------------------|-------------------------|---------------|--------------------|
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Affirmative | N/A |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Negative | Comments Submitted |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | Abstain | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Affirmative | N/A |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Affirmative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | Negative | Comments Submitted |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | None | N/A |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Affirmative | N/A |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|--------------------|
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Negative | Comments Submitted |
| 5 | Great River Energy | Jacalynn Bentz | | Affirmative | N/A |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Negative | Comments Submitted |
| 5 | Hydro-Quebec (HQ) | Junji Yamaguchi | | Negative | Comments Submitted |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Brittany Millard | | Abstain | N/A |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Affirmative | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | Comments Submitted |
| 5 | National Grid USA | Robin Berry | | Negative | Comments Submitted |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Abstain | N/A |
| 5 | New York Power Authority | Zahid Qayyum | | Affirmative | N/A |
| 5 | NextEra Energy | Richard Vendetti | | None | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|--------------------|
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | | Affirmative | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | Comments Submitted |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | Negative | Comments Submitted |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Affirmative | N/A |
| 5 | Orlando Utilities Commission | Dania Colon | | None | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | Negative | Comments Submitted |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | None | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | None | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | Abstain | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Rebecca Zahler | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------|------------------|-------------|--------------------|
| 5 | Public Utility District No. 2 of Grant County, Washington | Nikkee Hebdon | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Thomas Johnson | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | None | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Affirmative | N/A |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Affirmative | N/A |
| 5 | Tri-State G and T Association, Inc. | Sergio Banuelos | | Affirmative | N/A |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | None | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | Comments Submitted |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Abstain | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Affirmative | N/A |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Abstain | N/A |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Affirmative | N/A |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|--------------------|
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | Comments Submitted |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | None | N/A |
| 6 | Duke Energy | John Sturgeon | | Affirmative | N/A |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Negative | Comments Submitted |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Abstain | N/A |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | None | N/A |
| 6 | New York Power Authority | Shelly Dineen | | Affirmative | N/A |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Abstain | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | Abstain | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | None | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | Comments Submitted |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|----------------|-------------------------|---------------|--------------------|
| 6 | Omaha Public Power District | Shonda McCain | | Negative | Comments Submitted |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Daniel Mason | | Abstain | N/A |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | None | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | Abstain | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | Mike Stussy | | None | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Marty Watson | | None | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Negative | Comments Submitted |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Affirmative | N/A |
| 6 | Southern Indiana Gas and Electric Co. | Kati Barr | | Affirmative | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | Jennie Wike | Negative | Comments Submitted |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | Comments Submitted |
| 6 | Western Area Power Administration | Chrystal Dean | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|--------------------|
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | William Steiner | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | Stephen Whaite | Negative | Comments Submitted |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Affirmative | N/A |

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Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the final draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 – August 6, 2021 |
| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|-----------------------|
| 45-day formal comment period with additional ballot | May 5 – June 10, 2023 |
| 10-day final ballot | July 21 – 31, 2023 |
| Board adoption | August 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data and information Specification and Collection
2. **Number:** IRO-010-5
3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring each Reliability Coordinator has the data and information it needs to plan, monitor and assess the operation of its Reliability Coordinator Area.
4. **Applicability:**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2021-06.

B. Requirements

- R1.** The Reliability Coordinator shall maintain documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- 1.1.** A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** Method(s) for the entity identified in Part 1.1 to provide data and information that includes, but is not limited to.
 - 1.5.1** Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3** Provisions to update or correct data and information, as applicable or necessary.
 - 1.5.4** A mutually agreeable format.
 - 1.5.5** A mutually agreeable method(s) for securely transferring data and information.

- M1.** The Reliability Coordinator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** The Reliability Coordinator shall distribute its data and information specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *(Violation Risk Factor: Low) (Time Horizon: Operations Planning)*
- M2.** The Reliability Coordinator shall make available evidence that it has distributed its specification(s) to entities that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.
- R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R2 shall satisfy the obligations of the documented specifications. *(Violation Risk Factor: Medium) (Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations)*
- M3.** The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

- 1.1. Compliance Enforcement Authority:** “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.
- 1.2. Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

- 1.3. Compliance Monitoring and Enforcement Program:**
As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-----|---|--|---|--|
| | | | Lower | Moderate | High | Severe |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|---|---|--|---|
| | | | Lower | Moderate | High | Severe |
| R2 | Operations Planning | Low | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R3 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet one of the parts in Requirement Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet two of the parts in Requirement R1Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet any of the parts in Requirement R1 Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 did not satisfy the obligations of the documented specifications . |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|--|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
| 1a | August 5, 2009 | Added Appendix 1: Interpretation of R1.2 and R3 as approved by Board of Trustees | Addition |
| 1a | March 17, 2011 | Order issued by FERC approving IRO- 010-1a (approval effective 5/23/11) | |
| 1a | November 19, 2013 | Updated VRFs based on June 24, 2013 approval | |
| 2 | April 2014 | Revisions pursuant to Project 2014-03 | |
| 2 | November 13, 2014 | Adopted by NERC Board of Trustees | Revisions under Project 2014-03 |
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| 3 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 3 | October 30, 2020 | FERC approved IRO-010-3. Docket No. RD20-4-000 | |
| 4 | March 22, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 Cold Weather |
| 4 | June 11, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 |
| 4 | August 24, 2021 | FERC approved IRO-010-4. Docket No. RD21-5-000 | |
| 4 | August 27, 2021 | Effective Date | April 1, 2023 |
| 5 | TBD | Adopted by NERC Board of Trustees | Revision under project 2021-06 |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the final draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 – August 6, 2021 |
| SAR posted for comment | January 11 – February 9, 2022 |
| 45-day formal comment period with ballot | October 25 – December 9, 2022 |

| Anticipated Actions | Date |
|---|-----------------------|
| 45-day formal comment period with additional ballot | May 5 – June 10, 2023 |
| 10-day final ballot | July 21 – 31, 2023 |
| Board adoption | August 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data and ~~information~~Information Specification and Collection
2. **Number:** IRO-010-5
3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring ~~each~~the Reliability Coordinator has the data and information it needs to plan, ~~monitor~~Monitor and assess the operation of ~~its~~ Reliability Coordinator Area.
4. **Applicability:**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project ~~2021~~2019-06.

B. Requirements

- R1.** The Reliability Coordinator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- 1.1.** A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time ~~Assessments~~Assessment, including non-BES data and information, external network data and information, and identification of the ~~entities~~entity responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** ~~Method(s)~~Methods for the entity identified in Part 1.1 to provide data and information that includes, but is not limited to.
 - 1.5.1** Specific deadlines or periodicity in which data and information is to be provided;
 - 1.5.2** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 1.5.3** Provisions to update or correct data and information, as applicable or necessary.
 - 1.5.4** A mutually agreeable format.
 - 1.5.5** A mutually agreeable ~~method(s)~~methods for securely transferring data and information.

- M1.** The Reliability Coordinator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** The Reliability Coordinator shall distribute its data and information specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *(Violation Risk Factor: Low) (Time Horizon: Operations Planning)*
- M2.** The Reliability Coordinator shall make available evidence that it has distributed its specification(s) to entities that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.
- R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R2 shall satisfy the obligations of the documented specifications. *(Violation Risk Factor: Medium) (Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations)*
- M3.** The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority: “Compliance Enforcement Authority”

1.1. -(CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. **Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its ~~data~~ specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

1.3. 1.3. Compliance Monitoring and Enforcement Program:

As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R # | Time Horizon Horizons | VRF | Violation Severity Levels | | | |
|-----|-------------------------------------|-----|---|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include one <u>two</u> or two <u>fewer</u> of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| R # | Time Horizon Horizons | VRF | Violation Severity Levels | | | |
|---|--|--------|---|---|--|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |
| R2 | Operations Planning | Low | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R3 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a _ specification(s) in Requirement R2 satisfied the <u>obligations of the</u> documented | The responsible entity receiving a _ specification(s) in Requirement R2 satisfied the <u>obligations of the</u> documented | The responsible entity receiving a _ specification(s) in Requirement R2 satisfied the <u>obligations of the</u> documented | The responsible entity receiving a _ specification(s) in Requirement R2 did not satisfy the <u>obligations of the</u> documented specifications_. |

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|--------------|-----|--|--|---|------------|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | specifications but failed to meet use one of the <u>parts criteria</u> in Requirement Part R1-Parts 1.5. | specifications but failed to <u>meet</u> use two of the <u>parts criteria</u> in Requirement R1 PartR1-Parts 1.5. | specifications but failed to <u>meet</u> any use three <u>three</u> or more of the <u>parts criteria</u> in Requirement R1 Part Parts 1.5. | |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------------|---|--|---|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
| 1a | August 5, 2009 | Added Appendix 1: Interpretation of R1.2 and R3 as approved by Board of Trustees | Addition |
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| 1a | November 19, 2013 | Updated VRFs based on June 24, 2013 approval | |
| 2 | April 2014 | Revisions pursuant to Project 2014-03 | |
| 2 | November 13, 2014 | Adopted by NERC Board of Trustees | Revisions under Project 2014-03 |
| 2 | November 19, 2015 | FERC approved IRO-010-2. Docket No. RM15-16-000 | |
| 3 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 34 | TBD <u>October 30, 2020</u> | Adopted by NERC Board of Trustees <u>FERC approved IRO-010-3. Docket No. RD20-4-000</u> | Revisions under Project 2019-06 Cold Weather |
| 43 | October 30, 2020 <u>March 22, 2021</u> | FERC approved IRO-010-2. Docket No. RD20-4-000 <u>Adopted by NERC Board of Trustees</u> | Revisions under Project 2019-06 Cold Weather |
| 4 | June 11, 2021 | Adopted by NERC Board of Trustees | Revisions under Project 2019-06 |
| 4 | August 24, 2021 | FERC approved IRO-010-4. Docket No. -RD21-5-000 | |
| 45 | August 27 <u>June, 2021</u> | Effective Date <u>Revisions pursuant to Project 2021-06</u> | <u>April 1, 2023</u> |
| 5 | <u>TBD</u> | <u>Adopted by NERC Board of Trustees</u> TBD | <u>Revision under</u> |

| | | | |
|--|--|--|--------------------------------------|
| | | | <u>project 2021-</u> <u>06TBD</u> |
|--|--|--|--------------------------------------|

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Description of Current Draft

This is the final draft of the proposed standard.

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| Anticipated Actions | Date |
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| 45-day formal comment period with additional ballot | May 5 – June 10, 2023 |
| 10-day final ballot | July 21 – 31, 2023 |
| Board adoption | August 2023 |

A. Introduction

1. **Title:** Reliability Coordinator Data and information Specification and Collection
 2. **Number:** IRO-010-45
 3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, by ensuring ~~the~~each Reliability Coordinator has the data and information it needs to plan, monitor and assess the operation of its Reliability Coordinator Area.
 4. **Applicability:**
 - 4.1. Reliability Coordinator
 - 4.2. Balancing Authority
 - 4.3. Generator Owner
 - 4.4. Generator Operator
 - 4.5. Transmission Operator
 - 4.6. Transmission Owner
 - 4.7. Distribution Provider
 5. **Effective Date:** See Implementation Plan for Project 20219-06.
-

B. Requirements

- R1.** The Reliability Coordinator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include but not be limited to: (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- 1.1.** A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data, and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Reliability Coordinator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints

1.3.2. Generating unit(s) minimum:

1.3.2.1. design temperature; or

1.3.2.2. historical operating temperature; or

1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

~~**1.4.** A periodicity for providing data.~~

~~**1.4.** The deadline by which Identification of a mutually agreeable process for resolving conflicts.~~

~~**1.5.** Method(s) for the respondent is entity identified in Part 1.1 to provide data and information that includes, but is not limited to.~~

~~**1.5.1** Specific deadlines or periodicity in which data and information is to be provided;~~

~~**1.4.1****1.5.2** Performance criteria for the indicated data availability and accuracy of data and information, as applicable;~~

~~**1.5.3** Provisions to update or correct data and information, as applicable or necessary.~~

~~**1.5.4** A mutually agreeable format.~~

~~**1.5.5** A mutually agreeable method(s) for securely transferring data and information.~~

- M1.**— The Reliability Coordinator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** The Reliability Coordinator shall distribute its data and information specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. (*Violation Risk Factor: Low*) (*Time Horizon: Operations Planning*)
- M2.** — The Reliability Coordinator shall make available evidence that it has distributed its ~~data~~ specification(s) to entities that have data and information required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. This evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.
- R3.** Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) in Requirement R2 shall satisfy the obligations of the documented specifications ~~using:~~ (*Violation Risk Factor: Medium*) (*Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations*)
- ~~3.1. A mutually agreeable format~~
 - ~~3.2. A mutually agreeable process for resolving data conflicts~~
 - ~~3.3. A mutually agreeable security protocol~~
- M3.**— The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Reliability Coordinator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) in Requirement R2 shall make available evidence that it satisfied the obligations of the documented specification using the specified criteria. Such evidence could include but is not limited to electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

- 1.1. Compliance Enforcement Authority:** “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.
- 1.2. Evidence Retention:** The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider shall each keep data or evidence to show compliance as identified below unless directed by its ~~Compliance Enforcement Authority~~ CEA to retain specific evidence for a longer period of time as part of an investigation:

The Reliability Coordinator shall retain its dated, current, in force documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, Measure M1 as well as any documents in force since the last compliance audit.

The Reliability Coordinator shall keep evidence for three calendar years that it has distributed its ~~data~~ specification(s) to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R2, Measure M2.

Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R3 and Measurement M3.

1.3. Compliance Monitoring and Enforcement Program:

As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-----|--|---|--|--|
| | | | Lower | Moderate | High | Severe |
| R1 | Operations Planning | Low | The Reliability Coordinator did not include one or two or fewer of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| <p>For the Requirement R2 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p> | | | | | | |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|--|--|---|--|
| | | | Lower | Moderate | High | Severe |
| R2 | Operations Planning | Low | The Reliability Coordinator did not distribute its data specification(s) as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its data specification(s) as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator’s Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its data specification(s) as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its data specification(s) as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data <u>and information</u> required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R3 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a data specification(s) in Requirement R2 satisfied the obligations of the documented specifications for data but failed to <u>meet follow</u> one of the <u>parts criteria shown</u> in <u>Parts 3.1 – 3.3 Requirement</u> | The responsible entity receiving a data specification(s) in Requirement R2 satisfied the obligations of the documented specifications for data but failed to <u>meet follow</u> two of the <u>criteria shown</u> <u>parts</u> in <u>Requirement R1 Part</u> | The responsible entity receiving a data specification(s) in Requirement R2 satisfied the obligations of the documented specifications for data but failed to <u>meet follow</u> any of the <u>criteria shown</u> <u>parts</u> in <u>Requirement R1 Part</u> | The responsible entity receiving a data specification(s) in Requirement R2 did not satisfy the obligations of the documented specifications for data . |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--------------|-----|---------------------------|---------------------------|---------------------------|--------|
| | | | Lower | Moderate | High | Severe |
| | | | <u>Part 1.5.</u> | <u>1.5.Parts 3.1-3.3.</u> | <u>1.5.Parts 3.1-3.3.</u> | |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|--|--|
| 1 | October 17, 2008 | Adopted by Board of Trustees | New |
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| 4 | August 27, 2021 | Effective Date | April 1, 2023 |
| 5 | TBD | Adopted by NERC Board of Trustees | Revision under project 2021-06 |

Standard Development Timeline

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Description of Current Draft

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| Anticipated Actions | Date |
|---------------------|-------------------|
| 10-day final ballot | July 21 – 31 2023 |
| Board adoption | August 2023 |

A. Introduction

1. **Title:** Transmission Operator and Balancing Authority Data and Information Specification and Collection
2. **Number:** TOP-003-6
3. **Purpose:** To ensure that each Transmission Operator and Balancing Authority has the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.
4. **Applicability:**
 - 4.1 Functional Entities:
 - 4.1.1 Transmission Operator
 - 4.1.2 Balancing Authority
 - 4.1.3 Generator Owner
 - 4.1.4 Generator Operator
 - 4.1.5 Transmission Owner
 - 4.1.6 Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2021-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** Method(s) for the entity identified in Part 1.1 to provide the data and information that includes at a minimum the following.
 - 1.5.1.** Specified deadlines or periodicity which data and information is to be provided;
 - 1.5.2.** Performance criteria for the availability and accuracy of data and information as applicable;
 - 1.5.3.** Provisions to update or correct data and information, as applicable or necessary;
 - 1.5.4.** A mutually agreeable format;
 - 1.5.5.** Mutually agreeable method(s) for securely transferring data and information.

- M1.** Each Transmission Operator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** Each Balancing Authority shall maintain documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
 - 2.1.** A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.
 - 2.2.** Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
 - 2.3.** Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
 - 2.3.1.** Operating limitations based on:
 - 2.3.1.1.** capability and availability;
 - 2.3.1.2.** fuel supply and inventory concerns;
 - 2.3.1.3.** fuel switching capabilities; and
 - 2.3.1.4.** environmental constraints.
 - 2.3.2.** Generating unit(s) minimum:
 - 2.3.2.1.** design temperature; or
 - 2.3.2.2.** historical operating temperature; or
 - 2.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 2.4.** Identification of a mutually agreeable process in resolving conflicts
 - 2.5.** Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.
 - 2.5.1.** Specific deadlines or periodicity in which data and information is to be provided;
 - 2.5.2.** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 2.5.3.** Provisions to update or correct data and information, as applicable or necessary.
 - 2.5.4.** A mutually agreeable format.
 - 2.5.5.** A mutually agreeable methods for securely transferring data and information.

- M2.** Each Balancing Authority shall make available its dated, current, in force documented specification(s) for data and information.
- R3.** Each Transmission Operator shall distribute its data and information specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M3.** Each Transmission Operator shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

- R4.** Each Balancing Authority shall distribute its data and information specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M4.** Each Balancing Authority shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.
- R5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data and information specification(s) in Requirement R3 or R4 shall satisfy the obligations of the documented specifications using. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*
- M5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specification. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

4.1.1 Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

4.1.2 Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its specification(s) to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its specification(s) to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R3 or R4 shall retain evidence for the most

recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R5 and Measurement M5.

- 4.1.3 Compliance Monitoring and Enforcement Program:** As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|---------------------|-------|---|--|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|--|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | monitoring. | | OR, The Balancing Authority did not have a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its Specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its Specification(s) to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its Specification(s) to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its Specification(s) to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its Specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required | The Balancing Authority did not distribute its Specification(s) to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that | The Balancing Authority did not distribute its Specification(s) to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that | The Balancing Authority did not distribute its Specification(s) to four or more entities, or more than 15% of the entities that have data and information required by |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|-----------|--|--------|---|---|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | by the Balancing Authority's analysis functions and Real-time monitoring. | have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | the Balancing Authority's analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet one of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet two of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet three or more of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 did not satisfy the obligations of the documented specifications. |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|---|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP- 003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | October 30, 2020 | FERC approved TOP-003-4. Docket No. RD20-4-000 | |
| 5 | May 2021 | Changes pursuant to Project 2019-06 | Revised |
| 5 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |
| 5 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order 176 | |
| 6 | TBD | Adopted by NERC Board of Trustees | Revisions under project 2021-06 |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the final draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 - August 6, 2021 |
| SAR posted for comment | January 11 - February 9, 2022 |
| 45-day formal comment period with ballot | October 25 - December 9, 2022 |
| 45-day formal comment period with additional ballot | May 5 - June 11, 2023 |

| Anticipated Actions | Date |
|---------------------|-------------------|
| 10-day final ballot | July 21 – 31 2023 |
| Board adoption | August 2023 |

A. Introduction

1. **Title:** Transmission Operator and Balancing Authority Data and Information Specification and Collection
2. **Number:** TOP-003-6
3. **Purpose:** To ensure that ~~each~~ the Transmission Operator and Balancing Authority ~~has~~ have the _____ data and information it needs to plan, monitor, and assess the operation of its _____ Transmission Operator Area or Balancing Authority Area.
4. **Applicability:**
 - 4.1 Functional Entities:
 - 4.1.1. Transmission Operator
 - 4.1.2. Balancing Authority
 - 4.1.3. Generator Owner
 - 4.1.4. Generator Operator
 - 4.1.5. Transmission Owner
 - 4.1.6. Distribution Provider
5. **Effective Date:** See Implementation Plan for Project ~~2021~~2019-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the ~~entity~~entity responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** ~~Method(s)~~Methods for the entity identified in Part 1.1 to provide the data and information that includes at a minimum the following:
 - 1.5.1.** ~~Specified~~Specific deadlines or periodicity ~~in~~ which data and information is to be provided;
 - 1.5.2.** Performance criteria for the availability and accuracy of data and information; as applicable;
 - 1.5.3.** Provisions to update or correct data and information, as applicable or necessary;
 - 1.5.4.** A mutually agreeable format;
 - 1.5.5.** ~~Mutually~~A mutually agreeable ~~method(s)~~methods for securely transferring data and information.

- M1.** Each Transmission Operator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** Each Balancing Authority shall maintain a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
 - 2.1.** A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and -external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.
 - 2.2.** Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
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 - 2.3.1.1.** capability and availability;
 - 2.3.1.2.** fuel supply and inventory concerns;
 - 2.3.1.3.** fuel switching capabilities; and
 - 2.3.1.4.** environmental constraints.
 - 2.3.2.** Generating unit(s) minimum:
 - 2.3.2.1.** design temperature; or
 - 2.3.2.2.** historical operating temperature; or
 - 2.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 2.4.** Identification of a mutually agreeable process in resolving conflicts.
 - 2.5.** Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.
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 - 2.5.2.** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 2.5.3.** Provisions to update or correct data and information, as applicable or necessary.
 - 2.5.4.** A mutually agreeable format.
 - 2.5.5.** A mutually agreeable methods for securely transferring data and information.

- M2.** Each Balancing Authority shall make available its dated, current, in force documented specification(s) for data and information.
- R3.** Each Transmission Operator shall distribute its data and information specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M3.** Each Transmission Operator shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

- R4.** Each Balancing Authority shall distribute its data and information specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M4.** Each Balancing Authority shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.
- R5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data and information specification(s) in Requirement R3 or R4 shall satisfy the obligations of the documented specifications using. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*
- M5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specification. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its ~~data~~-specification(s) to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its ~~data~~-specification(s) to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~-specification(s) in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented

specifications in accordance with Requirement R5 and Measurement M5.

- 1.3 Compliance Monitoring and Enforcement Program:** As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|---------------------|-------|---|--|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include one two or two fewer of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR The Transmission Operator did not have a documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|---|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real- time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real- time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real- time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real- time monitoring. OR _L The Balancing Authority did not have a documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real- time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its <u>Specification(s)specificatio</u> n to one entity, or 5% or less of the entities, whichever is greater, that | The Transmission Operator did not distribute its <u>Specification(s)specificatio</u> n to two entities, or more than 5% and less than or equal to10% of the | The Transmission Operator did not distribute its <u>Specification(s)specificatio</u> n to three entities, or more than 10% and less than or equal to 15% of | The Transmission Operator did not distribute its <u>Specification(s)specificati</u> n to four or more entities, or more than 15% of the entities that |

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|--|--------|--|--|--|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R4 | Operations -Planning | Lower | The Balancing Authority did not distribute its Specification(s)specificatio to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its Specification(s)specificatio to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its Specification(s)specificatio to three entities, or more than10than 10% and less than or equal to 15% of the entities, whichever is greater, that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its Specification(s)specificatio to four or more entities, or more than 15% of the entities that have dataData and information required by the Balancing Authority’s analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the <u>obligations in the specification</u> but failed to meetuse one of the <u>partscriteria</u> in Requirement R1 Part1Part | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the <u>obligations in the specification</u> but failed to meetuse two of the <u>partscriteria</u> in Requirement R1 Part 1.5 | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the <u>obligations in the specification</u> but failed to meetuse three or more of the <u>partscriteria</u> in | The responsible entity receiving a specification(s) in Requirement R3 or R4 did not satisfy the <u>obligations of the documented specificationsspecification</u> . |

| R # | Time Horizon | VRF | Violation Severity Levels | | | |
|-----|--------------|-----|---------------------------------|-----------------------------|--|------------|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | ±.5 or Requirement R2 Part 2.5. | or Requirement R2 Part 2.5. | Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|-----------|-------------------------|---|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP- 003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| <u>4</u> | <u>October 30, 2020</u> | <u>FERC approved TOP-003-4. Docket No. RD20-4-000</u> | |
| <u>5</u> | <u>May 2021</u> | <u>Changes pursuant to Project 2019-06</u> | <u>Revised</u> |
| <u>54</u> | June 11, 2021 | Board approved– | Project 2019-06 Cold Weather |
| <u>54</u> | August 24, 2021 | FERC approved TOP –003-5 Docket No. -RD21-5-000, Order <u>176-</u> | |
| <u>65</u> | <u>TBD June, 2021</u> | <u>Adopted by NERC Board of Trustees</u> Revision under project 2021-06 | <u>Revisions under project</u> |

| | | | |
|---|--|-----|-------------------------------|
| | | | <u>2021-06</u> |
| 6 | | TBD | Revised under project 2021-06 |

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the final draft of the proposed standard.

| Completed Actions | Date |
|---|-------------------------------|
| Standards Committee approved Standard Authorization Request (SAR) for posting | January 20, 2021 |
| SAR posted for comment | July 8 - August 6, 2021 |
| SAR posted for comment | January 11 - February 9, 2022 |
| 45-day formal comment period with ballot | October 25 - December 9, 2022 |
| 45-day formal comment period with additional ballot | May 5 - June 11, 2023 |

| Anticipated Actions | Date |
|---------------------|-------------------|
| 10-day final ballot | July 21 – 31 2023 |
| Board adoption | August 2023 |

A. Introduction

1. Title: Transmission Operator and Balancing Authority Data and Information Specification and Collection

2. Number: TOP-003-~~5~~6

3. Purpose: To ensure that each Transmission Operator and Balancing Authority has the Transmission Operator and Balancing Authority have data needed and information it needs to fulfill their operational and planning responsibilities plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.

4. Applicability:

4.1 Functional Entities:

4.1.1 Transmission Operator

4.1.2 Balancing Authority

4.1.3 Generator Owner

4.1.4 Generator Operator

4.1.5 Transmission Owner

4.1.6 Distribution Provider

5. Effective Date: See Implementation Plan for Project 20~~19~~-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data, and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or

- 1.3.2.2. historical operating temperature; or
- 1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

~~1.4. A mutually agreeable process for resolving conflicts.~~

1.5. Method(s) for the entity identified in Part 1.1 to provide the data and information that includes at a minimum the following.

~~1.4. Specified deadlines or periodicity for providing data.~~

~~1.4.1.1.5.1. The deadline by which the respondent data and information is to provide the indicated data be provided;~~

1.5.2. Performance criteria for the availability and accuracy of data and information as applicable;

1.5.3. Provisions to update or correct data and information, as applicable or necessary;

1.5.4. A mutually agreeable format;

1.5.5. Mutually agreeable method(s) for securely transferring data and information.

- M1.-** Each Transmission Operator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** Each Balancing Authority shall maintain a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 2.1. A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.
 - 2.2. Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
 - 2.3. Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
 - 2.3.1. Operating limitations based on:
 - 2.3.1.1. capability and availability;
 - 2.3.1.2. fuel supply and inventory concerns;
 - 2.3.1.3. fuel switching capabilities; and
 - 2.3.1.4. environmental constraints.
 - 2.3.2. Generating unit(s) minimum:

- 2.3.2.1. design temperature; or
- 2.3.2.2. historical operating temperature; or
- 2.3.2.3. current cold weather performance temperature determined by an engineering analysis.

2.4. A-Identification of a mutually agreeable process in resolving conflicts

2.5. Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.

~~2.4. Specific deadlines or periodicity for providing data.~~

~~2.4.1.2.5.1. The deadline by in which the respondent data and information is to provide the indicated data be provided;~~

2.5.2. Performance criteria for the availability and accuracy of data and information, as applicable;

2.5.3. Provisions to update or correct data and information, as applicable or necessary.

2.5.4. A mutually agreeable format.

2.5.5. A mutually agreeable methods for securely transferring data and information.

M2.- Each Balancing Authority shall make available its dated, current, in force documented specification(s) for data and information.

R3. Each Transmission Operator shall distribute its data and information specification(s) to entities that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.
[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

M3.- Each Transmission Operator shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

R4. Each Balancing Authority shall distribute its data and information specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. [*Violation Risk Factor: Lower*] [*Time Horizon: Operations Planning*]

M4.- Each Balancing Authority shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.

R5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data and information specification(s) in Requirement R3 or R4 shall satisfy the obligations of the documented specifications using: [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations*]

~~5.1. A mutually agreeable format~~

~~5.2. A mutually agreeable process for resolving data conflicts~~

~~5.3. A mutually agreeable security protocol~~

M5.- Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specifications. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

4.1.1 Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

4.1.2 Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the ~~Compliance Enforcement Authority~~ CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its ~~Compliance Enforcement Authority~~ CEA to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its ~~data~~-specification(s) to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its ~~data~~-specification(s) to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~

specification(s) in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R5 and Measurement M5.

4.1.3 Compliance Monitoring and Enforcement Program: As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

I

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|---------------------|-------|--|---|--|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include two or fewer one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification(s) for the data <u>and information</u> on necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|--|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | monitoring. | | OR, The Balancing Authority did not have a documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its data <u>Specification(s)</u> to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>Specification(s)</u> to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>Specification(s)</u> to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>Specification(s)</u> to four or more entities, or more than 15% of the entities that have data <u>and information</u> required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its data <u>Specification(s)</u> to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required | The Balancing Authority did not distribute its data <u>Specification(s)</u> to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that | The Balancing Authority did not distribute its data <u>Specification(s)</u> to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that | The Balancing Authority did not distribute its data <u>Specification(s)</u> to four or more entities, or more than 15% of the entities that have data <u>and information</u> required by |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|--|--|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | by the Balancing Authority’s analysis functions and Real-time monitoring. | have data <u>and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. | have data <u>and information</u> required by the Balancing Authority’s analysis functions and Real-time monitoring. | the Balancing Authority’s analysis functions and Real-time monitoring. |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but <u>failed did-not to</u> meet one of the parts criteria shown in Requirement R15 (Parts 15.51- or 5.3) <u>Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but <u>did-notfailed</u> to meet two of the parts criteria shown in Requirement R15 (Parts 15.51–5.3) <u>or Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but <u>did-notfailed</u> to meet three or more of the parts criteria shown in Requirement R15 (Parts 15.15 –5.3) <u>or Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 did not satisfy the obligations of the documented specifications for data . |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|----------------|-------------------|---|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP- 003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | October 30, 2020 | FERC approved TOP-003-4. Docket No. RD20-4-000 | |
| 5 | May 2021 | Changes pursuant to Project 2019-06 | Revised |
| 5 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |
| 5 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order 176 | |
| 6 | TBD | Adopted by NERC Board of Trustees | Revisions under project 2021-06 |

Implementation Plan

Reliability Standards IRO-010-5 and TOP-003-6 Project 2021-06 Modifications to IRO-010 and TOP-003

Applicable Standard(s)

- Reliability Standard IRO-010-5 – Reliability Coordinator Data and Information Specification and Collection
- Reliability Standard TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection

Requested Retirements

- Reliability Standard IRO-010-4 – Reliability Coordinator Data Specification and Collection
- Reliability Standard TOP-003-5 – Operational Reliability Data

Applicable Entities

- See subject standards.

Background

The primary purpose of this project is to simplify administrative burdens and mitigate potential zero defects expectations associated with the current IRO-010-4 and TOP-003-5 standards, while ensuring that Registered Entities with operational responsibilities continue to request and receive the data necessary to support Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

General Considerations

This implementation plan reflects consideration that responsible entities will need time to develop revised data and information specifications under Reliability Standards IRO-010-5 and TOP-003-6, including: (i) developing new protocols for submission periodicity, performance criteria, and provisions to update information as needed; (ii) developing provisions for using intermediary entities to provide data; and (iii) codifying in the data and information specification the mutually agreed upon formats, process for resolving conflicts, and security protocols to use for data and information exchange. This implementation plan also reflects consideration of the time that responsible entities will need to distribute the revised data and information specifications to the reporting entities, and that the reporting entities will need to comply with the revised data and information specifications.

Effective Date

Reliability Standards IRO-010-5 and TOP-003-6

Where approval by an applicable governmental authority is required, the standards shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the effective date of the applicable governmental authority's order approving the standard, or as otherwise provided for by the applicable governmental authority.

Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is eighteen (18) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction.

Retirement Date

Reliability Standards IRO-010-4 and TOP-003-5

Reliability Standards IRO-010-4 and TOP-003-5 shall be retired immediately prior to the effective date of Reliability Standards IRO-010-5 and TOP-003-6 in the particular jurisdiction in which the revised standards are becoming effective.

Technical Rationale for Reliability Standard IRO-010-5

July 2023

IRO-010-5 – Reliability Coordinator Data and Information Specification and Collection

Rationale:

The primary purpose of this project is to reduce unnecessary administrative overhead and reduce potential zero defect expectations associated with the current IRO-010-4 and TOP-003-5 standards. Also ensuring that Registered Entities request and receive the data and information necessary to support the core reliability tasks required to perform Operational Planning Analysis, Real-time Assessments, and Real-time monitoring, and Balancing Authority analysis functions.

The core reliability tasks for Reliability Coordinators identified in IRO-010 are identified as Operational Planning Analysis, Real-time Assessments, and Real-time monitoring.

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-4 and TOP-003-5. The SDT also reviewed the results of the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in (standards listed in the SAR's Detailed Description), the SDT determined there is insufficient justification(s) for the retirement of these requirements and are not proposing changes to the reviewed standards. For further information on the justification(s) for not proposing additional retirements or consolidation of existing requirements into IRO-010-4 or TOP-003-5 see the white paper titled **White Paper for 2021-06 Modifications to IRO-010 and TOP-003** with the project document.

The data specification requirements in IRO-010-5 and TOP-003-6 are substantively similar, if not functionally identical therefore the SDT has revised both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements.

The SDT has drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability.

Proposed revisions include Title, Purpose, and Requirements sections.

Rationale for Title

The proposed Title change from “Reliability Coordinator Data Specification and Collection” to “Reliability Coordinator Data and Information Specification and Collection” acknowledges that the specifications are for the collection of both Data and Information.

Rationale for Purpose

The proposed changes to IRO-010-5 purpose is to align with the purpose of TOP-003. Throughout the standard, the SDT used the terms “data” and “information” to clarify that specifications include both “data and information.” The intent is to include data and information necessary for Reliability Coordinators to perform their core reliability tasks. The revision clarifies that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.

In addition to monitoring and assessing stated in the previous version of the standard, both data and information are necessary for satisfying all of the identified core reliability tasks. The tasks include planning activities, therefore the purpose has been clarified by including planning, monitoring, and assessing operations.

Rationale for Requirement R1

R1 is revised to clarify that specifications include both data and information that a Reliability Coordinator requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R1.1

R1 is revised to include not only the list of data and Information that the requestor needs for the core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R1.4

R1.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather multiple requirements.

R1.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Reliability Coordinator and the respondent. Placement of this sub part under R1, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor’s authority to request data it needs. Respondents would be expected to engage the requestor about the respondent’s concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute

resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R1.5

R1.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R3.1 and placed in R1.5.4, and the identification of security protocols have been removed from R3.3 and placed in R.1.5.5. Moving format and security protocols into R1 is appropriate so that the data specification requirements are contained in one requirement, rather multiple requirements.

- R1.5.1 is revised to include deadlines and periodicity (as previously included in R1.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R1.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R1.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R1.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R1.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R1.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R2

R2 is revised to add the term “and Information” for consistency.

Rationale for Requirement R3

R3 is revised to require the Respondents to satisfy the documented specification based on the criterion established in R1.

| Version 4 Requirement | Revision | Version 5 |
|-----------------------|-------------|-----------|
| R1.4 | Revised | R1.5.1 |
| | | |
| None | Newly added | R1.5 |
| | | |
| R3.1 | Moved | R1.6 |
| | | |

Technical Rationale for Reliability Standard

TOP-003-6

July 2023

TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection

Rationale:

The primary purpose of this project is to reduce unnecessary administrative overhead and reduce potential zero defects expectations associated with the current IRO-010-4 and TOP-003-5 standards. Also, ensuring that Registered Entities request and receive the data and information necessary to support the four reliability tasks required to perform Operational Planning Analysis, Real-time Assessments, Real-time monitoring, and Balancing Authority analysis functions.

The SDT reviewed standards listed in the SAR's Detailed Description to determine whether additional changes could be proposed to the standards to address potential redundancy of requirements related to the four reliability tasks identified in IRO-010-5 and TOP-003-6. The SDT also reviewed the results of the Standards Efficiency Review initiative. Due to the criticality of the tasks and functions identified in (standards listed in the SAR's Detailed Description), the SDT determined there is insufficient justification(s) for the retirement of these requirements and are not proposing changes to the reviewed standards. For further information on the justification(s) for not proposing additional retirements or consolidation of existing requirements into IRO-010-4 or TOP-003-5 see the white paper titled **White Paper for 2021-06 Modifications to TOP-003 and IRO-010** with the project documents.

The data specification requirements in IRO-010-5 and TOP-003-6 are substantively similar, if not functionally identical therefore the SDT has revised both standards so that the language is parallel in form and function and uses similar vernacular in describing the underlying requirements.

The SDT has drafted revisions in a manner that retains flexibility for applicable entities to utilize available technologies, integrate new technologies, and to define expectations for data and information exchange. This allows entities to continue to receive the data and information they believe is necessary to perform its functions and promote reliability.

Proposed revisions include Title, Purpose, and Requirements sections.

Rationale for Title

The proposed Title change from "Operational Reliability Data" to "Transmission Operator and Balancing Authority Data and Information Specification and Collection" aligns with the Title section of IRO-010-5. This revision refers to the function of the standard whereas the previous title suggests a broader purpose than the four identified core reliability tasks.

Rationale for Purpose

The proposed changes to Purpose in TOP-003 align with the purpose of IRO-010-5. The two standards are companions, whereas the former applies to RC data specifications, this standard applies to TOP and BA specifications. Throughout the standard, the SDT used the terms “data” and “information” to clarify that specifications include both “data and information.” The intent is to include data and information necessary for Transmission Operators and Balancing Authorities to perform their core reliability tasks. The revision clarifies that specifications can contain other data/information in addition to data typically provided systematically from field devices via SCADA/ICCP.

In addition to operational planning stated in the previous version of the standard, both data and information are necessary for satisfying the four identified core reliability tasks. The four tasks include monitoring and assessing activities, therefore the purpose has been clarified by including planning, monitoring, and assessing operations.

Rationale for Requirement R1

R1 is revised to clarify that specifications include both data and information that a Transmission Operator requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R1.1

R1 is revised to include not only the list of data and Information that the requestor needs for the four core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request.

Rationale for Subpart R1.4

R1.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather than multiple requirements.

R1.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Transmission Operator and the respondent. Placement of this sub part under R1, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor’s authority to request data it needs. Respondents would be expected to engage the requestor about the respondent’s concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R1.5

R1.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R5.1 and placed in R1.5.4, and the identification of security protocols have been removed from R5.3 and placed in R1.5.5. Moving format and security protocols into R1 is appropriate so that the data specification requirements are contained in one requirement, rather multiple requirements.

- R1.5.1 is revised to include deadlines and periodicity (as previously included in R1.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R1.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R1.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R1.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R1.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R1.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R2

R2 is revised to clarify that specifications include both data and information that a Balancing Authority requires. This also aligns with the Purpose of the Standard.

Rationale for Subpart R2.1

R2 is revised to include not only the list of data and Information that the requestor needs for the core reliability tasks, but also to identify the applicable entity that is required to respond to the request for the specification. The purpose is to ensure that data and information specifications clearly identify the responsible parties that need to comply with the request

Rationale for Subpart R2.4

R2.4 is revised to include a data conflict resolution provision within the data specification requirements. The previous content referring to resolving data conflicts was located in Requirement R3.2, and was moved to R1 so that the data specification requirements were contained in one requirement, rather than multiple requirements.

R2.4 identifies a requirement for a mutually agreeable process for resolving conflicts between the Balancing Authority and the respondent. Placement of this sub part under R2, establishes the inclusion of this process in the data specification itself. By establishing conflict resolution as a sub part of the requirement, requestors would be expected to establish processes directly with the responding parties, to improve upon, requests, responses, and performance expectations. The provision will establish the process for resolving disagreements while retaining the requestor's authority to request data it needs. Respondents would be expected to engage the requestor about the respondent's concerns using the established process contained in the data request. These concerns could include, for example, concerns for managing risks for public disclosure of commercially sensitive information, or for establishing a dispute resolution process for conflicts between entities related to necessary data exchanges, or to establish data correction protocols.

Rationale for Subpart R2.5

R2.5 identifies that specifications should include protocols to address periodicity, performance criterion, and to provide update and correction mechanisms. In addition, identification of the mutually agreed upon format is removed from R5.1 and placed in R2.5.4, and the identification of security protocols have been removed from R5.3 and placed in R2.5.5. Moving format and security protocols into R2 is appropriate so that the data specification requirements are contained in one requirement, rather than multiple requirements.

- R2.5.1 is revised to include deadlines and periodicity (as previously included in R2.4) for data and information to address data that is expected to be updated on different time frames; The inclusion of deadlines addresses data provisions that may be immediate, one-time, or that do not have recurring periods.
- R2.5.2 is revised to address performance criterion for the availability and accuracy of data and information necessary to mitigate expectations of zero-defect compliance. Such expectations may or may not be reasonable, and this language permits requestors to specify where an expectation of zero-defect compliance is necessary.
- R2.5.3 is revised to address provisions to update or correct responsible respondent data and information. This requirement allows for inclusion of protocols to aid in rectifying data and information errors that requestors need to mitigate zero defect compliance.
- R2.5.4 moves the necessity for a mutually agreeable format into the specification, as a requirement of the specification itself. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.
- R2.5.5 has included the security protocol by requiring a method for securely transferring data and information. The requirement acknowledges that data and information may not require a

protocol but may require an agreed upon method for secure transfer, or both. As stated above, the inclusion of this requirement as a sub-part of R1 is to include processes related to the data specification under one requirement.

R2.5 recognizes that the protocols are not limited to these identified requirements; allowing entities the flexibility to include protocols to address differences in organizations, operational environments, processes and technologies provide flexibility to define specifications which reduce administrative overhead and potential zero-defect approaches.

Rationale for Requirement R3

R3 is revised to add the term “and Information” for consistency.

Rationale for Requirement R4

R4 is revised to add the term “and Information” for consistency.

Rationale for Requirement R5

R5 is revised to require the Respondents to satisfy the documented specification based on the criterion established in R1 for requests originating from Transmission Operator specifications.

R5 is revised to require the Respondents to satisfy the documented specification based on criterion established in R2 for requests originating from Balancing Authority specifications.

Violation Risk Factor and Violation Severity Level Justifications

2021-06 Modifications to IRO-010 and TOP-003

This document provides the standard drafting team's (SDT's) justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in [Project Number and Name or Standard Number]. Each requirement is assigned a VRF and a VSL. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the Electric Reliability Organizations (ERO) Sanction Guidelines. The SDT applied the following NERC criteria and FERC Guidelines when developing the VRFs and VSLs for the requirements.

NERC Criteria for Violation Risk Factors

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to Bulk Electric System instability, separation, or a cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to Bulk Electric System instability, separation, or a cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of a medium risk requirement is unlikely to lead to Bulk Electric System instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to Bulk Electric System instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System.

FERC Guidelines for Violation Risk Factors

Guideline (1) – Consistency with the Conclusions of the Final Blackout Report

FERC seeks to ensure that VRFs assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System. In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) – Consistency within a Reliability Standard

FERC expects a rational connection between the sub-Requirement VRF assignments and the main Requirement VRF assignment.

Guideline (3) – Consistency among Reliability Standards

FERC expects the assignment of VRFs corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) – Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular VRF level conforms to NERC’s definition of that risk level.

Guideline (5) – Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

NERC Criteria for Violation Severity Levels

VSLs define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

VSLs should be based on NERC’s overarching criteria shown in the table below:

| Lower VSL | Moderate VSL | High VSL | Severe VSL |
|--|--|--|--|
| The performance or product measured almost meets the full intent of the requirement. | The performance or product measured meets the majority of the intent of the requirement. | The performance or product measured does not meet the majority of the intent of the requirement, but does meet some of the intent. | The performance or product measured does not substantively meet the intent of the requirement. |

FERC Order of Violation Severity Levels

The FERC VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

Guideline (1) – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline (2) – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

Guideline (3) – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline (4) – Violation Severity Level Assignment Should Be Based on a Single Violation, Not on a Cumulative Number of Violations

Unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

IRO-010-5

VRF Justification for IRO-010-5, Requirement R1

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for IRO-010-5, Requirement R1

Please refer to the VSL table located below.

VRF Justification for IRO-010-5, Requirement R2

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to R2 were administrative in nature therefore the VRF remained a low.

VSL Justification for IRO-010-5, Requirement R2

Please refer to the VSL table located below.

VRF Justification for IRO-010-5, Requirement R3

The VRF did not change from the previously FERC approved IRO-010-5 Reliability Standard. The modifications made to Requirement R3 directly effect the electrical state or capability of the Bulk Electric system therefore the VRF remained a medium.

VSL Justification for IRO-010-5, Requirement R3

Please refer to the VSL table located below.

| VSL Justifications for IRO-010-5, Requirement 1 | | | |
|--|--|---|--|
| Lower | Moderate | High | Severe |
| The Reliability Coordinator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments | The Reliability Coordinator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Reliability Coordinator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| VSL Justifications for IRO-010-5, Requirement 1 | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding addition sub requirements to requirement R1. The purposed VSL was modified to reflect the addition sub requirement. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of | The requirement is for the responsible entity to maintain a document speciation for the data and information. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for IRO-010-5, Requirement 1

| | |
|---|--|
| <p>Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for IRO-010-5, Requirement 2 | | | |
|---|---|--|---|
| Lower | Moderate | High | Severe |
| The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, and Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Reliability Coordinator did not distribute its specification(s) as developed in Requirement R1 to four or more entities, or more than 15% of the entities, whichever is greater, that have data and information required by the Reliability Coordinator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| VSL Justifications for IRO-010-5, Requirement 2 | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by add language for consistency purposes to requirement R2. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for IRO-010-5, Requirement 2

| | |
|--|--|
| <p>Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

VSL Justifications for IRO-010-5, Requirement 3

| Lower | Moderate | High | Severe |
|--|--|--|---|
| The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet one of the parts in Requirement R1 Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet two of the parts in Requirement R1 Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 satisfied the obligations of the documented specifications but failed to meet any of the parts in Requirement R1 Part 1.5. | The responsible entity receiving a specification(s) in Requirement R2 did not satisfy the obligations of the documented specifications. |

VSL Justifications for IRO-010-5, Requirement 3

| | |
|--|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by deleting language for consistency purposes to requirement R3. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain Ambiguous Language | The requirement is for the responsible entity receiving a specification in Requirement R3 shall satisfy the documented specifications. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |
| FERC VSL G3 | The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent |

VSL Justifications for IRO-010-5, Requirement 3

| | |
|---|---|
| <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

TOP-003-6

VRF Justification for TOP-003-6, Requirement R1

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R1

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R2

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R2 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R2

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R3

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R3

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R4

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to R1 were administrative in nature therefore the VRF remained a low.

VSL Justification for TOP-003-6, Requirement R4

Please refer to the VSL table located below.

VRF Justification for TOP-003-6, Requirement R5

The VRF did not change from the previously FERC approved TOP-003-6 Reliability Standard. The modifications made to Requirement R3 directly effect the electrical state or capability of the Bulk Electric system therefore the VRF remained a medium.

VSL Justification for TOP-003-6, Requirement R5

Please refer to the VSL table located below.

| VSL Justifications for TOP-003-6, Requirement 1 | | | |
|--|---|--|---|
| Lower | Moderate | High | Severe |
| <p>The Transmission Operator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> | <p>The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> <p>OR,</p> <p>The Transmission Operator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> |

| VSL Justifications for TOP-003-6, Requirement 1 | |
|---|---|
| <p>FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p> | <p>The requirement was modified by adding addition sub requirements to requirement R1. The purposed VSL was modified to reflect the addition sub requirement. It does not have an unintended consequence of lowering the level of compliance.</p> |

VSL Justifications for TOP-003-6, Requirement 1

| | |
|---|--|
| <p>FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p><u>Guideline 2a</u>: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | <p>The requirement is for the responsible entity to maintain a document specification for the data and information. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language.</p> |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for TOP-003-6, Requirement 2 | | | |
|--|---|--|--|
| Lower | Moderate | High | Severe |
| The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. OR, The Balancing Authority did not have a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. |

| VSL Justifications for TOP-003-6 Requirement 2 | |
|---|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding addition language to requirement R2. The purposed VSL was modified to reflect the addition language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation | The requirement is for the responsible entity to maintain a document speciation for the data and information. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6 Requirement 2

| | |
|--|--|
| <p>Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for TOP-003-6, Requirement 3 | | | |
|--|--|---|---|
| Lower | Moderate | High | Severe |
| The Transmission Operator did not distribute its specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification(s) to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification(s) to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its specification(s) to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |

| VSL Justifications for TOP-003-6, Requirement 3 | |
|--|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by add language for consistency purposes to requirement R3. The purposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 3

| | |
|--|--|
| <p><u>Guideline 2b</u>: Violation Severity Level Assignments that Contain Ambiguous Language</p> | |
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The proposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

| VSL Justifications for TOP-003-6, Requirement 4 | | | |
|---|---|--|--|
| Lower | Moderate | High | Severe |
| The Balancing Authority did not distribute its specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification(s) to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification(s) to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | The Balancing Authority did not distribute its specification(s) to four or more entities, or more than 15% of the entities that have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. |

| VSL Justifications for TOP-003-6, Requirement 4 | |
|---|--|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by adding language for consistency purposes to requirement R4. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain | The requirement is for the responsible entity to distribute its data and information specification to entities that have data required. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 4

| | |
|--|---|
| Ambiguous Language | |
| FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement | The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement. |
| FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations | Each VSL is based on a single violation and not cumulative violations. |

VSL Justifications for TOP-003-6, Requirement 5

| Lower | Moderate | High | Severe |
|---|---|---|---|
| The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet one of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet two of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet three or more of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 did not satisfy the obligations of the documented specifications. |

VSL Justifications for TOP-003-6, Requirement 5

| | |
|--|---|
| FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance | The requirement was modified by deleting language for consistency purposes to requirement R5. The proposed VSL was modified to reflect the language. It does not have an unintended consequence of lowering the level of compliance. |
| FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties <u>Guideline 2a</u> : The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent <u>Guideline 2b</u> : Violation Severity Level Assignments that Contain Ambiguous Language | The requirement is for the responsible entity receiving a specification in Requirement R5 shall satisfy the documented specifications. Guideline 2a is no applicable as these VSLs are no binary. The VSLs do not contain ambiguous language. |

VSL Justifications for TOP-003-6, Requirement 5

| | |
|---|--|
| <p>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p> | <p>The purposed VSL uses the same terminology as used in the associated requirement therefore it is consistent with the requirement.</p> |
| <p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p> | <p>Each VSL is based on a single violation and not cumulative violations.</p> |

Standards Announcement

Project 2021-06 Modifications to IRO-010 and TOP-003

Final Ballots Open through July 31, 2023

[Now Available](#)

Final ballots are open through **8 p.m. Eastern, Monday, July 31, 2023** for the following:

- IRO-010-5 – Reliability Coordinator Data Specification and Collection
- IRO-010-5 – Implementation Plan
- TOP-003-6 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- TOP-003-6 – Implementation Plan

Balloting

In the final ballot, votes are counted by exception. Votes from the previous ballot are automatically carried over in the final ballot. Only members of the applicable ballot pools can cast a vote. Ballot pool members who previously voted have the option to change their vote in the final ballot. Ballot pool members who did not cast a vote during the previous ballot can vote in the final ballot.

Members of the ballot pool(s) associated with this project can log into the Standards Balloting and Commenting System (SBS) and submit votes [here](#).

- *Contact NERC IT support directly at <https://support.nerc.net/> (Monday – Friday, 8 a.m. - 5 p.m. Eastern) for problems regarding accessing the SBS due to a forgotten password, incorrect credential error messages, or system lock-out.*
- *Passwords expire every **6 months** and must be reset.*
- *The SBS **is not** supported for use on mobile devices.*
- *Please be mindful of ballot and comment period closing dates. We ask to **allow at least 48 hours** for NERC support staff to assist with inquiries. Therefore, it is recommended that users try logging into their SBS accounts **prior to the last day** of a comment/ballot period.*

Next Steps

The voting results will be posted and announced after the ballots close. If approved, the standard will be submitted to the Board of Trustees for adoption and then filed with the appropriate regulatory authorities.

For information on the Standards Development Process, refer to the [Standard Processes Manual](#).

For more information or assistance, contact Standards Developer, [Josh Blume](#) (via email) or at 404-446-2593.

North American Electric Reliability Corporation
3353 Peachtree Rd, NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

BALLOT RESULTS

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 IRO-010-5 FN 3 ST

Voting Start Date: 7/21/2023 10:15:00 AM

Voting End Date: 7/31/2023 8:00:00 PM

Ballot Type: ST

Ballot Activity: FN

Ballot Series: 3

Total # Votes: 247

Total Ballot Pool: 292

Quorum: 84.59

Quorum Established Date: 7/21/2023 11:12:25 AM

Weighted Segment Value: 76.36

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 43 | 0.662 | 22 | 0.338 | 0 | 6 | 9 |
| Segment: 2 | 7 | 0.6 | 6 | 0.6 | 0 | 0 | 0 | 0 | 1 |
| Segment: 3 | 65 | 1 | 34 | 0.68 | 16 | 0.32 | 0 | 4 | 11 |
| Segment: 4 | 16 | 0.8 | 7 | 0.7 | 1 | 0.1 | 0 | 1 | 7 |
| Segment: 5 | 71 | 1 | 41 | 0.707 | 17 | 0.293 | 0 | 3 | 10 |
| Segment: 6 | 46 | 1 | 28 | 0.757 | 9 | 0.243 | 0 | 2 | 7 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 10 | 6 | 0.5 | 4 | 0.4 | 1 | 0.1 | 0 | 1 | 0 |
| Totals: | 292 | 5.9 | 163 | 4.505 | 66 | 1.395 | 0 | 18 | 45 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|-----------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allete - Minnesota Power, Inc. | Lori Frisk | | Negative | N/A |
| 1 | Ameren - Ameren Services | Tamara Evey | | Affirmative | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Affirmative | N/A |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|------------------|
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | N/A |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Negative | N/A |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Affirmative | N/A |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | N/A |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | None | N/A |
| 1 | Colorado Springs Utilities | Corey Walker | | Negative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | N/A |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Elizabeth Weber | | None | N/A |
| 1 | Duke Energy | Katherine Street | | Affirmative | N/A |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Affirmative | N/A |
| 1 | Eversource Energy | Joshua London | | Negative | N/A |
| 1 | Exelon | Daniel Gacek | | Negative | N/A |
| 1 | FirstEnergy - FirstEnergy Corporation | Theresa Ciancio | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|------------------|
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | N/A |
| 1 | Great River Energy | Gordon Pietsch | | Affirmative | N/A |
| 1 | Hydro One Networks, Inc. | Alain Mukama | | Negative | N/A |
| 1 | Hydro-Quebec (HQ) | Nicolas Turcotte | | Affirmative | N/A |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | Affirmative | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | Affirmative | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | None | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | Matt Lewis | | Affirmative | N/A |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Manitoba Hydro | Nazra Gladu | | Affirmative | N/A |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | N/A |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | N/A |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|------------------|
| 1 | National Grid USA | Michael Jones | | Negative | N/A |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | N/A |
| 1 | New York Power Authority | Salvatore Spagnolo | | Affirmative | N/A |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | N/A |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | N/A |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | Negative | N/A |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | None | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Negative | N/A |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | N/A |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|------------------|
| 1 | Public Utility District No. 1 of Chelan County | Glen Pruitt | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | None | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | N/A |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | Affirmative | N/A |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | Jennie Wike | Negative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | Affirmative | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Affirmative | N/A |
| 1 | Western Area Power Administration | Ben Hammer | Kimberly Bentley | Negative | N/A |
| 1 | Xcel Energy, Inc. | Eric Barry | | Affirmative | N/A |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Kennedy Meier | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------------------|-------------------------|---------------|------------------|
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Affirmative | N/A |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | Affirmative | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Affirmative | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Affirmative | N/A |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Abstain | N/A |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Lovita Griffin | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | N/A |
| 3 | Black Hills Corporation | Josh Combs | Rachel Schuldt | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | None | N/A |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | None | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|------------------|
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | N/A |
| 3 | Cowlitz County PUD | Russell Noble | | None | N/A |
| 3 | Dominion - Dominion Virginia Power | Bill Garvey | | None | N/A |
| 3 | DTE Energy - Detroit Edison Company | Marvin Johnson | | Affirmative | N/A |
| 3 | Duke Energy - Florida Power Corporation | Marcelo Pesantez | | Affirmative | N/A |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | None | N/A |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Affirmative | N/A |
| 3 | Eversource Energy | Vicki O'Leary | | Negative | N/A |
| 3 | Exelon | Kinte Whitehead | | Negative | N/A |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Affirmative | N/A |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | Lakeland Electric | Steven Marshall | | Affirmative | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | N/A |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|------------------|
| 3 | National Grid USA | Brian Shanahan | | Negative | N/A |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | N/A |
| 3 | New York Power Authority | David Rivera | | Affirmative | N/A |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | None | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | Affirmative | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | N/A |
| 3 | Omaha Public Power District | David Heins | | Negative | N/A |
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | Negative | N/A |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Negative | N/A |
| 3 | Portland General Electric Co. | Adam Menendez | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------|------------------|-------------|-----------|
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Affirmative | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Christopher Murphy | | Negative | N/A |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Rayburn Country Electric Cooperative, Inc. | Frank Owens | | None | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | Vicky Budreau | | None | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrold Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | N/A |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Ryan Walter | | None | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | N/A |
| 3 | Xcel Energy, Inc. | Nicholas Friebe | | Affirmative | N/A |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | None | N/A |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-------------------|------------------|-------------|-----------|
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | None | N/A |
| 4 | DTE Energy | Patricia Ireland | | Affirmative | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | None | N/A |
| 4 | LaGen | Wayne Messina | | None | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | Affirmative | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | None | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | Affirmative | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | Seminole Electric Cooperative, Inc. | Ken Habgood | | None | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | N/A |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | | Negative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Affirmative | N/A |
| 5 | APS - Arizona Public Service Co. | Brandon Smith | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------------|------------------|-------------|-----------|
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Affirmative | N/A |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Negative | N/A |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | Abstain | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | N/A |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Negative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | Negative | N/A |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | None | N/A |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Affirmative | N/A |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|------------------|
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Affirmative | N/A |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Affirmative | N/A |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Negative | N/A |
| 5 | Hydro-Quebec (HQ) | Junji Yamaguchi | | Affirmative | N/A |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Brittany Millard | | Negative | N/A |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Affirmative | N/A |
| 5 | Manitoba Hydro | Kristy-Lee Young | | Affirmative | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | N/A |
| 5 | National Grid USA | Robin Berry | | Negative | N/A |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Negative | N/A |
| 5 | New York Power Authority | Zahid Qayyum | | Affirmative | N/A |
| 5 | NextEra Energy | Richard Vendetti | | Affirmative | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|------------------|
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | | Affirmative | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | N/A |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | Negative | N/A |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Affirmative | N/A |
| 5 | Orlando Utilities Commission | Dania Colon | | None | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | Negative | N/A |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | None | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | Affirmative | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | Negative | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Rebecca Zahler | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Nikkee Hebdon | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|------------------|
| 5 | Salt River Project | Thomas Johnson | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | None | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | N/A |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Affirmative | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | Negative | N/A |
| 5 | Tri-State G and T Association, Inc. | Sergio Banuelos | | Affirmative | N/A |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | Affirmative | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | N/A |
| 5 | Xcel Energy, Inc. | Gerry Huitt | Joseph Gatten | Affirmative | N/A |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Affirmative | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Affirmative | N/A |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Abstain | N/A |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Affirmative | N/A |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirschak | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|------------------|
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | N/A |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | None | N/A |
| 6 | Duke Energy | John Sturgeon | | Affirmative | N/A |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Affirmative | N/A |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | N/A |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | None | N/A |
| 6 | Manitoba Hydro | Kelly Bertholet | | Affirmative | N/A |
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | N/A |
| 6 | New York Power Authority | Shelly Dineen | | Affirmative | N/A |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | Affirmative | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | Affirmative | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|----------------|-------------------------|---------------|------------------|
| 6 | Omaha Public Power District | Shonda McCain | | Negative | N/A |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Stefanie Burke | | Negative | N/A |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | Affirmative | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | Negative | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | Mike Stussy | | None | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Marty Watson | | None | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | N/A |
| 6 | Southern Indiana Gas and Electric Co. | Kati Barr | | Affirmative | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | Jennie Wike | Affirmative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | N/A |
| 6 | Western Area Power Administration | Chrystal Dean | | Affirmative | N/A |
| 6 | Xcel Energy, Inc. | Steve Szablya | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|-----------|
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | Mark Flanary | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | Stephen Whaite | Negative | N/A |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Affirmative | N/A |

Showing 1 to 292 of 292 entries

Previous 1 Next

BALLOT RESULTS

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 TOP-003-6 FN 3 ST

Voting Start Date: 7/21/2023 10:15:44 AM

Voting End Date: 7/31/2023 8:00:00 PM

Ballot Type: ST

Ballot Activity: FN

Ballot Series: 3

Total # Votes: 249

Total Ballot Pool: 292

Quorum: 85.27

Quorum Established Date: 7/21/2023 11:12:38 AM

Weighted Segment Value: 75.41

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 43 | 0.652 | 23 | 0.348 | 0 | 5 | 9 |
| Segment: 2 | 7 | 0.6 | 6 | 0.6 | 0 | 0 | 0 | 0 | 1 |
| Segment: 3 | 66 | 1 | 35 | 0.673 | 17 | 0.327 | 0 | 3 | 11 |
| Segment: 4 | 15 | 0.8 | 7 | 0.7 | 1 | 0.1 | 0 | 1 | 6 |
| Segment: 5 | 71 | 1 | 41 | 0.707 | 17 | 0.293 | 0 | 3 | 10 |
| Segment: 6 | 46 | 1 | 28 | 0.718 | 11 | 0.282 | 0 | 1 | 6 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Segment: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 10 | 6 | 0.5 | 4 | 0.4 | 1 | 0.1 | 0 | 1 | 0 |
| Totals: | 292 | 5.9 | 164 | 4.449 | 70 | 1.451 | 0 | 15 | 43 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|-----------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allete - Minnesota Power, Inc. | Lori Frisk | | Negative | N/A |
| 1 | Ameren - Ameren Services | Tamara Evey | | Affirmative | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Affirmative | N/A |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|------------------|
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Negative | N/A |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Negative | N/A |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Affirmative | N/A |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | N/A |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | None | N/A |
| 1 | Colorado Springs Utilities | Corey Walker | | Negative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | N/A |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Elizabeth Weber | | None | N/A |
| 1 | Duke Energy | Katherine Street | | Affirmative | N/A |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Affirmative | N/A |
| 1 | Eversource Energy | Joshua London | | Negative | N/A |
| 1 | Exelon | Daniel Gacek | | Negative | N/A |
| 1 | FirstEnergy - FirstEnergy Corporation | Theresa Ciancio | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|------------------|
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | N/A |
| 1 | Great River Energy | Gordon Pietsch | | Affirmative | N/A |
| 1 | Hydro One Networks, Inc. | Alain Mukama | | Negative | N/A |
| 1 | Hydro-Quebec (HQ) | Nicolas Turcotte | | Affirmative | N/A |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | Affirmative | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | Affirmative | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | None | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | Matt Lewis | | Affirmative | N/A |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Manitoba Hydro | Nazra Gladu | | Affirmative | N/A |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | N/A |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | N/A |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|------------------|
| 1 | National Grid USA | Michael Jones | | Negative | N/A |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | N/A |
| 1 | New York Power Authority | Salvatore Spagnolo | | Affirmative | N/A |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | N/A |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | N/A |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | Negative | N/A |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | None | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Negative | N/A |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | N/A |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|------------------|
| 1 | Public Utility District No. 1 of Chelan County | Glen Pruitt | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | None | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Negative | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | N/A |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | Affirmative | N/A |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | Jennie Wike | Negative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | Affirmative | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Affirmative | N/A |
| 1 | Western Area Power Administration | Ben Hammer | Kimberly Bentley | Negative | N/A |
| 1 | Xcel Energy, Inc. | Eric Barry | | Affirmative | N/A |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Kennedy Meier | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------------------|-------------------------|---------------|------------------|
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Affirmative | N/A |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | Affirmative | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Affirmative | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Affirmative | N/A |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Abstain | N/A |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Lovita Griffin | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | N/A |
| 3 | Black Hills Corporation | Josh Combs | Rachel Schuldt | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | None | N/A |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | None | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|------------------|
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | N/A |
| 3 | Cowlitz County PUD | Russell Noble | | None | N/A |
| 3 | Dominion - Dominion Virginia Power | Bill Garvey | | None | N/A |
| 3 | DTE Energy - Detroit Edison Company | Marvin Johnson | | Affirmative | N/A |
| 3 | Duke Energy - Florida Power Corporation | Marcelo Pesantez | | Affirmative | N/A |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | None | N/A |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Affirmative | N/A |
| 3 | Eversource Energy | Vicki O'Leary | | Negative | N/A |
| 3 | Exelon | Kinte Whitehead | | Negative | N/A |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Affirmative | N/A |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | KAMO Electric Cooperative | Tony Gott | | Affirmative | N/A |
| 3 | Lakeland Electric | Steven Marshall | | Affirmative | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | N/A |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|------------------|
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | N/A |
| 3 | National Grid USA | Brian Shanahan | | Negative | N/A |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | N/A |
| 3 | New York Power Authority | David Rivera | | Affirmative | N/A |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | None | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | Affirmative | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | N/A |
| 3 | Omaha Public Power District | David Heins | | Negative | N/A |
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | Negative | N/A |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------|-------------------------|---------------|------------------|
| 3 | Portland General Electric Co. | Adam Menendez | | None | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Affirmative | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Christopher Murphy | | Negative | N/A |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Rayburn Country Electric Cooperative, Inc. | Frank Owens | | None | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | Vicky Budreau | | None | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Negative | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrod Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | N/A |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Ryan Walter | | None | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | N/A |
| 3 | Xcel Energy, Inc. | Nicholas Friebe | | Affirmative | N/A |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|------------------|
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Abstain | N/A |
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | None | N/A |
| 4 | DTE Energy | Patricia Ireland | | Affirmative | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | None | N/A |
| 4 | LaGen | Wayne Messina | | None | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | Affirmative | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | None | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | Affirmative | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | N/A |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | | Negative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Affirmative | N/A |
| 5 | APS - Arizona Public Service Co. | Brandon Smith | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------------|------------------|-------------|-----------|
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Affirmative | N/A |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Negative | N/A |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | Abstain | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | N/A |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Negative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | Negative | N/A |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | None | N/A |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Affirmative | N/A |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|------------------|
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |
| 5 | Evergy | Jeremy Harris | Alan Kloster | Affirmative | N/A |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Affirmative | N/A |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Negative | N/A |
| 5 | Hydro-Quebec (HQ) | Junji Yamaguchi | | Affirmative | N/A |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Brittany Millard | | Negative | N/A |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Affirmative | N/A |
| 5 | Manitoba Hydro | Kristy-Lee Young | | Affirmative | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | N/A |
| 5 | National Grid USA | Robin Berry | | Negative | N/A |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Negative | N/A |
| 5 | New York Power Authority | Zahid Qayyum | | Affirmative | N/A |
| 5 | NextEra Energy | Richard Vendetti | | Affirmative | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|---------------------|------------------|-------------|-----------|
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | | Affirmative | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | N/A |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | Negative | N/A |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Affirmative | N/A |
| 5 | Orlando Utilities Commission | Dania Colon | | None | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | Negative | N/A |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | None | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | Affirmative | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | Negative | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Rebecca Zahler | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Nikkee Hebdon | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|------------------|
| 5 | Salt River Project | Thomas Johnson | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | None | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | N/A |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Affirmative | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | Negative | N/A |
| 5 | Tri-State G and T Association, Inc. | Sergio Banuelos | | Affirmative | N/A |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | Affirmative | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | N/A |
| 5 | Xcel Energy, Inc. | Gerry Huitt | Joseph Gatten | Affirmative | N/A |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Affirmative | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Affirmative | N/A |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Abstain | N/A |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Affirmative | N/A |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirschak | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------------|------------------|-------------|-----------|
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | N/A |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | None | N/A |
| 6 | Duke Energy | John Sturgeon | | Affirmative | N/A |
| 6 | Edison International - Southern California Edison Company | Kenya Streeter | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Affirmative | N/A |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | N/A |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | None | N/A |
| 6 | Manitoba Hydro | Kelly Bertholet | | Affirmative | N/A |
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | N/A |
| 6 | New York Power Authority | Shelly Dineen | | Affirmative | N/A |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | Affirmative | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | Affirmative | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|----------------|-------------------------|---------------|------------------|
| 6 | Omaha Public Power District | Shonda McCain | | Negative | N/A |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Stefanie Burke | | Negative | N/A |
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | Affirmative | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | Negative | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | Mike Stussy | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Marty Watson | | None | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Negative | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | N/A |
| 6 | Southern Indiana Gas and Electric Co. | Kati Barr | | Affirmative | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | Jennie Wike | Negative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | N/A |
| 6 | Western Area Power Administration | Chrystal Dean | | Affirmative | N/A |
| 6 | Xcel Energy, Inc. | Steve Szablya | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|-----------------|------------------|-------------|-----------|
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | Mark Flanary | | Affirmative | N/A |
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | Stephen Whaite | Negative | N/A |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Affirmative | N/A |

Showing 1 to 292 of 292 entries

Previous 1 Next

BALLOT RESULTS

Ballot Name: 2021-06 Modifications to IRO-010 and TOP-003 Implementation Plan FN 3 OT

Voting Start Date: 7/21/2023 10:16:44 AM

Voting End Date: 7/31/2023 8:00:00 PM

Ballot Type: OT

Ballot Activity: FN

Ballot Series: 3

Total # Votes: 246

Total Ballot Pool: 289

Quorum: 85.12

Quorum Established Date: 7/21/2023 11:12:47 AM

Weighted Segment Value: 79.05

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 1 | 80 | 1 | 47 | 0.723 | 18 | 0.277 | 0 | 6 | 9 |
| Segment: 2 | 7 | 0.6 | 6 | 0.6 | 0 | 0 | 0 | 0 | 1 |
| Segment: 3 | 65 | 1 | 37 | 0.725 | 14 | 0.275 | 0 | 4 | 10 |
| Segment: 4 | 14 | 0.7 | 6 | 0.6 | 1 | 0.1 | 0 | 1 | 6 |
| Segment: 5 | 70 | 1 | 43 | 0.768 | 13 | 0.232 | 0 | 3 | 11 |
| Segment: 6 | 46 | 1 | 30 | 0.789 | 8 | 0.211 | 0 | 2 | 6 |
| Segment: 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Segment: 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Segment: 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Segment | Ballot Pool | Segment Weight | Affirmative Votes | Affirmative Fraction | Negative Votes w/ Comment | Negative Fraction w/ Comment | Negative Votes w/o Comment | Abstain | No Vote |
|-------------|-------------|----------------|-------------------|----------------------|---------------------------|------------------------------|----------------------------|---------|---------|
| Segment: 10 | 6 | 0.4 | 3 | 0.3 | 1 | 0.1 | 0 | 2 | 0 |
| Totals: | 289 | 5.7 | 172 | 4.506 | 55 | 1.194 | 0 | 19 | 43 |

BALLOT POOL MEMBERS

Show entries

Search:

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|---------------------|------------------|-------------|-----------|
| 1 | AEP - AEP Service Corporation | Dennis Sauriol | | Affirmative | N/A |
| 1 | Allete - Minnesota Power, Inc. | Lori Frisk | | Negative | N/A |
| 1 | Ameren - Ameren Services | Tamara Evey | | Affirmative | N/A |
| 1 | APS - Arizona Public Service Co. | Daniela Atanasovski | | Affirmative | N/A |
| 1 | Arizona Electric Power Cooperative, Inc. | Jennifer Bray | | Affirmative | N/A |
| 1 | Associated Electric Cooperative, Inc. | Mark Riley | | Affirmative | N/A |
| 1 | Austin Energy | Thomas Standifur | | Affirmative | N/A |
| 1 | Avista - Avista Corporation | Mike Magruder | | Affirmative | N/A |
| 1 | Balancing Authority of Northern California | Kevin Smith | Tim Kelley | Affirmative | N/A |
| 1 | Basin Electric Power Cooperative | David Rudolph | | None | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------------|-------------------------|---------------|------------------|
| 1 | BC Hydro and Power Authority | Adrian Andreoiu | | Affirmative | N/A |
| 1 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Terry Harbour | | Affirmative | N/A |
| 1 | Black Hills Corporation | Micah Runner | | Affirmative | N/A |
| 1 | Bonneville Power Administration | Kamala Rogers-Holliday | | Affirmative | N/A |
| 1 | CenterPoint Energy Houston Electric, LLC | Daniela Hammons | | Affirmative | N/A |
| 1 | Central Electric Power Cooperative (Missouri) | Michael Bax | | None | N/A |
| 1 | Central Iowa Power Cooperative | Kevin Lyons | | Negative | N/A |
| 1 | City Utilities of Springfield, Missouri | Michael Bowman | | None | N/A |
| 1 | Colorado Springs Utilities | Corey Walker | | Negative | N/A |
| 1 | Con Ed - Consolidated Edison Co. of New York | Dermot Smyth | | Negative | N/A |
| 1 | Dairyland Power Cooperative | Karrie Schuldt | | None | N/A |
| 1 | Dominion - Dominion Virginia Power | Elizabeth Weber | | None | N/A |
| 1 | Duke Energy | Katherine Street | | Affirmative | N/A |
| 1 | Entergy | Brian Lindsey | | Affirmative | N/A |
| 1 | Evergy | Kevin Frick | Alan Kloster | Affirmative | N/A |
| 1 | Eversource Energy | Joshua London | | Affirmative | N/A |
| 1 | Exelon | Daniel Gacek | | Negative | N/A |
| 1 | FirstEnergy - FirstEnergy Corporation | Theresa Ciancio | | Affirmative | N/A |
| 1 | Georgia Transmission Corporation | Greg Davis | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|---------------------|-------------------------|---------------|------------------|
| 1 | Glencoe Light and Power Commission | Terry Volkmann | | Negative | N/A |
| 1 | Great River Energy | Gordon Pietsch | | Affirmative | N/A |
| 1 | Hydro One Networks, Inc. | Alain Mukama | | Negative | N/A |
| 1 | Hydro-Quebec (HQ) | Nicolas Turcotte | | Affirmative | N/A |
| 1 | IDACORP - Idaho Power Company | Sean Steffensen | | Affirmative | N/A |
| 1 | Imperial Irrigation District | Jesus Sammy Alcaraz | Denise Sanchez | Affirmative | N/A |
| 1 | International Transmission Company Holdings Corporation | Michael Moltane | Allie Gavin | Abstain | N/A |
| 1 | JEA | Joseph McClung | | Affirmative | N/A |
| 1 | KAMO Electric Cooperative | Micah Breedlove | | Affirmative | N/A |
| 1 | Lakeland Electric | Larry Watt | | None | N/A |
| 1 | Lincoln Electric System | Josh Johnson | | None | N/A |
| 1 | Long Island Power Authority | Isidoro Behar | | Abstain | N/A |
| 1 | Los Angeles Department of Water and Power | Pjoy Chua | | Abstain | N/A |
| 1 | Lower Colorado River Authority | Matt Lewis | | Affirmative | N/A |
| 1 | M and A Electric Power Cooperative | William Price | | Affirmative | N/A |
| 1 | Manitoba Hydro | Nazra Gladu | | Affirmative | N/A |
| 1 | Minnkota Power Cooperative Inc. | Theresa Allard | Andy Fuhrman | Negative | N/A |
| 1 | Muscatine Power and Water | Andrew Kurriger | | Negative | N/A |
| 1 | N.W. Electric Power Cooperative, Inc. | Mark Ramsey | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|--------------------------|-------------------------|---------------|------------------|
| 1 | National Grid USA | Michael Jones | | Negative | N/A |
| 1 | NB Power Corporation | Jeffrey Streifling | | Affirmative | N/A |
| 1 | Nebraska Public Power District | Jamison Cawley | | Negative | N/A |
| 1 | New York Power Authority | Salvatore Spagnolo | | Affirmative | N/A |
| 1 | NextEra Energy - Florida Power and Light Co. | Silvia Mitchell | | Affirmative | N/A |
| 1 | NiSource - Northern Indiana Public Service Co. | Steve Toosevich | | Affirmative | N/A |
| 1 | Northeast Missouri Electric Power Cooperative | Brett Douglas | | Affirmative | N/A |
| 1 | OGE Energy - Oklahoma Gas and Electric Co. | Terri Pyle | | Negative | N/A |
| 1 | Omaha Public Power District | Doug Peterchuck | | Negative | N/A |
| 1 | OTP - Otter Tail Power Company | Charles Wicklund | | Negative | N/A |
| 1 | Pacific Gas and Electric Company | Marco Rios | Michael Johnson | Abstain | N/A |
| 1 | Pedernales Electric Cooperative, Inc. | Bradley Collard | | None | N/A |
| 1 | Platte River Power Authority | Marissa Archie | | Affirmative | N/A |
| 1 | PNM Resources - Public Service Company of New Mexico | Lynn Goldstein | | Negative | N/A |
| 1 | Portland General Electric Co. | Brooke Jockin | | Negative | N/A |
| 1 | PPL Electric Utilities Corporation | Michelle McCartney Longo | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-------------------|-------------------------|---------------|------------------|
| 1 | Public Utility District No. 1 of Chelan County | Glen Pruitt | | Affirmative | N/A |
| 1 | Public Utility District No. 1 of Snohomish County | Alyssia Rhoads | | Affirmative | N/A |
| 1 | Sacramento Municipal Utility District | Wei Shao | Tim Kelley | Affirmative | N/A |
| 1 | Salt River Project | Sarah Blankenship | Israel Perez | Affirmative | N/A |
| 1 | Santee Cooper | Chris Wagner | | None | N/A |
| 1 | SaskPower | Wayne Guttormson | | Abstain | N/A |
| 1 | Seminole Electric Cooperative, Inc. | Kristine Ward | | Abstain | N/A |
| 1 | Sempra - San Diego Gas and Electric | Mohamed Derbas | | Affirmative | N/A |
| 1 | Southern Company - Southern Company Services, Inc. | Matt Carden | | Negative | N/A |
| 1 | Sunflower Electric Power Corporation | Paul Mehlhaff | | Affirmative | N/A |
| 1 | Tacoma Public Utilities (Tacoma, WA) | John Merrell | Jennie Wike | Affirmative | N/A |
| 1 | Tallahassee Electric (City of Tallahassee, FL) | Scott Langston | | Affirmative | N/A |
| 1 | Tennessee Valley Authority | David Plumb | | Affirmative | N/A |
| 1 | Tri-State G and T Association, Inc. | Donna Wood | | Affirmative | N/A |
| 1 | Western Area Power Administration | Ben Hammer | Kimberly Bentley | Negative | N/A |
| 1 | Xcel Energy, Inc. | Eric Barry | | Affirmative | N/A |
| 2 | California ISO | Darcy O'Connell | | Affirmative | N/A |
| 2 | Electric Reliability Council of Texas, Inc. | Kennedy Meier | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|-----------------------------------|-------------------------|---------------|------------------|
| 2 | Independent Electricity System Operator | Harishkumar Subramani Vijay Kumar | | Affirmative | N/A |
| 2 | ISO New England, Inc. | John Pearson | Keith Jonassen | Affirmative | N/A |
| 2 | Midcontinent ISO, Inc. | Bobbi Welch | | Affirmative | N/A |
| 2 | New York Independent System Operator | Gregory Campoli | | None | N/A |
| 2 | PJM Interconnection, L.L.C. | Thomas Foster | Elizabeth Davis | Affirmative | N/A |
| 3 | AEP | Kent Feliks | | Affirmative | N/A |
| 3 | Ameren - Ameren Services | David Jendras Sr | | Affirmative | N/A |
| 3 | APS - Arizona Public Service Co. | Jessica Lopez | | Affirmative | N/A |
| 3 | Arkansas Electric Cooperative Corporation | Ayslynn Mcavoy | | Abstain | N/A |
| 3 | Associated Electric Cooperative, Inc. | Todd Bennett | | Affirmative | N/A |
| 3 | Austin Energy | Lovita Griffin | | Affirmative | N/A |
| 3 | Avista - Avista Corporation | Robert Follini | | Affirmative | N/A |
| 3 | Berkshire Hathaway Energy - MidAmerican Energy Co. | Joseph Amato | | Negative | N/A |
| 3 | Black Hills Corporation | Josh Combs | Rachel Schuldt | Affirmative | N/A |
| 3 | Bonneville Power Administration | Ken Lanehome | | None | N/A |
| 3 | Central Electric Power Cooperative (Missouri) | Adam Weber | | None | N/A |
| 3 | CMS Energy - Consumers Energy Company | Karl Blaszkowski | | None | N/A |
| 3 | Colorado Springs Utilities | Hillary Dobson | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|------------------|
| 3 | Con Ed - Consolidated Edison Co. of New York | Peter Yost | | Negative | N/A |
| 3 | Cowlitz County PUD | Russell Noble | | None | N/A |
| 3 | Dominion - Dominion Virginia Power | Bill Garvey | | None | N/A |
| 3 | DTE Energy - Detroit Edison Company | Marvin Johnson | | Affirmative | N/A |
| 3 | Duke Energy - Florida Power Corporation | Marcelo Pesantez | | Affirmative | N/A |
| 3 | Edison International - Southern California Edison Company | Romel Aquino | | None | N/A |
| 3 | Entergy | James Keele | | Affirmative | N/A |
| 3 | Evergy | Marcus Moor | Alan Kloster | Affirmative | N/A |
| 3 | Eversource Energy | Vicki O'Leary | | Affirmative | N/A |
| 3 | Exelon | Kinte Whitehead | | Negative | N/A |
| 3 | FirstEnergy - FirstEnergy Corporation | Aaron Ghodooshim | | Affirmative | N/A |
| 3 | Georgia System Operations Corporation | Scott McGough | | Affirmative | N/A |
| 3 | Great River Energy | Michael Brytowski | | Affirmative | N/A |
| 3 | Imperial Irrigation District | Glen Allegranza | Denise Sanchez | Affirmative | N/A |
| 3 | JEA | Marilyn Williams | | Affirmative | N/A |
| 3 | KAMO Electric Cooperative | Tony Gott | | Affirmative | N/A |
| 3 | Lakeland Electric | Steven Marshall | | Affirmative | N/A |
| 3 | Lincoln Electric System | Sam Christensen | | Negative | N/A |
| 3 | Los Angeles Department of Water and Power | Tony Skourtas | | Abstain | N/A |
| 3 | M and A Electric Power Cooperative | Stephen Pogue | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|------------------|
| 3 | Muscatine Power and Water | Seth Shoemaker | | Negative | N/A |
| 3 | National Grid USA | Brian Shanahan | | Negative | N/A |
| 3 | Nebraska Public Power District | Tony Eddleman | | Negative | N/A |
| 3 | New York Power Authority | David Rivera | | Affirmative | N/A |
| 3 | NiSource - Northern Indiana Public Service Co. | Steven Taddeucci | | Affirmative | N/A |
| 3 | North Carolina Electric Membership Corporation | Chris Dimisa | Scott Brame | Affirmative | N/A |
| 3 | Northeast Missouri Electric Power Cooperative | Skyler Wiegmann | | None | N/A |
| 3 | Northern California Power Agency | Michael Whitney | James Mearns | Affirmative | N/A |
| 3 | NW Electric Power Cooperative, Inc. | Heath Henry | | Affirmative | N/A |
| 3 | OGE Energy - Oklahoma Gas and Electric Co. | Donald Hargrove | | Negative | N/A |
| 3 | Omaha Public Power District | David Heins | | Negative | N/A |
| 3 | OTP - Otter Tail Power Company | Wendi Olson | | Negative | N/A |
| 3 | Owensboro Municipal Utilities | William Berry | | Affirmative | N/A |
| 3 | Pacific Gas and Electric Company | Sandra Ellis | Michael Johnson | Abstain | N/A |
| 3 | Platte River Power Authority | Richard Kiess | | Affirmative | N/A |
| 3 | PNM Resources - Public Service Company of New Mexico | Amy Wesselkamper | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|--------------------|------------------|-------------|-----------|
| 3 | Portland General Electric Co. | Adam Menendez | | None | N/A |
| 3 | PPL - Louisville Gas and Electric Co. | James Frank | | Affirmative | N/A |
| 3 | PSEG - Public Service Electric and Gas Co. | Christopher Murphy | | Affirmative | N/A |
| 3 | Public Utility District No. 1 of Chelan County | Joyce Gundry | | Affirmative | N/A |
| 3 | Sacramento Municipal Utility District | Nicole Looney | Tim Kelley | Affirmative | N/A |
| 3 | Salt River Project | Mathew Weber | Israel Perez | Affirmative | N/A |
| 3 | Santee Cooper | Vicky Budreau | | None | N/A |
| 3 | Seminole Electric Cooperative, Inc. | Marc Sedor | | Abstain | N/A |
| 3 | Sempra - San Diego Gas and Electric | Bryan Bennett | | Affirmative | N/A |
| 3 | Sho-Me Power Electric Cooperative | Jarrold Murdaugh | | Affirmative | N/A |
| 3 | Snohomish County PUD No. 1 | Holly Chaney | | Affirmative | N/A |
| 3 | Southern Company - Alabama Power Company | Joel Dembowski | | Negative | N/A |
| 3 | Tennessee Valley Authority | Ian Grant | | Affirmative | N/A |
| 3 | Tri-State G and T Association, Inc. | Ryan Walter | | None | N/A |
| 3 | WEC Energy Group, Inc. | Christine Kane | | Negative | N/A |
| 3 | Xcel Energy, Inc. | Nicholas Friebe | | Affirmative | N/A |
| 4 | Alliant Energy Corporation Services, Inc. | Larry Heckert | | None | N/A |
| 4 | City Utilities of Springfield, Missouri | Jerry Bradshaw | | Abstain | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-------------------|-------------------------|---------------|------------------|
| 4 | CMS Energy - Consumers Energy Company | Aric Root | | None | N/A |
| 4 | Electricities of North Carolina | Marcus Freeman | | None | N/A |
| 4 | FirstEnergy - FirstEnergy Corporation | Mark Garza | | Affirmative | N/A |
| 4 | Georgia System Operations Corporation | Benjamin Winslett | | None | N/A |
| 4 | LaGen | Wayne Messina | | None | N/A |
| 4 | North Carolina Electric Membership Corporation | Richard McCall | Scott Brame | Affirmative | N/A |
| 4 | Northern California Power Agency | Marty Hostler | James Mearns | Affirmative | N/A |
| 4 | Oklahoma Municipal Power Authority | Michael Watt | | None | N/A |
| 4 | Public Utility District No. 1 of Snohomish County | John D. Martinsen | | Affirmative | N/A |
| 4 | Public Utility District No. 2 of Grant County, Washington | Karla Weaver | | Affirmative | N/A |
| 4 | Sacramento Municipal Utility District | Foung Mua | Tim Kelley | Affirmative | N/A |
| 4 | WEC Energy Group, Inc. | Matthew Beilfuss | | Negative | N/A |
| 5 | AEP | Thomas Foltz | | Affirmative | N/A |
| 5 | AES - AES Corporation | Ruchi Shah | | Affirmative | N/A |
| 5 | Ameren - Ameren Missouri | Sam Dwyer | | Affirmative | N/A |
| 5 | APS - Arizona Public Service Co. | Brandon Smith | | Affirmative | N/A |
| 5 | Austin Energy | Michael Dillard | | Affirmative | N/A |
| 5 | Avista - Avista Corporation | Glen Farmer | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|------------------------|------------------|-------------|-----------|
| 5 | Basin Electric Power Cooperative | Amanda Wangler | | None | N/A |
| 5 | BC Hydro and Power Authority | Helen Hamilton Harding | | Affirmative | N/A |
| 5 | Berkshire Hathaway - NV Energy | Dwanique Spiller | | Affirmative | N/A |
| 5 | Black Hills Corporation | Sheila Suurmeier | | Affirmative | N/A |
| 5 | Bonneville Power Administration | Christopher Siewert | | Affirmative | N/A |
| 5 | Brazos Electric Power Cooperative, Inc. | Shari Heino | | Abstain | N/A |
| 5 | Choctaw Generation Limited Partnership, LLLP | Rob Watson | | Negative | N/A |
| 5 | Cleco Corporation | Stephanie Huffman | | None | N/A |
| 5 | Colorado Springs Utilities | Jeffrey Icke | | Negative | N/A |
| 5 | Con Ed - Consolidated Edison Co. of New York | Helen Wang | | Negative | N/A |
| 5 | Constellation | Alison MacKellar | | Affirmative | N/A |
| 5 | Cowlitz County PUD | Deanna Carlson | | None | N/A |
| 5 | Dairyland Power Cooperative | Tommy Drea | | None | N/A |
| 5 | Dominion - Dominion Resources, Inc. | Rachel Snead | | None | N/A |
| 5 | DTE Energy - Detroit Edison Company | Adrian Raducea | | Affirmative | N/A |
| 5 | Duke Energy | Dale Goodwine | | Affirmative | N/A |
| 5 | Edison International - Southern California Edison Company | Selene Willis | | None | N/A |
| 5 | Enel Green Power | Natalie Johnson | | None | N/A |
| 5 | Entergy - Entergy Services, Inc. | Gail Golden | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|--|------------------|-------------------------|---------------|------------------|
| 5 | Eergy | Jeremy Harris | Alan Kloster | Affirmative | N/A |
| 5 | FirstEnergy - FirstEnergy Corporation | Robert Loy | | Affirmative | N/A |
| 5 | Great River Energy | Jacalynn Bentz | | Affirmative | N/A |
| 5 | Greybeard Compliance Services, LLC | Mike Gabriel | | Affirmative | N/A |
| 5 | Hydro-Quebec (HQ) | Junji Yamaguchi | | Affirmative | N/A |
| 5 | Imperial Irrigation District | Tino Zaragoza | Denise Sanchez | Affirmative | N/A |
| 5 | JEA | John Babik | | Affirmative | N/A |
| 5 | Lincoln Electric System | Brittany Millard | | Negative | N/A |
| 5 | Los Angeles Department of Water and Power | Glenn Barry | | Abstain | N/A |
| 5 | Lower Colorado River Authority | Teresa Krabe | | Affirmative | N/A |
| 5 | Muscatine Power and Water | Neal Nelson | | Negative | N/A |
| 5 | National Grid USA | Robin Berry | | Negative | N/A |
| 5 | NB Power Corporation | David Melanson | | Affirmative | N/A |
| 5 | Nebraska Public Power District | Ronald Bender | | Negative | N/A |
| 5 | New York Power Authority | Zahid Qayyum | | Affirmative | N/A |
| 5 | NextEra Energy | Richard Vendetti | | Affirmative | N/A |
| 5 | NiSource - Northern Indiana Public Service Co. | Kathryn Tackett | | Affirmative | N/A |
| 5 | North Carolina Electric Membership Corporation | Reid Cashion | Scott Brame | Affirmative | N/A |
| 5 | Northern California Power Agency | Jeremy Lawson | | Affirmative | N/A |
| 5 | NRG - NRG Energy, Inc. | Patricia Lynch | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|---|---------------------|------------------|-------------|-----------|
| 5 | OGE Energy - Oklahoma Gas and Electric Co. | Patrick Wells | | Negative | N/A |
| 5 | Oglethorpe Power Corporation | Donna Johnson | | Affirmative | N/A |
| 5 | Omaha Public Power District | Kayleigh Wilkerson | | Negative | N/A |
| 5 | Ontario Power Generation Inc. | Constantin Chitescu | | Affirmative | N/A |
| 5 | Orlando Utilities Commission | Dania Colon | | None | N/A |
| 5 | Pacific Gas and Electric Company | Frank Lee | Michael Johnson | Abstain | N/A |
| 5 | Pattern Operators LP | George E Brown | | Negative | N/A |
| 5 | Platte River Power Authority | Jon Osell | | Affirmative | N/A |
| 5 | Portland General Electric Co. | Ryan Olson | | None | N/A |
| 5 | PPL - Louisville Gas and Electric Co. | JULIE HOSTRANDER | | Affirmative | N/A |
| 5 | PSEG Nuclear LLC | Tim Kucey | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Chelan County | Rebecca Zahler | | Affirmative | N/A |
| 5 | Public Utility District No. 1 of Snohomish County | Becky Burden | | Affirmative | N/A |
| 5 | Public Utility District No. 2 of Grant County, Washington | Nikkee Hebdon | | Affirmative | N/A |
| 5 | Sacramento Municipal Utility District | Pedro Juarez | Tim Kelley | Affirmative | N/A |
| 5 | Salt River Project | Thomas Johnson | Israel Perez | Affirmative | N/A |
| 5 | Seminole Electric Cooperative, Inc. | Melanie Wong | | None | N/A |
| 5 | Sempra - San Diego Gas and Electric | Jennifer Wright | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|------------------|------------------|-------------|-----------|
| 5 | Southern Company - Southern Company Generation | Jim Howell, Jr. | | Negative | N/A |
| 5 | Southern Indiana Gas and Electric Co. | Larry Rogers | | Affirmative | N/A |
| 5 | Talen Generation, LLC | Donald Lock | | None | N/A |
| 5 | Tri-State G and T Association, Inc. | Sergio Banuelos | | Affirmative | N/A |
| 5 | U.S. Bureau of Reclamation | Wendy Kalidass | | Affirmative | N/A |
| 5 | WEC Energy Group, Inc. | Clarice Zellmer | | Negative | N/A |
| 5 | Xcel Energy, Inc. | Gerry Huitt | Joseph Gatten | Negative | N/A |
| 6 | AEP | Justin Kuehne | | Affirmative | N/A |
| 6 | Ameren - Ameren Services | Robert Quinlivan | | Affirmative | N/A |
| 6 | APS - Arizona Public Service Co. | Marcus Bortman | | Affirmative | N/A |
| 6 | Arkansas Electric Cooperative Corporation | Bruce Walkup | | Abstain | N/A |
| 6 | Associated Electric Cooperative, Inc. | Brian Ackermann | | Affirmative | N/A |
| 6 | Austin Energy | Imane Mrini | | Affirmative | N/A |
| 6 | Berkshire Hathaway - PacifiCorp | Lindsay Wickizer | | Affirmative | N/A |
| 6 | Black Hills Corporation | Claudine Bates | | Affirmative | N/A |
| 6 | Cleco Corporation | Robert Hirschak | | None | N/A |
| 6 | Con Ed - Consolidated Edison Co. of New York | Michael Foley | | Negative | N/A |
| 6 | Constellation | Kimberly Turco | | Affirmative | N/A |
| 6 | Dominion - Dominion Resources, Inc. | Sean Bodkin | | None | N/A |
| 6 | Duke Energy | John Sturgeon | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|-----------------------|-------------------------|---------------|------------------|
| 6 | Edison International - Southern California Edison Company | Kenya Streater | | None | N/A |
| 6 | Entergy | Julie Hall | | Affirmative | N/A |
| 6 | Evergy | Jennifer Flandermeyer | Alan Kloster | Affirmative | N/A |
| 6 | FirstEnergy - FirstEnergy Corporation | Stacey Sheehan | | Affirmative | N/A |
| 6 | Imperial Irrigation District | Diana Torres | Denise Sanchez | Affirmative | N/A |
| 6 | Lincoln Electric System | Eric Ruskamp | | Negative | N/A |
| 6 | Los Angeles Department of Water and Power | Anton Vu | | None | N/A |
| 6 | Manitoba Hydro | Kelly Bertholet | | Affirmative | N/A |
| 6 | Muscatine Power and Water | Nicholas Burns | | Negative | N/A |
| 6 | New York Power Authority | Shelly Dineen | | Affirmative | N/A |
| 6 | NextEra Energy - Florida Power and Light Co. | Justin Welty | | Affirmative | N/A |
| 6 | NiSource - Northern Indiana Public Service Co. | Joseph OBrien | | Affirmative | N/A |
| 6 | Northern California Power Agency | Dennis Sismaet | James Mearns | Affirmative | N/A |
| 6 | NRG - NRG Energy, Inc. | Martin Sidor | | Affirmative | N/A |
| 6 | OGE Energy - Oklahoma Gas and Electric Co. | Ashley F Stringer | | Negative | N/A |
| 6 | Omaha Public Power District | Shonda McCain | | Negative | N/A |
| 6 | Platte River Power Authority | Sabrina Martz | | Affirmative | N/A |
| 6 | Portland General Electric Co. | Stefanie Burke | | Negative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|----------------|---|----------------|-------------------------|---------------|------------------|
| 6 | Powerex Corporation | Raj Hundal | | Affirmative | N/A |
| 6 | PPL - Louisville Gas and Electric Co. | Linn Oelker | | Affirmative | N/A |
| 6 | PSEG - PSEG Energy Resources and Trade LLC | Joseph Neglia | | Affirmative | N/A |
| 6 | Public Utility District No. 1 of Chelan County | Anne Kronshage | | Affirmative | N/A |
| 6 | Public Utility District No. 2 of Grant County, Washington | Mike Stussy | | Affirmative | N/A |
| 6 | Sacramento Municipal Utility District | Charles Norton | Tim Kelley | Affirmative | N/A |
| 6 | Salt River Project | Timothy Singh | Israel Perez | Affirmative | N/A |
| 6 | Santee Cooper | Marty Watson | | None | N/A |
| 6 | Seminole Electric Cooperative, Inc. | Bret Galbraith | | Abstain | N/A |
| 6 | Southern Company - Southern Company Generation | Ron Carlsen | | Negative | N/A |
| 6 | Southern Indiana Gas and Electric Co. | Kati Barr | | Affirmative | N/A |
| 6 | Tacoma Public Utilities (Tacoma, WA) | Terry Gifford | Jennie Wike | Affirmative | N/A |
| 6 | WEC Energy Group, Inc. | David Boeshaar | | Negative | N/A |
| 6 | Western Area Power Administration | Chrystal Dean | | Affirmative | N/A |
| 6 | Xcel Energy, Inc. | Steve Szablya | | None | N/A |
| 8 | Florida Reliability Coordinating Council – Member Services Division | Vince Ordax | | Abstain | N/A |
| 10 | Midwest Reliability Organization | Mark Flanary | | Affirmative | N/A |

| Segment | Organization | Voter | Designated Proxy | Ballot | NERC Memo |
|---------|--|-----------------|------------------|-------------|-----------|
| 10 | Northeast Power Coordinating Council | Gerry Dunbar | | Abstain | N/A |
| 10 | ReliabilityFirst | Lindsey Mannion | Stephen Whaite | Negative | N/A |
| 10 | SERC Reliability Corporation | Dave Krueger | | Affirmative | N/A |
| 10 | Texas Reliability Entity, Inc. | Rachel Coyne | | Affirmative | N/A |
| 10 | Western Electricity Coordinating Council | Steven Rueckert | | Abstain | N/A |

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A. Introduction

1. **Title:** Transmission Operator and Balancing Authority Data and Information Specification and Collection
2. **Number:** TOP-003-6.1
3. **Purpose:** To ensure that each Transmission Operator and Balancing Authority has the data and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.
4. **Applicability:**
 - 4.1 Functional Entities:
 - 4.1.1 Transmission Operator
 - 4.1.2 Balancing Authority
 - 4.1.3 Generator Owner
 - 4.1.4 Generator Operator
 - 4.1.5 Transmission Owner
 - 4.1.6 Distribution Provider
5. **Effective Date:** See Implementation Plan for Project 2021-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or
 - 1.3.2.2.** historical operating temperature; or
 - 1.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 1.4.** Identification of a mutually agreeable process for resolving conflicts.
 - 1.5.** Method(s) for the entity identified in Part 1.1 to provide the data and information that includes at a minimum the following.
 - 1.5.1.** Specified deadlines or periodicity which data and information is to be provided;
 - 1.5.2.** Performance criteria for the availability and accuracy of data and information as applicable;
 - 1.5.3.** Provisions to update or correct data and information, as applicable or necessary;
 - 1.5.4.** A mutually agreeable format;
 - 1.5.5.** Mutually agreeable method(s) for securely transferring data and information.

- M1.** Each Transmission Operator shall make available its dated, current, in force documented specification(s) for data and information.
- R2.** Each Balancing Authority shall maintain documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
 - 2.1.** A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.
 - 2.2.** Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
 - 2.3.** Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
 - 2.3.1.** Operating limitations based on:
 - 2.3.1.1.** capability and availability;
 - 2.3.1.2.** fuel supply and inventory concerns;
 - 2.3.1.3.** fuel switching capabilities; and
 - 2.3.1.4.** environmental constraints.
 - 2.3.2.** Generating unit(s) minimum:
 - 2.3.2.1.** design temperature; or
 - 2.3.2.2.** historical operating temperature; or
 - 2.3.2.3.** current cold weather performance temperature determined by an engineering analysis.
 - 2.4.** Identification of a mutually agreeable process in resolving conflicts
 - 2.5.** Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.
 - 2.5.1.** Specific deadlines or periodicity in which data and information is to be provided;
 - 2.5.2.** Performance criteria for the availability and accuracy of data and information, as applicable;
 - 2.5.3.** Provisions to update or correct data and information, as applicable or necessary.
 - 2.5.4.** A mutually agreeable format.
 - 2.5.5.** A mutually agreeable method(s) for securely transferring data and information.

- M2.** Each Balancing Authority shall make available its dated, current, in force documented specification(s) for data and information.
- R3.** Each Transmission Operator shall distribute its data and information specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M3.** Each Transmission Operator shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

- R4.** Each Balancing Authority shall distribute its data and information specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- M4.** Each Balancing Authority shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.
- R5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data and information specification(s) in Requirement R3 or R4 shall satisfy the obligations of the documented specifications. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*
- M5.** Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specification. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

4.1.1 Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

4.1.2 Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its specification(s) to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its specification(s) to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a specification(s) in Requirement R3 or R4 shall retain evidence for the most

recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R5 and Measurement M5.

- 4.1.3 Compliance Monitoring and Enforcement Program:** As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|---------------------|-------|---|--|---|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|--|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | monitoring. | | OR, The Balancing Authority did not have a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its Specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its Specification(s) to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its Specification(s) to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its Specification(s) to four or more entities, or more than 15% of the entities that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its Specification(s) to one entity, or 5% or less of the entities, whichever is greater, that have data and information required | The Balancing Authority did not distribute its Specification(s) to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that | The Balancing Authority did not distribute its Specification(s) to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that | The Balancing Authority did not distribute its Specification(s) to four or more entities, or more than 15% of the entities that have data and information required by |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|---|---|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | by the Balancing Authority's analysis functions and Real-time monitoring. | have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | have data and information required by the Balancing Authority's analysis functions and Real-time monitoring. | the Balancing Authority's analysis functions and Real-time monitoring. |
| | | | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet one of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet two of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 satisfied the obligations in the specification but failed to meet three or more of the parts in Requirement R1 Part 1.5 or Requirement R2 Part 2.5. | The responsible entity receiving a specification(s) in Requirement R3 or R4 did not satisfy the obligations of the documented specifications. |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|---|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP- 003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
| 4 | October 30, 2020 | FERC approved TOP-003-4. Docket No. RD20-4-000 | |
| 5 | May 2021 | Changes pursuant to Project 2019-06 | Revised |
| 5 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |
| 5 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order 176 | |
| 6 | TBD | Adopted by NERC Board of Trustees | Revisions under project 2021-06 |
| 6.1 | Errata | Approved by the Standards Committee | |

A. Introduction

1. Title: Transmission Operator and Balancing Authority Data and Information Specification and Collection

1.2. Number: TOP-003-~~56.1~~

2.3. Purpose: To ensure that each Transmission Operator and Balancing Authority has the data needed and information it needs to plan, monitor, and assess the operation of its Transmission Operator Area or Balancing Authority Area.

3.4. Applicability:

4.1 Functional Entities:

4.1.1 Transmission Operator

4.1.2 Balancing Authority

4.1.3 Generator Owner

4.1.4 Generator Operator

4.1.5 Transmission Owner

4.1.6 Distribution Provider

5. Effective Date: See Implementation Plan for Project 2021-06.

B. Requirements and Measures

- R1.** Each Transmission Operator shall maintain a documented specification(s) for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The ~~data~~ specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 1.1.** A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and information, external network data, and information, and identification of the entities responsible for responding to the specification as deemed necessary by the Transmission Operator.
 - 1.2.** Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.
 - 1.3.** Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:
 - 1.3.1.** Operating limitations based on:
 - 1.3.1.1.** capability and availability;
 - 1.3.1.2.** fuel supply and inventory concerns;
 - 1.3.1.3.** fuel switching capabilities; and
 - 1.3.1.4.** environmental constraints
 - 1.3.2.** Generating unit(s) minimum:
 - 1.3.2.1.** design temperature; or

- 1.3.2.2. historical operating temperature; or
- 1.3.2.3. current cold weather performance temperature determined by an engineering analysis.

1.4. ~~A~~ Identification of a mutually agreeable process for resolving conflicts.

1.5. Method(s) for the entity identified in Part 1.1 to provide the data and information that includes at a minimum the following.

~~1.4.~~

~~1.4.1.1.5.1. Specified deadlines or periodicity for providing data. The deadline by which the respondent data and information is to provide the indicated data be provided;~~

1.5.2. Performance criteria for the availability and accuracy of data and information as applicable;

1.5.3. Provisions to update or correct data and information, as applicable or necessary;

1.5.4. A mutually agreeable format;

1.5.5. Mutually agreeable method(s) for securely transferring data and information.

- M1.** ~~Each Transmission Operator shall make available its dated, current, in force documented specification(s) for data and information.~~
- R2.** Each Balancing Authority shall maintain ~~a~~ documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*
- 2.1.** A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring including non-Bulk Electric System data and information, and external network data and information, as deemed necessary by the Balancing Authority, and identification of the entity responsible for responding to the specification.
 - 2.2.** Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
 - 2.3.** Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
 - 2.3.1.** Operating limitations based on:
 - 2.3.1.1.** capability and availability;
 - 2.3.1.2.** fuel supply and inventory concerns;
 - 2.3.1.3.** fuel switching capabilities; and
 - 2.3.1.4.** environmental constraints.

2.3.2. Generating unit(s) minimum:

2.3.2.1. design temperature; or

2.3.2.2. historical operating temperature; or

2.3.2.3. current cold weather performance temperature determined by an engineering analysis.

2.4. ~~A~~ Identification of a mutually agreeable process in resolving conflicts

2.5. Methods for the entity identified in Part 2.1 to provide data and information that includes at a minimum the following.

~~2.4.~~

~~2.4.1.~~2.5.1. Specific deadlines or periodicity for providing data. The deadline by in which the respondent data and information is to provide the indicated data be provided;

2.5.2. Performance criteria for the availability and accuracy of data and information, as applicable;

2.5.3. Provisions to update or correct data and information, as applicable or necessary.

2.5.4. A mutually agreeable format.

2.5.5. A mutually agreeable method(s) for securely transferring data and information.

M2.- Each Balancing Authority shall make available its dated, current, in force documented specification(s) for data and information.

R3. Each Transmission Operator shall distribute its data and information specification(s) to entities that have data and information required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.
[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

M3.- Each Transmission Operator shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, date and contents, or e-mail records.

R4. Each Balancing Authority shall distribute its data and information specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. [*Violation Risk Factor: Lower*] [*Time Horizon: Operations Planning*]

M4.- Each Balancing Authority shall make available evidence that it has distributed its data specification(s) to entities that have data and information required by the Balancing Authority’s analysis functions and Real-time monitoring. Such evidence could include but is not limited to web postings with an electronic notice of the posting, dated operator logs, voice recordings, postal receipts showing the recipient, or e-mail records.

R5. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data and information specification(s) in Requirement R3 or R4 shall satisfy the obligations of the documented specifications ~~using:~~ [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations*]

~~5.1. A mutually agreeable format~~

~~5.2. A mutually agreeable process for resolving data conflicts~~

~~5.3. A mutually agreeable security protocol~~

M5.- Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~ specification(s) in Requirement R3 or R4 shall make available evidence that it has satisfied the obligations of the documented specifications. Such evidence could include, but is not limited to, electronic or hard copies of data transmittals or attestations of receiving entities.

C. Compliance

1. Compliance Monitoring Process

4.1.1 Compliance Enforcement Authority: “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

4.1.2 Evidence Retention: The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the ~~Compliance Enforcement Authority~~ CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each responsible entity shall keep data or evidence to show compliance as identified below unless directed by its ~~Compliance Enforcement Authority~~ CEA to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain its dated, current, in force, documented specification for the data and information necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R1 and Measurement M1 as well as any documents in force since the last compliance audit.

Each Balancing Authority shall retain its dated, current, in force, documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring in accordance with Requirement R2 and Measurement M2 as well as any documents in force since the last compliance audit.

Each Transmission Operator shall retain evidence for three calendar years that it has distributed its ~~data~~-specification(s) to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments in accordance with Requirement R3 and Measurement M3.

Each Balancing Authority shall retain evidence for three calendar years that it has distributed its ~~data~~-specification(s) to entities that have data required by the Balancing Authority’s analysis functions and Real-time monitoring in accordance with Requirement R4 and Measurement M4.

Each Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a ~~data~~

specification(s) in Requirement R3 or R4 shall retain evidence for the most recent 90-calendar days that it has satisfied the obligations of the documented specifications in accordance with Requirement R5 and Measurement M5.

4.1.3 Compliance Monitoring and Enforcement Program: As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated reliability standard.

I

Violation Severity Levels

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|---------------------|-------|--|---|--|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R1 | Operations Planning | Lower | The Transmission Operator did not include two or fewer one or two of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include three of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include four of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification(s) for the data <u>and information</u> on necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not include any of the parts (Part 1.1 through Part 1.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. OR, The Transmission Operator did not have a documented specification(s) for the data <u>and information</u> on necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R2 | Operations Planning | Lower | The Balancing Authority did not include two or fewer of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include three of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include four of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. | The Balancing Authority did not include any of the parts (Part 2.1 through Part 2.5) of the documented specification(s) for the data <u>and information</u> necessary for it to perform its analysis functions and Real-time monitoring. |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|---|---------------------|-------|--|--|---|---|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| | | | | monitoring. | | OR, The Balancing Authority did not have a documented specification(s) for the data and information necessary for it to perform its analysis functions and Real-time monitoring. |
| For the Requirement R3 and R4 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation. | | | | | | |
| R3 | Operations Planning | Lower | The Transmission Operator did not distribute its data <u>specification(s)</u> to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>specification(s)</u> to two entities, or more than 5% and less than or equal to 10% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>specification(s)</u> to three entities, or more than 10% and less than or equal to 15% of the reliability entities, whichever is greater, that have data <u>and information</u> required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. | The Transmission Operator did not distribute its data <u>specification(s)</u> to four or more entities, or more than 15% of the entities that have data <u>and information</u> required by the Transmission Operator's Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. |
| R4 | Operations Planning | Lower | The Balancing Authority did not distribute its data <u>specification(s)</u> to one entity, or 5% or less of the entities, whichever is greater, that have data <u>and information</u> required | The Balancing Authority did not distribute its data <u>specification(s)</u> to two entities, or more than 5% and less than or equal to 10% of the entities, whichever is greater, that | The Balancing Authority did not distribute its data <u>specification(s)</u> to three entities, or more than 10% and less than or equal to 15% of the entities, whichever is greater, that | The Balancing Authority did not distribute its data <u>specification(s)</u> to four or more entities, or more than 15% of the entities that have data <u>and information</u> required by |

| R# | Time Horizon | VRF | Violation Severity Levels | | | |
|----|--|--------|---|--|--|--|
| | | | Lower VSL | Moderate VSL | High VSL | Severe VSL |
| R5 | Operations Planning, Same-Day Operations, Real-time Operations | Medium | by the Balancing Authority's analysis functions and Real-time monitoring. | have data <u>and information</u> required by the Balancing Authority's analysis functions and Real-time monitoring. | have data <u>and information</u> required by the Balancing Authority's analysis functions and Real-time monitoring. | the Balancing Authority's analysis functions and Real-time monitoring. |
| | | | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but did not <u>failed</u> to meet one of the parts criteria shown <u>parts</u> in Requirement R15 (Parts 15.51-5.3 <u>15.51- or 5.3</u>) <u>Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but did not <u>failed</u> to meet two of the parts criteria shown <u>parts</u> in Requirement R15 (Parts 15.51-5.3 <u>15.51-5.3</u>) <u>OR Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 satisfied the obligations in the data specification but did not <u>failed</u> to meet three or more of the parts criteria shown <u>parts</u> in Requirement R15 (Parts 15.15-5.3 <u>15.15-5.3</u>) <u>OR Requirement R2 Part 2.5.</u> | The responsible entity receiving a data specification(s) in Requirement R3 or R4 did not satisfy the obligations of the documented specifications for data . |

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Version History

| Version | Date | Action | Change Tracking |
|---------------------|------------------------|---|---------------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | | Modified R1.2 Modified M1 Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) | Revised |
| 1 | October 17, 2008 | Adopted by NERC Board of Trustees | |
| 1 | March 17, 2011 | Order issued by FERC approving TOP- 003-1 (approval effective 5/23/11) | |
| 2 | May 6, 2012 | Revised under Project 2007-03 | Revised |
| 2 | May 9, 2012 | Adopted by Board of Trustees | Revised |
| 3 | April 2014 | Changes pursuant to Project 2014-03 | Revised |
| 3 | November 13, 2014 | Adopted by Board of Trustees | Revisions under Project 2014-03 |
| 3 | November 19, 2015 | FERC approved TOP-003-3. Docket No. RM15-16-000, Order No. 817 | |
| 4 | February 6, 2020 | Adopted by NERC Board of Trustees | Revisions under Project 2017-07 |
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| 5 | May 2021 | Changes pursuant to Project 2019-06 | Revised |
| 5 | June 11, 2021 | Board approved | Project 2019-06 Cold Weather |
| 5 | August 24, 2021 | FERC approved TOP –003-5 Docket No. RD21-5-000, Order 176 | |
| 6 | TBD | Adopted by NERC Board of Trustees | Revisions under project 2021-06 |
| 6.1 | Errata | Approved by the Standards Committee | |

Exhibit G

Standard Drafting Team Roster
Project 2021-06 Modifications to IRO-010 and TOP-003

Drafting Team Roster

Project 2021-06 Modifications to IRO-010 and TOP-003

| | Name | Entity |
|-------------------|----------------------------------|---|
| Chair | Matthew Harward | Southwest Power Pool, Inc. |
| Vice Chair | Dennis Sauriol | American Electric Power |
| Members | Robert (Bob) Cielen | BC Hydro |
| | Sarah B. Facey | GSOC |
| | Barry Jones | Western Area Power Administration (WAPA) |
| | Nick Messner | California ISO |
| | Jennifer Richards | SCPSA (Santee Cooper) |
| | Stephen Solis | Electric Reliability Council of Texas, Inc. |
| NERC Staff | Josh Blume – Standards Developer | North American Electric Reliability Corporation |