

## 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

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					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

<b>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.</b>	
<b>Rachel Coyne - Texas Reliability Entity, Inc. - 10</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>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.</p> <p><b>Zero-defect Expectation</b></p> <p>The statement in the Purpose or Goal section <i>“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”</i> 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.”</p> <p>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</p>	

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**

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
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**

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
N/A.	
Likes 0	

Dislikes	0
<b>Response</b>	
Thank you for your support.	
<b>Thomas Foltz - AEP - 3,5,6</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<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
<b>Response</b>	
Thank you for the comment and support	
<b>Jamie Monette - Allete - Minnesota Power, Inc. - 1</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
.	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your support.	
<b>Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
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	
<b>Response</b>	
Thank you for the comment and support.	
<b>Carl Pineault - Hydro-Qu?bec Production - 1,5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	<a href="#">HQP comments TOP-IRO.docx</a>
<b>Comment</b>	
See attached comments to substantiate our support on the proposed scope.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your comments and perspective. The team has taken these into consideration, for the SAR and potential scope of a Standards revision.	
<b>Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,7 - WECC,Texas RE,NPCC,SERC,RF, Group Name Southern Company</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
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
<b>Response</b>	
Thank you for the comment. Please see the response to EEI.	
<b>Jack Cashin - American Public Power Association - 4</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<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
<b>Response</b>	
Thank you for the comment and support. Your comments have been considered in the next redline of the SAR.	
<b>David Jendras - Ameren - Ameren Services - 1,3,6</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Ameren agrees with and supports EEI comments.	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your comments. Please see the response to EEI.	
<b>Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
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.

<b>Mary Cooper - Alameda Municipal Power - 3 - WECC, Group Name</b> Cooper Compliance Corp	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
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
<b>Response</b>	
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.	
<b>David Kwan - Ontario Power Generation Inc. - 5 - NPCC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
OPG concurs with NPCC's RSC comments.	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your comment. Please see the response to NPCC RSC.	

<b>Bobbi Welch - Midcontinent ISO, Inc. - 2</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<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
<b>Response</b>	
<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>	
<b>Amber Parker - Unisource - Tucson Electric Power Co. - NA - Not Applicable - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

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

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

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



<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	
<b>Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	
<b>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</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	

<b>2. Provide any additional comments for the drafting team to consider, if desired.</b>	
<b>Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<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	
<b>Response</b>	
<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>	
<b>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</b>	
<b>Answer</b>	
<b>Document Name</b>	

<b>Comment</b>	
Please consider updating the SAR with the current standard version numbers.	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your comment. Please see the updated SAR that has been modified with the current standard version numbers.	
<b>David Kwan - Ontario Power Generation Inc. - 5 - NPCC</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
OPG concurs with NPCC's RSC comments.	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your comment.	
<b>Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	

Thank you for the opportunity to provide comments.	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your comment and support.	
<b>Jack Cashin - American Public Power Association - 4</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<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
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Dislikes	0	
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**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	
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Dislikes	0
<b>Response</b>	
The SAR Drafting Team thanks you for your comments. The revised SAR has updated the references to the standard versions.	
<b>Julie Hall - Entergy - 6, Group Name</b> Entergy	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
None	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your support.	
<b>Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name</b> MRO NSRF	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<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"> <li>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.</li> </ol>	

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
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Dislikes	0
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**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	
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Document Name	
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**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
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Dislikes	0
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**Response**

Thank you for your comments and support

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

Answer	
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Document Name	
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Comment	
N/A	
Likes	0
Dislikes	0
Response	
Thank you for your support.	
<b>Thomas Foltz - AEP - 3,5,6</b>	
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.	
<b>Anthony Jablonski - ReliabilityFirst - 10</b>	
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

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

<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
No additional comments.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	

**End of Report**