NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Agenda
Standards Committee Conference Call

August 21, 2019 | 1:00 — 3:00 p.m. Eastern

Dial-in: 1-415-655-0002 | Access Code: 734 417 987 | Meeting Password: 082119
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Introduction and Chair's Remarks

NERC Antitrust Compliance Guidelines and Public Announcement*
NERC Participant Conduct Policy

Agenda Items

1. **Review August 21 Agenda — Approve** (A. Gallo) (1 minute)
2. **Consent Agenda** (A. Gallo) (5 minutes)
   a. July 24, 2019 Standards Committee Meeting Minutes* **— Approve**
3. **Projects Under Development — Review**
   a. Project Tracking Spreadsheet (C. Yeung) (5 minutes)
   b. Projected Posting Schedule (H. Gugel) (5 minutes)
4. **2020 Standards Committee Meeting Frequency and Locations — Discuss** (H. Gugel) (10 minutes)
5. **Standards Committee Officer Election Process* — Approve** (C. Larson) (5 minutes)
6. **Project 2019-02 BES Cyber System Information Access Management* — Authorize** (S. Kim) (15 minutes)
7. **Project 2019-03 Cyber Security Supply Chain Risks* CONFIDENTIAL — Appoint** (S. Kim) (15 minutes)
8. **Project 2018-04 Modifications to PRC-024-2* — Inform** (S. Kim) (5 minutes)
9. **Standard Authorization Request for BAL-002-3* — Reject** (T. Coleman) (10 minutes)
10. **Standards Efficiency Review – Evidence Retention Report* — Endorse** (M. Puscas) (15 minutes)
11. **Legal Update and Upcoming Standards Filings* — Review** (L. Perotti) (5 minutes)
12. **Informational Items — Enclosed**
    a. Standards Committee Expectations*
    b. 2019 Meeting Dates and Locations
    c. 2019 Standards Committee Roster

d. Highlights of Parliamentary Procedure*

13. Adjournment

*Background materials included.

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Antitrust Compliance Guidelines

I. General

It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC's antitrust compliance policy is implicated in any situation should consult NERC's General Counsel immediately.

II. Prohibited Activities

Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference calls and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.
- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

III. Activities That Are Permitted

From time to time decisions or actions of NERC (including those of its committees and subgroups) may

have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.

Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

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Public Announcements

Conference call:
Participants are reminded that this conference call is public. The access number was posted on the NERC website and widely distributed. Speakers on the call should keep in mind that the listening audience may include members of the press and representatives of various governmental authorities, in addition to the expected participation by industry stakeholders.

Minutes
Standards Committee Conference Call

July 24, 2019 | 1:00 – 3:00 p.m. Eastern

A. Gallo, chair, called to order the meeting of the Standards Committee (SC or the Committee) on July 24, at 1:00 p.m. Eastern. C. Larson called roll and determined the meeting had a quorum. The SC member attendance and proxy sheets are attached as Attachment 1.

NERC Antitrust Compliance Guidelines and Public Announcement

The Committee secretary called attention to the NERC Antitrust Compliance Guidelines and the public meeting notice and directed questions to NERC's General Counsel, Charles Berardesco.

Introduction and Chair's Remarks

A. Gallo welcomed the Committee and guests and acknowledged the people attending as proxies.

Review July 24, 2019 Agenda (agenda item 1)

The Committee approved the July 24, 2019 meeting agenda by unanimous consent.

Consent Agenda (agenda item 2a)

The Committee approved the June 26, 2019 SC meeting minutes by unanimous consent.

Projects Under Development (agenda item 3)

C. Yeung reviewed the Project Tracking Spreadsheet. He highlighted relevant information for each project. S. Kim reviewed the Projected Posting Schedule.

Project 2019-01 Modifications to TPL-007-3 (agenda item 4)

S. Kim provided an overview of Project 2019-01.

S. Rueckert moved to authorize initial posting of proposed Reliability Standard TPL-007-4 and the associated Implementation Plan for a 45-day formal comment period, with ballot pool formed in the first 30 days, and parallel initial ballots and non-binding polls on the Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs), conducted during the last 10 days of the comment period.

The Committee approved the motion with no objections or abstentions.

Project 2019-02 BES Cyber System Information Access Management (agenda item 5)

S. Kim provided an overview of Project 2019-02.

C. Yeung moved to accept the revised Project 2019-02 – BES Cyber System Information Access Management Standard Authorization Request (SAR); authorize drafting revisions to the Reliability

Standards identified in the SAR; and appoint the Project 2019-02 – BES Cyber System Information Access Management SAR Drafting Team (DT) as the Project 2019-02 Standard Drafting Team (SDT).

The Committee approved the motion with no objections or abstentions.

Standard Authorization Request for PER-003-2 (agenda item 6)
S. Kim provided an overview of the SAR for PER-003-2.

R. Shu moved to accept the Standard Authorization Request (SAR) to modify PER-003-2, developed by the Personnel Certification Governance Committee (PCGC); authorize posting the SAR for a 30-day informal comment period; and authorize for solicitation of SAR Drafting Team (DT) members.

The Committee approved the motion with no objections or abstentions.

Request for Interpretation for INT-006-4 (agenda item 7)
T. Coleman provided an overview of the Request for Interpretation.

V. Greaff moved to reject the Request for Interpretation of INT-006-4 – Evaluation of Interchange Transactions as submitted by Powerex and provide a written explanation for the rejection to the submitter within 10 business days.

The Committee approved the motion with no objections or abstentions.

Retirement of Standards Documents (agenda item 8)
L. Oelker provided an overview of the action item.

Y. Chou moved to retire the following Reliability Standards resource documents as recommended by the Standards Committee Process Subcommittee: SC Procedure – Approving a Field Test Associated with a Reliability Standard dated March 10, 2008; Guidelines for Interpretation Drafting Teams dated September 19, 2013; and SC Procedure – Processing Requests for an Interpretation dated December 9, 2012.

The Committee approved the motion with no objections or abstentions.

Legal Update (agenda item 9)
L. Perotti provided the legal update regarding recent and upcoming filings.

New Business
Supplemental material for BAL-002-3 SAR was recently received, and will likely be on August agenda. L. Oelker asked about an update regarding the Functional Model Advisory Group discussion by SC and Compliance and Certification Committee (CCC) leadership. A. Gallo and H. Gugel will share next steps. SC officer nominations and elections are upcoming. Segment 9 Special Election announcement will be sent in the next few days. There will be a joint CCC/SC meeting September 17-18 in Kansas City, MO; a rough agenda and timing was discussed.

Adjournment

A. Gallo thanked the Committee members and observers and adjourned the meeting at 1:36 p.m. Eastern.

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Attachment 1

Segment and Term	Representative	Organization	Proxy	Present (Member or Proxy)
Chair 2018-19	Andrew Gallo Director, Corporate Compliance	City of Austin dba Austin Energy		Yes
Vice Chair 2018-19	Amy Casuscelli Sr. Reliability Standards Analyst	Xcel Energy		Yes
Segment 1-2018-19	Sean Cavote NERC Compliance and Advocacy	Public Service Enterprise Group	Kyle Down	Yes
Segment 1-2019-20	Sean Bodkin NERC Compliance Policy Manager	Dominion Resources Services, Inc.	Candace Marshall	Yes
Segment 2-2018-19	Michael Puscas Compliance Manager	ISO New England, Inc.		Yes
Segment 2-2019-20	Charles Yeung Executive Director Interregional	Southwest Power Pool		Yes
Segment 3-2018-19	Todd Bennett Manager Reliability Compliance	Associated Electric Cooperative, Inc.		Yes
Segment 3-2019-20	Linn Oelker Manager – Market Compliance	LG&E and KU Services Company		Yes
Segment 4-2018-19	Chris Gowder Regulatory Compliance Manager	Florida Municipal Power Agency		Yes
Segment 4-2019-20	Barry Lawson Associate Director, Power Delivery and Reliability	National Rural Electric Cooperative Association		Yes
Segment 5-2018-19	Yee Chou Director NERC Compliance Services	American Electric Power		Yes
Segment 5-2019-20	William Winters Chief Engineer, Electrical Engineering	Con Edison Company of New York, Inc.		No

Segment and Term	Representative	Organization	Proxy	Present (Member or Proxy)
Segment 6-2018-19	Jennifer Flandermeyer Director, Federal Regulatory Policy	Evergy Companies	Douglas Webb	Yes
Segment 6-2019-20	Rebecca Moore Darrah Manager of Reliability Compliance	ACES Power		Yes
Segment 7-2018-19	Frank McElvain Senior Manager, Consulting	Siemens Power Technologies International		No
Segment 7-2019-20	Venona Greaff Senior Energy Analyst	Occidental Chemical Corporation		Yes
Segment 8-2018-19	Robert Blohm Managing Director	Keen Resources Ltd.		No
Segment 8-2019-20	David Kiguel	Independent		Yes
Segment 9-2018-19	Alexander Vedvik Senior Electrical Engineer	Public Service Commission of Wisconsin		No
Segment 9-2019-20	Vacant			N/A
Segment 10-2018-19	Guy Zito Assistant VP of Standards	Northeast Power Coordinating Council	Ruida Shu	Yes
Segment 10-2019-20	Steve Rueckert Director of Standards	WECC		Yes

Process for Election of Chair and Vice Chair

Action

Approve the following approach[1] for electing the chair and vice chair of the Standards Committee (SC) two-year terms starting January 1, 2020 and ending December 31, 2021:

1. Form a nomination committee, consisting of the three "at large" SC Executive Committee (SCEC) members (currently Sean Bodkin, Linn Oelker, and Steve Rueckert). If any of those members wish to run for chair or vice chair, he shall resign from the nominating committee. If a member(s) of the nominating committee resigns from the nominating committee, the SC chair will solicit, via an email announcement, a different SC member to serve on the nominating committee so the nominating committee has a full three member complement.
2. The nominating committee solicits nominations for chair and vice chair from August 21, 2019 to September 4, 2019, with the understanding nominations may be submitted from the floor on the day of the election pursuant to Section 5 (1) of the SC Charter. The nominating committee shall develop a questionnaire to solicit the qualifications from the nominees. Nominations may be made via another SC member or self-nominations. Any member nominated by another SC member must confirm acceptance of the nomination.
3. No later than September 6, 2019, the nominating committee shall provide the SC a list (via email) of members nominated along with their qualifications. The nominating committee's email of nominees and qualifications shall also be sent to the Chair of the Board of Trustees' Standards Committee Liaison.
4. At the September 18, 2019 SC face-to-face meeting, NERC staff will conduct elections for the chair and vice chair immediately after the consent agenda item is completed. The elections shall be accomplished as follows:
    a. The nominating committee will request nominations from the floor. If there is a nomination from the floor, the nominee shall have five minutes to orally present his or her qualifications to the SC.
    b. After (a) is completed, the Secretary of the SC shall distribute written election ballots for chair and vice chair. The members shall mark their selection on the ballot and return the ballot to the Secretary. Any SC member participating by phone shall submit his or her selections to the Secretary via email. The chair and vice chair have the right to vote in both elections for chair and vice chair.

    After the Secretary collects all ballots, the Secretary and members of the nominating committee shall leave the room and count the ballots. After the Secretary and nominating committee members agree to the vote count, they shall re-enter the room

[1] This approach was used in 2019 for election of chair and vice chair.

and announce the results. If for any reason a majority of votes was not received by a nominee for chair or vice chair, the nominee with the lowest vote count shall be removed from the nominee list and a second ballot shall be conducted, using the same process as used for the first ballot. This process of eliminating the lowest vote count from the nomination list shall continue as needed until a majority vote is obtained for chair and vice chair. (Note: the intention of the election process is to allow for confidentiality of the voters, while providing the transparency of the final vote count. Thus, the Secretary of the SC and the nominating committee shall not disclose any names of who voted for whom (which may have been ascertained from email ballots or otherwise) during or after the election.

Background

The SC Charter, dated March 20, 2019, states in Section 5 (Officers) that:

1. **Selection**
   Prior to the annual election of Committee representatives in odd numbered years, the Committee members shall select a chair and vice chair from among their membership by majority vote. The chair and vice chair cannot represent the same industry segment. Approximately 150 calendar days prior to the end of each term, a nominating committee shall solicit nominations for chair and vice chair. The nominating committee shall consult with the NERC Board of Trustees' SC liaison on the nominations received. No less than ten calendar days before the election date, the nominating committee shall provide to the Committee members the qualifications of the chair and vice chair nominees. At the time of the election, the Committee can accept nominations from the floor. Following the election, the successful candidates shall be presented to the NERC Board of Trustees for approval. The chair and vice chair, upon assuming such positions, shall cease to act as representatives of the industry segments that elected them and thereafter be responsible for acting in the best interests of the Committee as a whole.
2. **Terms**
   The term of office for the Committee chair and vice chair is two years without limit on the number of terms an officer may serve. A member of NERC staff serves as the Committee's non-voting secretary.

Project 2019-02 – BES Cyber System Information Access Management

Action

Authorize solicitation of additional nominees for the Project 2019-02 Standard Drafting Team (SDT) for a 30-day nomination period.

Background

Due to personnel and other changes, the SDT is currently comprised of seven team members. In order to replace SDT members who are no longer able to participate, SDT leadership and NERC staff have concluded that nominations for additional SDT members with CIP experience are needed to supplement the SDT.

The purpose of Project 2019-02 is to clarify the CIP requirements related to both managing access and securing BES Cyber System Information (BCSI). This project will consider revisions to Reliability Standards CIP-004 and CIP-011 and will review the Glossary of Terms Used in NERC Reliability Standards as it pertains to requirements addressing BCSI.

This project enhances BES reliability by creating increased choice, greater flexibility, higher availability, and reduced-cost options for entities to manage their BCSI. In addition, the proposed project would clarify the protections expected when utilizing third-party solutions (e.g., cloud services).

Project 2019-03 – Cyber Security Supply Chain Risks
Standard Drafting Team Recommendation

Action

Appoint members, chair, and vice chair to the standard drafting team for Project 2019-03, as recommended by NERC staff.

Background

This project will address the directives issued by FERC in Order No. 850 to modify the Supply Chain Standards. FERC directed NERC to submit modifications to address Electronic Access Control or Monitoring Systems (EACMS), specifically those systems that provide electronic access control to high and medium impact BES Cyber Systems. FERC directed NERC to submit the modified Reliability Standard including the directed revisions for approval within 24 months from the effective date of Order No. 850. In addition, NERC also recommends revising the Supply Chain Standards to address Physical Access Control Systems (PACS) that provide physical access control (excluding alarming and logging) to high and medium impact BES Cyber Systems. The modifications to address PACS do not have a regulatory deadline, but will be addressed by this project.

From July 2 – August 1, 2019, NERC solicited nominations for volunteers to serve on a SAR drafting team for modifications to the supply chain standards. NERC staff received fifteen nominations from industry professionals and recommends nine individuals for the SAR drafting team, as they have the requisite background, experience, and skills necessary for membership.

Project 2018-04 Modifications to PRC-024-2
Supplemental Standard Authorization Request

Action
Information

Background
On June 26, 2019, the Standards Committee took the following actions on Project 2018-04:

- Accepted a Supplemental Standard Authorization Request (SAR);
- Authorized posting the Supplemental SAR for a 30-day informal comment period; and
- Authorized the Project 2018-04 standard drafting team (SDT) to continue revising Reliability Standard PRC-024 based on the Supplemental SAR.

The Project Scope of the Supplemental SAR states: "*Revise the Applicability to include all relevant Registered Entities and facilities to make the standard more comprehensive, and revise the requirement language to improve the clarity and completeness of the standard.*"

Additionally, the Supplemental SAR provides that the scope of Project 2018-04 will include the setting of voltage and frequency protective relays (if applied) on generator step-up (GSU) and collector transformers.

Summary
NERC posted the Supplemental SAR for a 30-day informal comment period from June 26 – June 27, 2019. Based on the comments received, the SDT determined that no further changes to the SAR were necessary.

Revisions related to the protection on the GSU/collector transformer will be reflected in the next posted draft of the standard. Revisions to include the Transmission Owner as a PRC-024 applicable entity will not, however, be reflected in the next posted draft of the standard. In soliciting comments on the SAR, the drafting team sought specific comments on the reliability need to include Transmission Owners as PRC-024 applicable entities. Specifically, the team sought comment on potential instances where a Transmission Owner may own a GSU or collector transformer and apply the associated voltage and frequency protection.

The SDT reviewed the comments received and determined that there may not be an actual reliability issue with respect to Transmission Owner ownership of GSUs or collector transformers with applied voltage and frequency protection that would require their inclusion in the Applicability section of a continent-wide standard. Based on these considerations, the SDT plans to omit Transmission Owners as applicable entities during the next formal posting of the draft PRC-024-3 standard and explain why it has determined that Transmission Owners are not relevant Registered Entities for the purposes of this standard. The SDT will solicit specific comments on this approach to ensure that all relevant reliability considerations are being addressed.

Because Transmission Owners will not be included in the Applicability section of the standard, there is no longer a need to reopen the ballot pools for the next comment and ballot period.

No Standards Committee action is requested for Project 2018-04 at this time.

BAL-002-3 Standard Authorization Request

Action

Reject the Standard Authorization Request (SAR) for BAL-002-3, dated April 18, 2018, and provide a written explanation for the rejection to the sponsor within 10 days of the rejection decision.

Background

NERC received a SAR requesting modifications to Reliability Standard BAL-002-3 Disturbance Control Standard—Contingency Reserve for Recovery from a Balancing Contingency Event. The SAR states that the proposed change (e.g., allowing the compliance with BAL-002-2 R1 to have been reached once Interconnection Frequency has recovered) would prevent the recovery of one event to contribute to the creation of another event, High Frequency Trigger Limit – BAAL Exceedance (BAL-001-2 R2). The SAR further states that operating in such a manner as to intentionally increase Frequency when Frequency is already high is not permissible in normal operations, it should similarly be avoided and discouraged during the emergency operations.

Pursuant to Section 4.1 of the Standard Processes Manual, NERC staff recommended to the Standards Committee (SC) at its July 18, 2018 meeting to delay action on the SAR and consult with the NERC Operating Committee (OC) for further technical review. The SC agreed and the SAR was forwarded to the OC on July 19, 2018. The Resources Subcommittee (RS) of the OC considered this SAR at length at its October 2018 meeting. After reviewing the SAR, the RS recommended to the OC that the SAR should not go forward as written. The requested modification (i.e., modify Requirement Part R1.1 of this standard to include interconnection frequency assessment) would modify the original intent of standard, which is the demonstration of the deployment of reserves to recover from Reportable Balancing Contingency Events (RBCEs). Further technical rationale and explanation can be found in the attached supplemental material provided by the RS of the OC.

Standard Authorization Request (SAR)

Complete and please email this form, with attachment(s) to: sarcomm@nerc.net

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:	BAL-002-3 – Disturbance Control Standard—Contingency Reserve for Recovery from a Balancing Contingency Event		
Date Submitted:	April 18, 2018		
SAR Requester			
Name:	Gary Nolan		
Organization:	Arizona Public Service		
Telephone:	602-250-1135	Email:	Gary.Nolan@aps.com
SAR Type (Check as many as apply)			
☐ New Standard ☒ Revision to Existing Standard ☐ Add, Modify or Retire a Glossary Term ☐ Withdraw/retire an Existing Standard		☐ Imminent Action/ Confidential Issue (SPM Section 10) ☐ Variance development or revision ☐ Other (Please specify)	
Justification for this proposed standard development project (Check all that apply to help NERC prioritize development)			
☐ Regulatory Initiation ☐ Emerging Risk (Reliability Issues Steering Committee) Identified ☐ Reliability Standard Development Plan		☐ NERC Standing Committee Identified ☐ Enhanced Periodic Review Initiated ☒ Industry Stakeholder Identified	
Industry Need (What Bulk Electric System (BES) reliability benefit does the proposed project provide?):			
With the deployment of Reliability Based Control "RBC" (BAL-001-2 R2) which encourages Balancing Authorities to operate to not further degrade or escalate off-nominal Frequency, the recovery to Reportable Balancing Contingency Events can require a Balancing Authority to further contribute to off-nominal high Frequency, when Frequency has been restored prior to Reporting ACE having been recovered. It should be considered that a Responsible Entity has recovered from a Reportable Balancing Contingency Event if either 1) Reporting ACE has reached zero or Pre-Reporting Contingency Event ACE Value (BAL-002-2 R1.1) or 2) Interconnection Frequency has reached or exceeded 60 Hz and/or the Balancing Authority has entered a permissible $BAAL_{LOW}$ and $BAAL_{HIGH}$ operating range .			
Purpose or Goal (How does this proposed project provide the reliability-related benefit described above?):			
This proposed change (e.g. allowing the compliance with BAL-002-2 R1 to have been reached once Interconnection Frequency has recovered) prevents the recovery of one event to contribute to the creation of another event, High Frequency Trigger Limit – BAAL Exceedance (BAL-001-2 R2). Since			

Requested information
operating in such a manner as to intentionally increase Frequency when Frequency is already high is not permissible in normal operations, it should similarly be avoided and discouraged during the emergency operations.
Project Scope (Define the parameters of the proposed project):
Modify BAL-002-2 R1.1 to include one additional condition to account for Interconnection Frequency reaching or exceeding 60 Hz; and/or the Balancing Authority has entered a permissible $BAAL_{LOW}$ and $BAAL_{HIGH}$ operating range; or a similar reasonable measurement that demonstrate the BES has recovered from the event and has transitioned back to normal operations.
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 justification[1]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):
With the integration of Variable Energy Resources and Reliability Based Control, currently the Interconnection may restore Frequency after a Reportable Balancing Contingency Event and at times Frequency may continue trending upwards post frequency restoration. Meanwhile, if the Balancing Authority or Reserve Sharing Group has not restored its Reporting ACE, they must continue to contribute additional generation resources onto the grid in order to comply with BAL-002-2 R1.1. In the interest of reliability, it is necessary now to consider a Balancing Authority's compliance with the Disturbance Control Standard and the Balancing Authority ACE Limit (BAAL) simultaneously to prevent intentional over generation during these events. It is proposed that BAL-002-2 R1.1 be modified to allow a Balancing Authority or Reserve Sharing Group to be considered having recovered their Reporting ACE if Interconnection Frequency has reached or exceeded 60 Hz and/or has entered a permissible $BAAL_{LOW}$ and $BAAL_{HIGH}$ operating range.
Cost Impact Assessment, if known (Provide a paragraph describing the potential cost impacts associated with the proposed project):
There would be minimal to no cost impact as the results of this modification would merely change how Reportable Events are determined to be compliant with the requirement.
Please describe any unique characteristics of the BES facilities that may be impacted by this proposed standard development project (*e.g*. Dispersed Generation Resources):
None.
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):
Balancing Authorities and Reserve Sharing Groups

[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
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.
No.
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)?
None.
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.

No.

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.	
☒	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.
☒	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.
☐	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.
☐	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☐	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☐	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☐	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☐	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

[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.

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
e.g. NPCC	

For Use by NERC Only

SAR Status Tracking (Check off as appropriate)	
☐ Draft SAR reviewed by NERC staff ☐ Draft SAR presented to SC for acceptance ☐ Draft SAR approved for posting by the SC	☐ Final SAR endorsed by the SC ☐ SAR assigned a Standards Project by NERC ☐ 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

Recommendation for Disposition of the Arizona Public Service Standard Authorization Request

Background

NERC received a Standard Authorization Request (SAR) from Arizona Public Service to modify Reliability Standard BAL-002-2(i) Disturbance Control Standard—Contingency Reserve for Recovery from a Balancing Contingency Event. The SAR states the proposed change (allowing compliance with proposed BAL-002-3 R1 once Interconnection Frequency has recovered) would prevent the recovery of one event to create another event, High Frequency Trigger Limit – BAAL exceedance (BAL-001-2 R2). The SAR further states that operating in such a manner as to intentionally increase Frequency when Frequency is already high should be avoided and discouraged during emergency operations.

Pursuant to Section 4.1 of the Standard Processes Manual, NERC staff recommended to the Standards Committee (SC) that the SAR be sent to the NERC Operating Committee (OC) for further technical review. The SC agreed and the SAR was forwarded to the OC on July 19, 2018. The OC reviewed the request and forwarded the SAR to the NERC Resources Subcommittee (RS) for review.

Recommendation

The RS considered this SAR at length at its October 2018 meeting. The SAR author (Gary Nolan, Arizona Public Service) was invited to, and did present his position during the agenda item. He also participated in much of the discussion subsequent to his presentation. The RS statement (absent the dissenting opinion) was the motion as voted. The motion passed 17-1, no abstentions. Per the RS charter, the opportunity to include a dissenting opinion was offered, and that opinion (unedited) was included in the report back to the OC.

The RS brought their final recommendation to the OC at the March 5-6, 2019 meeting and the OC unanimously approved the following response:

> The Resources Subcommittee opinion on the soundness of the request is that the SAR should not go forward as written. The recommended modification of R1.1 of this standard to include interconnection frequency assessment will modify the original intent of standard, which is the demonstration of the deployment of reserves to recover from Reportable Balancing Contingency Events (RBCEs).
>
> However, the concerns raised in this SAR can be addressed by other means.
>
> Dissenting Opinion on BAL-002: “The SAR request has technical merit based on the fact that it is contrary to reliability for the rules to incent resources to continue to inject power into the interconnection when the frequency is already high and rising. There are many complicating issues and many potential solutions that should be presented to the industry for discussion—this is what the SAR process does.”

Technical Rationale
For reference, the key proposal from the SAR is (last paragraph of the Detailed Description):

> It is proposed that BAL-002-2 R1.1 be modified to allow a Balancing Authority or Reserve Sharing Group to be considered having recovered their Reporting ACE if Interconnection Frequency has reached or exceeded 60 Hz and/or has entered a permissible $BAAL_{LOW}$ and $BAAL_{HIGH}$ operating range.

The proposal is in direct contradiction to the intent of BAL-002-3. As written, it proposes the BA/RSG "to be considered having recovered …" without any actual recovery of the BA/RSG ACE. The purpose of BAL-002-3 is "To ensure the Balancing Authority or Reserve Sharing Group balances resources and demand and returns the Balancing Authority's or Reserve Sharing Group's Area Control Error to defined values (subject to applicable limits) following a Reportable Balancing Contingency Event." There are several conditions in the standard (see R1.3 and following) which exempt a BA/RSG from compliance, but the expectation is still to "deploy Contingency Reserve, within system constraints, to respond to all Reportable Balancing Contingency Events…" and to have "provided … an ACE recovery plan, including target recovery time …". The proposal does not attempt to balance resources and demand or return ACE to defined values; it contradicts the purpose of the standard.

BAL-002 requires that the BA/RSG return ACE to the lower of pre-disturbance ACE or zero; in either case, the BA/RSG would not be injecting MWs into the interconnection during high frequency from an ACE perspective. Even when ACE is zero, the ACE would be drawing in MWs (due to the Frequency Bias component) so as to pull high frequency back towards Scheduled Frequency. In any case, frequency above or below Scheduled Frequency, the BA needs to demonstrate deployment of reserves to recover ACE. The reason why recovery is necessary is not just to be ready for the BA's next contingency, but for any such contingency on the Interconnection. Frequency can swing in the other direction at any time. If the BA has not deployed its reserves as required, it may not be positioned to address its balance in a manner that would not contribute to the severity of the next event on the system.

The proposal presumes that injecting more power or shedding load are the only solutions, but those are not necessarily the only means to recover ACE. One such way to accomplish this is to request emergency assistance from other BAs with a large positive ACE. Given the scenario described, the majority (possibly even the contingent BA prior to the loss) of BAs in the interconnection would have positive ACEs (only way frequency can be above scheduled). The schedule transfer does not add power to the interconnection, but both the contingent and other BAs have changed their respective ACEs to more closely balance resources and demand.

Other Means to Address
The dissenting opinion notes "many complicating issues and many potential solutions" and the RS majority recognized this in pointing out that there are other means to address the concern. Although the SAR process is one way, it is not the most efficient in this

case. Compliance guidance, reliability guidelines, and/or reference documents can be developed to instruct BAs/RSGs on how this should be addressed, including modifications to the Operating Process and Operating Plan (see R2) to better prepare for such situations and manage reserves so that injection of power or firm load shed is not the default response. An effort to develop any of these documents, in concert with the appropriate NERC technical committees, could be completed more quickly than the entire standard revision process. Such an effort will provide different solution(s) than proposed but will align with and not circumvent the requirements in the standard.

Standards Efficiency Review
Evidence Retention

Action
Endorse the Evidence Retention report produced by the Standard Efficiency Review (SER) phase 2 team, in advance of an informal industry comment period.

Background
The SER Evidence Retention team continued the work completed in 2014 by the Reliability Assurance Initiative (RAI) Evidence Retention team to avoid unnecessary duplication of effort and to validate the recommendations by that project team. The RAI Evidence Retention team looked at issues, and published a white-paper with recommendations related to compliance data retention and sampling.

The objectives of the SER Evidence Retention team were:

1. Review and analyze the RAI Evidence Retention efforts retaining recommendations that are still appropriate and valid.
2. Inventory and analyze the Evidence Retention schemes in currently enforceable standards to determine impact on reliability and high risks.
3. Build on the work of the RAI Evidence Retention team and document a new and much simplified set of data retention guidelines.
4. Recommend and justify proposed data/evidence retention solutions for each NERC standard.
5. Determine, in concert with the SER Advisory Committee, NERC CCC, and NERC staff how to implement the recommendations of the Evidence Retention Team and the appropriate committee to oversee the successful implementation of the recommendations.

Summary
The SER Evidence Retention team discovered over 50 different evidence retention schemes strewn throughout various standards and requirements. Approximately one-third (32%) of the operations and planning (O&P) and CIP standards requirements have a High Violation Risk Factor (VRF) level. These requirements have the highest VRFs and therefore evidence retention schemes for these requirements are important.

The evidence retention team simplified the existing evidence retention schemes to a manageable set of eight evidence retention schemes to cover all NERC O&P and CIP Standards and requirements. These include:

1. Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
2. Most recent full testing records with evidence of previous testing intervals.
3. Rolling 3-month data retention period for voice and audio recordings.

4. Rolling 6-month data retention period for high volume data.
5. Rolling 12 calendar month data retention period.
6. Rolling 30-day data retention period.
7. Rolling 36-month data retention period.
8. Rolling 48-month data retention period.

NERC Standard Efficiency Review (SER) Phase 2 Evidence Retention Team's Recommended Evidence Retention Schemes for NERC Standards.

Item XX SER Evidence Retention Report

Analysis and Recommendations

June 24, 2019

Puscas, Michael, ISO-NE
Zaragoza, Tino, IID
Bilke, Tery, MISO

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Executive Summary

This document analyzes the evidence or data retention sections of NERC CIP and O&P Standards as part of the NERC Standards Efficiency Review (SER) Phase 2 Project.[1]

Executive Summary

The Rules of Procedure (ROP) of the North American Electric Reliability Corporation (NERC), dated July 19, 2018, indicates:

> **"All Bulk Power System owners, operators, and users shall provide to NERC and the applicable Regional Entity such information as is necessary to monitor compliance with the Reliability Standards. NERC and the applicable Regional Entity will define the data retention and reporting requirements in the Reliability Standards and compliance reporting procedures."**[2]

The ROP indicates how long evidence should be retained by Compliance Enforcement Authorities (CEA), but the amount of time evidence must be retained by registered entities gets more complicated. There are over 50 evidence retention schemes in the existing set of NERC Operation and Planning (O&P) and CIP Standards (see Appendix A). Many evidence retention schemes apply to only one requirement in one Standard. Other evidence retention schemes are overly burdensome, especially when the risk to reliability is very low.

This is not a new or unknown problem. NERC and an associated study team produced a "Data Retention White Paper", dated September 12, 2014[3]. This document described a research and analysis project that started in 2013 when the Electric Reliability Organization (ERO) Enterprise assembled an advisory group to provide input and advice for modification of existing NERC Reliability Standard data retention requirements. The data retention team was comprised of representatives from NERC and the NERC Compliance and Certification Committee (CCC).

The 2014 data retention study team began reviewing and analyzing current data retention requirements and soliciting industry feedback on current data retention requirements. Their subsequent white paper presented their findings and made recommendations for changes to current guidance documents, future NERC Reliability Standard development, and auditing processes.

The white paper's analysis explored possible options for establishing uniform tools and applications and standardizing evidence retention requirements across the ERO Enterprise to promote consistency in demonstrating compliance. These options were intended to provide improvements that support reliability and ensure that resources allocated by the ERO Enterprise and registered entities are commensurate with the potential risks of noncompliance to reliability.

The 2014 white paper recommended that NERC modify data retention requirements so that the burden of producing records necessary to demonstrate compliance is commensurate with the risk to the reliability of the BPS. It further recommended including a consistent data retention period of either a rolling 6-months for high-volume data[4], or a 4-year retention period for all other data, with two specific exceptions:

1. Standards requiring a current program or procedure, which would be limited to the currently effective version with a revision history specifying changes and dates of review; and

[1] Author: Dr. Michael Puscas, Ed.D., Compliance Manager, ISO-NE. Reviewer: Tino Zaragoza, Reliability Compliance Officer, Imperial Irrigation District

[2] NERC Rules of Procedure Link, see pg. 22, #3; pg. 27, #3; and Section 9.0, pg. 29

[3] Data Retention White Paper - 2014

[4] "High-volume data," as used herein, refers to electronic data sets and files, paper documents, or audio recordings with sizes making it cost- or space-prohibitive to gather, maintain, track, and provide the data to auditors within a reasonable period. Examples of high-volume data could be access logs, video surveillance tapes, or voice and telephone recordings.

2. Standards requiring testing at intervals, which would require the retention of the last full testing record and evidence of recurrence.

The white paper recommended simplifying data requests by including as a part of the ERO Compliance Auditor Manual and Handbook a recommendation that, regardless of the data retention requirements of the Standard and time between Compliance Audits, auditors focus sampling to the most recent two years. This recommended method of sampling would be more efficient and less burdensome for registered entities and the ERO Enterprise. By instituting the recommended method of sampling, the ERO Enterprise and registered entities could reallocate resources to areas of greater risk to the reliability of the BPS.

The recommendations contained in the 2014 white paper were presented to NERC but never carried out. Data and evidence retention schemes remain overly complicated and burdensome. The Standards Efficiency Review (SER) Phase 2 team recognized that data and evidence retention issues remain and require attention. The SER Phase 2 team continued the work of the 2014 team.

The evidence retention team once again analyzed the current evidence retention schemes in the current set of O&P and CIP mandatory standards. They discovered over 50 different evidence retention schemes (see Appendix A). They sorted the list of requirements by VRF (see Appendix B) and they prepared a draft set of eight new and simplified evidence retention schemes. The evidence retention team proposed a new evidence retention scheme for each NERC Standard requirement based on the risk to the BES (see Appendix D).

The NERC Standards became mandatory on June 18, 2007. The electric industry has responded to these Standards by establishing new compliance organizations or bolstering existing compliance organizations. Most registered entities have been audited multiples times since 2007. These entities have been steadily improving and have clearly established a culture of compliance. It is no longer necessary to keep compliance evidence for extended periods of time to prove compliance.

Registered entities self-report non-compliance events when they occur. They have in effect become a self-policing organization. The remainder of this report presents eight new and simplified data retention schemes along with their justification. It also recommends new data retention schemes for high VRF requirements. More information is contained in the following sections:

Overview - SER Phase 2 Overview

This portion of the evidence retention report summarizes the SER Phase 2 Project.

Overall SER Project Scope

Evaluate NERC Reliability Standards using a risk-based approach to identify potential efficiencies through retirement or modification of Reliability Standard Requirements. Considering that many Reliability Standards have been mandatory and enforceable for 10+ years in North America, this project seeks to identify potential candidate requirements that are not essential for reliability, could be simplified or consolidated, and could thereby reduce regulatory obligations and/or compliance burden.[5]

SER Phase 2: Evidence Retention Project Scope

Evaluate NERC Reliability Standards (O&P and CIP), as informed by implementation experiences and compliance practices, to develop and recommend standards-based solutions intended to reduce inefficiencies and unnecessary regulatory burdens for the purpose of supporting continued safe, secure and reliable operations. The Phase Two Team will focus on the following activities:

- Identify areas of inefficiency in the current framework of Reliability Standards
- Collaborate and communicate with industry to ensure all areas of inefficiency and potential solutions are considered
- Potential solutions may include, but are not limited to the following:
    - SARs to remove inefficiencies in the Reliability Standards
    - Policy recommendations to appropriate ERO staff or committee[6]

SER Phase 2 Efficiency Concepts

The SER Phase 2 team identified six efficiency concepts including:

1. Evidence Retention Overhaul
2. Prototype Standard
3. Move Requirements to Guidance
4. Consolidate and Simplify Training Requirements
5. Consolidate Information/Data Exchange Requirements
6. Relocate Competency-based Requirements to Certification Program/CMEP Controls Review

The SER Phase 2 team surveyed the industry through a questionnaire that concluded on March 22, 2019. The highest rated efficiency concept was Evidence Retention. The results were presented to the SER Phase 2 Advisory Group. NERC, in concert with the Advisory Group, examined industry comments both for and against the concept (see below). Together they determined that the Evidence Retention concept would become the first priority for the SER Phase 2 team since work was completed in 2014 and the SER team could build on that work.

[5] https://www.nerc.com/pa/Stand/Pages/Standards-Efficiency-Review.aspx
[6] Ibid

Summary of the 2014 Evidence Retention Project

Analysis of 2014 Evidence Retention White Paper

The SER Phase 2 Evidence Retention team began by reviewing and analyzing the work of the 2014 project team (see Objectives) to avoid unnecessary duplication of effort, and to validate the recommendations by that project team.

Tasks Performed by the 2014 Evidence Retention Team

The data retention team began reviewing and analyzing the data retention requirements in the then currently-enforceable and NERC Board of Trustee approved NERC Reliability Standards, the NERC Rules of Procedure, and guidelines for auditing included in the Generally Accepted Government Auditing Standards (GAGAS). Finally, the data retention team reviewed the ERO Enterprise Compliance Auditor Manual and Handbook (Auditor Manual). They completed the following tasks:

- Identified and evaluated data retention requirements in the then current NERC Standards;
- Recommended improvements to reduce the data-maintenance burdens on registered entities;
- Provided guidance regarding the levels of data necessary to support proof of compliance;
- Recommended revised data retention requirements to be commensurate with risk to the BPS; and
- Recommended methods of sampling that are more efficient and less burdensome for registered entities.

Purpose of the 2014 White Paper

The 2014 Evidence Retention study team created a "White Paper" to present their findings. The twofold purpose of the evidence retention white paper was to provide rationale for proposed revisions to:

1. The data retention requirements in NERC Reliability Standards; and
2. The methodology of Compliance Audit and Spot Check data sampling requests.

The goal was to minimize the Compliance Enforcement Authority (CEA) and registered entity resources used for gathering, storing, and producing data while maintaining reasonable assurance of compliance with the effective NERC Reliability Standards and reliability of the BPS.

Identified Evidence Retention Problems, Issues and Concerns

The 2014 Evidence Retention team examined the data retention requirements of each active NERC Standard[7]. The 2014 team identified a series of data retention problems, for example:

- There is no current consistent data retention period prescribed by FERC (the Commission) or NERC applicable to all Reliability Standards. For example:
    - BAL-001-0.1a requires a one-year retention period for real-time operating data
    - VAR-002-2b requires two years of real-time operating data
    - COM-001-1.1 requires a 90-day retention of operator logs.
    - IRO-006-5, if the records are audio recordings, they have a 90-day retention but if documented transcripts then it should be 12 months
    - MOD-028-2 requires retaining data for 12 months for seven of its requirements, but either 14, 30, or 60 days for two other requirements

[7] **NOTE**: Many NERC Standards that were active in 2014 are now either inactive or replaced by newer versions.

- There are different requirements for the length of time registered entities must keep identical types of data for certain Reliability Standards.
- The ERO Enterprise has considerable flexibility to determine and identify how long a registered entity must retain evidence to show compliance.
- Current evidence retention policies aren't related to high reliability risk areas and therefore places undue administrative burden on registered entities.
- The NERC Rules of Procedure (ROP)[8] do not include specific evidence retention guidance for registered entities. The Rules of Procedure leave the assignment of data retention and reporting requirements to NERC or the Regional Entity.
- Industry responses voiced a frustration and opinion that the focus of auditor data requests and NERC Reliability Standards data retention requirements are on proving compliance and not enhancing reliability. They voiced a desire to focus on current practices and policies instead of historical documents, which may not have been relevant for several years.

Recommendations from the 2014 Evidence Retention Study Team

The 2014 Evidence Retention team documented a series of recommendations:

- NERC should modify data retention requirements in Standards so that the burden of producing records necessary to demonstrate compliance is commensurate with the impact to the reliability of the BPS.
- All new Standards receive a default four-year data retention period. This four-year period will exclude the following:
    - Voice and audio recordings, which will continue to be a 90-day rolling retention period.
    - High-volume data, which would be restricted to a six-month rolling retention period.
    - Standards requiring a current program or procedure, which would restrict to the currently effective version with a revision history specifying changes and dates of review.
    - Standards requiring testing intervals (e.g. PRC-005), which would restrict to the most recent full testing records with evidence of previous testing intervals.
- If current Reliability Standards are silent as to a data retention period, then the four-year or six-month data retention period should be used.
- Data sampling by CEAs should be focused on the most recent two years, unless the data sample would be statistically too small or irregularities are identified in the initial samples.

[8] https://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC_ROP_Effective_20180719.pdf

2019 SER Phase 2 Evidence Retention Project Overview

Introduction to SER Phase 2 Evidence Retention Project

This project evaluates and continues the work completed by the 2014 Evidence Retention team. NERC conducted a survey to gather industry comments related to six efficiency concepts. Analysis of industry comments indicated that the Evidence Retention concept was the highest rated SER Phase 2 concept. NERC and the SER Advisory Group selected the Evidence Retention concept as the first SER Phase 2 initiative. This will be verified through meetings with the CCC on June 18th, 2019 and with the NERC Standards Committee (SC) on June 26th, 2019.

SER Phase 2 Evidence Retention Project Team

1. Michael Puscas, Evidence Retention Team Lead
2. Tino Zaragoza, Evidence Retention Team Co-Lead
3. Chris Larson, NERC SER Phase 2 Project Lead
4. Amy Casuscelli, SC Vice-Chair
5. Ed Kichline
6. John Allen, SER Phase 2 Project Chair
7. Ryan Mauldin
8. Kiel Lyons
9. Steve Noess
10. Jennifer Flandermeyer, (NERC CCC Chair)
11. Richard Burt (CMG Rep)
12. Terry Bilke (MISO)

Evidence Retention Project Objectives

The SER Phase 2 Evidence Retention team will:

Objective	Status
1. Review and analyze the 2014 Evidence Retention efforts retaining recommendations that are still appropriate and valid.	1st Draft Complete
2. Inventory and analyze the Evidence Retention schemes in currently enforceable Standards to determine impact on reliability and high risks.	1st Draft Complete
3. Build on the work of the 2014 Evidence Retention team and document a new and much simplified set of data retention guidelines.	1st Draft Complete
4. Recommend and justify proposed data/evidence retention solutions for each NERC Standard.	1st Draft Complete
5. Determine, in concert with the SER Advisory Committee, NERC CCC, and NERC Management how to implement the recommendations of the Evidence Retention Team and the appropriate committee to oversee the successful implementation of the recommendations.	In progress

Evidence Retention Project Scope

The Evidence Retention efficiency project includes:

- Analysis of current mandatory O&P and CIP Standards.
- Analysis of the risk levels of each Standard requirement.
- Analysis of Data and Evidence Retention sections of the NERC Standards.

Evidence Retention Out of Scope

The Evidence Retention efficiency project does not include:

- O&P and CIP Standards subject to future enforcement.
- Auditor compliance evidence sampling methodologies.
- Specific evidence retention implementation plans and strategies.
- Changes to any portion of a given NERC Standard.

Evidence Retention Project Assumptions

The Evidence Retention efficiency project assumes:

- The recommendations of the SER Phase 2 team's recommendations will be assigned to an owner who will assure that the evidence retention recommendations are fully implemented.
- The committee or owner will establish an implementation strategy and timeline for the new evidence retention schemes.

Evidence Retention Questions

The Evidence Retention team considered the following questions:

Questions	Answers
What is the purpose and value of evidence retention?	Data and evidence is important because it provides information to support decision-making by auditors and is mandatory to meet regulatory requirements.
How are measures related to evidence retention? Should they be considered as part of this effort? Is it beneficial to have measures in the Standard?	Standard requirement measures often indicate what the specific evidence should look like. The data or evidence retention portion of the Standard explains how long to keep that evidence. The two are somewhat related. Measures describe the tangible artifacts, while the data/evidence retention rules are time-based.
Are there potential benefits if the measures, especially for high Violation Risk Factor requirements, were written differently?	Measures in NERC Standards are already sufficiently detailed to indicate what information needs to be collected. Rewriting them by adding retention information would only create more confusion.
Can we find opportunities to revise the measure language to reduce the burden of collecting, storing, and producing records?	Going forward, as new Standards are developed or existing Standards are revised, it is important to assure that the measures are clearly and specifically written without reference to how long to keep records.
Is it even practical to collect the type of evidence mentioned in the requirements and/or measures if the reliability risk is low?	If the reliability risk is low or inconsequential then data retention length should be as short as possible.

Questions	Answers
How do we assure people that they don't need to continue to keep evidence forever?	Once the new evidence retention schemes are adopted, Standards are updated, and CEAs are trained, then everyone will be held responsible only for the specific time period mentioned in the Standards.
How do we overcome the fear that entities will be asked for evidence beyond what is stated in the Standard?	After training CEAs must understand that they cannot ask for evidence or data beyond what is specifically prescribed in the Standard requirement.
How do we make sure that we don't go through an SER-Type activity in five years? We need to make sure this is a one-and-done mentality.	The NERC Standards are always in a state of continuous process improvement. There will always be some changes occurring in the NERC Standards, but NERC expects that the SER process if properly implemented will preclude another SER effort in five or more years.
What is the difference between measures and evidence retention? Measures provide descriptions of "what" evidence should be collected. The evidence retention section of the Standard describes how long to keep the collected evidence.	This is detailed in the analytical section of this report starting on page 18.

Benefits of Revised Data Retention Rules

The advantages of a simplified set of data retention rules include:

- Simplified evidence retention schemes reduce the compliance costs associated with low risk activity; registered entities don't need to spend resources on low risk activities, especially if evidence retention is not required.
- Evidence retention takes up space on servers, which could be used for other purposes. Excessive data retention increases costs to manage, backup, compile, and review data for compliance monitoring and enforcement activities.
- Simplified evidence retention schemes offer innovative approaches that mitigate high risks. Ultimately evidence retention is tied logically to risk mitigation, which replaces arbitrary evidence retention schedules.
- Simplified evidence retention schemes will enable entities to align their internal retention policies with the NERC requirements.
- Examination of current data/evidence retention schemes incentivizes creative thinking and best practices. The envisioned future state is a simplified and flexible set of data retention rules that are in line with risk and reliability. The rules will address changing technology and emerging threats.
- Simplified rules provide long-term stability to the Reliability Standards and it provides clear guidance to SDT's, which reduces the overall Standard development time.

Challenges

Potential challenges include:

- Proposed evidence retention rules may require changes to the NERC Rules of Procedure depending on how the Evidence Retention team's recommendations are addressed.

- The ERO Compliance Auditor Manual and Handbook may also need to be updated. After update all CEA auditors must be trained in the new evidence retention and data sampling rules. This assures that all regions are auditing and sampling in a consistent fashion.
- The proposed evidence retention schemes, the implementation process and timeline will require further study and verification by NERC and the committee or task force assigned to implement the recommendations of the SER Phase 2 evidence retention team.

Project Timeline

Date	Event	Status
5/8/19	Draft Evidence Retention Report Due	Complete
5/13/19	Working Meeting	Complete
5/20/19	Meet with Chris Larson and John Allen	Complete
6/11/19	SER Advisory Committee Meeting in Atlanta, GA	Complete
6/15/19	Second draft of the Evidence Retention Report Due	Complete
6/18/19	John Allen meets with NERC CCC for status update	Scheduled
6/26/19	Meet with NERC SC	Scheduled
6/30/19	Third draft of the Evidence Retention Report Due	Scheduled
7/15/19	Determine who “owns” the Evidence Retention recommendations and implementation process	TBD
TBD	Industry Feedback, Next Steps (Webinar? White Paper? SC Committee?)	TBD
TBD	Final Draft of the Evidence Retention Report Due	TBD

Evidence Retention Concept – Industry Comments

This section presents a summary of industry comments for and against the Evidence Retention concept.

Industry Comments in Support of the Evidence Retention Concept

1. Today's practice relies too much on the historical evidence which promulgates the burdensome practices of retaining data for indefinite time periods. There needs to be a revolution in the current thinking of having evidence to document compliance with each and every requirement, to only retain the necessary evidence to demonstrate the reliability intent of a standard. For example, demonstrating reliability, not merely having the record of compliance. Our concern is there have been exceptions to the standard retention periods which should be noted and understood. The Event Analysis (EA) program and the Compliance Monitoring and Enforcement Program (CMEP) activities can lengthen the standard data retention timeframes. For EA Category 3 events and higher, the regions can issue a data hold for the times around that event, and the data must be retained through the data hold period. While the entities involved in the event can always self-report possible non-compliance that occurred during the event, audit staff can also perform spot checks after the event concludes and/or examine the event on the next audit cycle. Thus, the standard retention window may have expired before the EA completes and/or the next audit occurs. Another exception to clarify is how to address the back-log in processing violations from NERC and the Regional Entity (RE) side. For instance, if an entity has a number of violations over multiple audits, the standard retention window from the first audit may expire before open enforcement actions have concluded.
2. We believe that registered entities are currently holding ALL evidence since 2007 because of the risk that an auditor can ask for any level of evidence regardless of retention time frames. Without a solid evidence retention policy approved by FERC, registered entities will continue their burdensome practices of keeping everything. As the Phase 2 Team notes, "evidence retention does not reduce risk or impact the reliability of the electric system". It is valuable to show compliance over a period of time; a corollary is that there is no increased reliability risk if an

auditor does not look at evidence for some portion of an audit period. Currently, evidence review is predicated on the retention period stated in each standard, and an auditor can request evidence beyond the stated retention period if that period is shorter than the last audit. Instead, auditors should limit themselves to the evidence retention period and move on. We recommend that evidence retention should be the current record, e.g. for periodic tests, the most recent test results. We understand that auditors will not be able to see arbitrary recurring dates, but this should not matter. The intent is to verify that maintenance was accomplished (for example) within the specific period. Auditors should focus on issues that could impact future activities. This is a paradigm shift for our industry and we need to look forward and not into the past. This Concept greatly helps all entities by requiring limits on what past evidence auditors can review. In addition, if data collection is not helpful from a reliability perspective, it should not be performed in the first place. Reducing the amount of data collected would go a long way toward alleviating the burden of data retention.

3. The plethora of current evidence retention schemes has led to many companies defaulting to the worst case which burdens servers and the associated data management/backup policies. A handful of evidence retention schemes, clearly linked to the risk to the reliability of the Bulk Power System, should be sufficient. Although this may require modifications to current standards and a possible revision to the NERC Rules of Procedure, this effort has significant value in making our compliance record preservations clear and meaningful.
4. We feel that this concept is not about retention of evidence but rather how much evidence should be kept for lower risk standards. We feel that it should be more specific in that the effort does not primarily concern itself with retention but rather having the "right size" of evidence to fit the risk of the requirements that are being monitored.
5. Data retention today is inconsistent and often subjective.
6. This concept will only be "worth the effort" if the ERO's compliance monitoring process recognizes and adheres to the data retention periods when conducting audits.
7. There should be more consistency with among standards in regards to evidence retention. For example, create an overall guideline that says recordings, logs, etc., of things that are done every day should always be a rolling 90 days or the last 90 days. Sometimes it's written differently among the various standards. Other evidence should be current year plus 1 previous year unless the entity has had a violation since its last audit; then it should be for the audit period. Then there is no guessing as to what needs to be kept.
8. There may be potential improvements in efficiency with this concept, but only if it reduces the need for the industry to routinely collect unnecessary data. We do not see a significant improvement in efficiency with only reducing the retention periods.
9. As the reliability risk decreases, the burden to retain detailed historical documentation should be relieved when possible. In addition, audit scope should respect the retention period. Small low-risk entity audit periods being extended out to nine years accentuates this need to restrict audit scope. Where increased risk is perceived by the Regional Entity, spot checks can be utilized to compensate for short retention periods.
10. Simplifying the evidence retention policy could potentially reduce costs, and shift focus away from administrative retention policies and more towards higher risk priorities.
11. As long as an entity must demonstrate compliance further back in time than the Data Retention for the requirement, it will not have a significant impact upon efficiency. This is because, unless there is another way of demonstrating compliance, entities will still need to keep the data past the Data Retention, as necessary, to demonstrate compliance in the time period (prior to the Data Retention). We suggest that the audit should only focus on the most current year for these types of requirements. Until this occurs, we will still need to keep all data based on inconsistencies between the data retention period and the audit period for each requirement (i.e. only keeping data for 1 year, yet for audit purposes; it must be necessary to access 3 years' worth of data).

12. Auditor demand for "alternate forms of compliance documentation" for time periods outside the retention requirement for the entire audit period must discontinue. It should be clearly understood that demonstration of compliance within the retention window demonstrates a culture of reliability. Should an entity pose a greater risk to the BES, spot checks can be implemented between scheduled audit periods. How the specific evaluation of data retention and evidence requirements for new technology needs to be detailed before the effort moves forward. Additionally, the current new technologies being considered for evaluation should be better detailed. One of the disadvantages listed is industry cost to implement. We agree that the there is an implementation cost, that cost is outweighed by the current cost of unneeded data retention and evidence requirements. Therefore, on a net basis, there is no cost disadvantage to the concept. The potential for the concept to require significant changes to the NERC Rules of Procedure (ROP) should be better detailed.
13. This SER team identified 45 evidence retention schemes, as well as inconsistency of application. Reducing the data retention schemes to less than ten (10) should provide industry with a consistent methodology and interpretation. Assigning data retention appropriate to risk factors will allow entities to focus their efforts on reliability of the BES and not on paperwork. Another element to consider is to ensure that data retention activities are not mandated to occur while mitigating activities are still occurring after an event.
14. Many standards require retaining evidence since the last audit. However, for certain functions that can be 6 years or even longer based on the risk based approach to auditing. There should be a maximum duration for which data must be retained.
15. For this to be beneficial, it needs to be clear and consistent, both from one standard to the next, as well as universal application across the ERO. Currently, the shorter retention periods listed in the standards are of no benefit as evidence is generally retained indefinitely. In some cases, this adds a very minor compliance burden of providing evidence that evidence was retained for the specified period.
16. We recommend the evidence retention overhaul consider the two items outlined below. We support reviewing the referenced White Paper recommendations to determine if they are still appropriate, since it is nearly 5 years old, and suggest the CCC consider reconstituting the data retention team to reevaluate the findings and recommendations. This will allow any efforts on the initiative to be informed by updated information prior to moving forward with this activity. Finally, we suggest that the CCC may be a more appropriate committee to address evidence retention. Evidence retention is a key element of NERC's Compliance Monitoring and Enforcement Program ("CMEP") and a Standard Drafting Team ("SDT") may not have the required range of view to appropriately assess how to broadly address evidence retention. However, the mission of the CCC is "to engage with, support, and advise" NERC's CMEP.
17. We recommend the evidence retention overhaul consider the two items outlined below. EEI members support reviewing the referenced White Paper recommendations to determine if they are still appropriate, since it is nearly 5 years old, and suggest that the CCC consider reconstituting the data retention team to reevaluate the findings and recommendations which will allow any efforts on this initiative to be informed by updated information. Finally, EEI members suggest that the CCC may be a more appropriate committee to address evidence retention. Evidence retention is a key element of NERC's Compliance Monitoring and Enforcement Program ("CMEP") and a Standard Drafting Team ("SDT") may not have the required range of view to appropriately assess how to broadly address evidence retention. However, the mission of the CCC is "to engage with, support, and advise" NERC's CMEP.
18. Many Entities maintain all past evidence since there is a possibility of being asked of evidence from the past. With about 47 different evidence retention schemes it is easier to maintain all evidence. Even when there is a stated shorter retention period, there are statements such as: "… or 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" (within CIP-002-5.1a). Standards evidence is backward looking, and we agree that is used to assure past compliance but our Standards need to be forward looking.

Industry Comments NOT Supporting the Evidence Retention Concept

1. We note that regardless of a minimal data retention period (1 or 2 years), the RE has the authority to require compliance evidence up to and including the prior audit period.
2. We do not believe the work required to consider the vast amount of information and requirements surrounding evidence retention would result in value that exceeds the amount of work.
3. The evidence retention mechanisms are in place for specific reasons and have been tailored to audit cycles and the requirements themselves based on specific needs. PSEG agrees with the disadvantages identified. Although there may be some efficiency benefit it may not be commensurate with the burden of changes stakeholders and auditors would have to make to existing documentation.
4. We are unsure if this will result in a significant impact. Considering we have our own internal evidence retention policies, we will always err on the longest duration of retention. However, we do support a review and potential update of the referenced White Paper recommendations.
5. We do not believe that the effort will result in significant efficiency.

Analysis of Existing Evidence Retention Schemes

Introduction: Analysis of Existing Evidence Retention Schemes

Many Standards studied in 2014 are either inactive or were replaced with newer versions of the Standard. Therefore, the SER Phase 2 evidence retention team analyzed all mandatory and enforceable Operations and Planning (O&P) and Critical Infrastructure Protection (CIP) Standards focusing attention on the data retention requirements of each Standard and each requirement, which included the following Standards.

BAL	COM	CIP	EOP	FAC	INT	IRO
BAL-001-2 BAL-002-3 BAL-003-1.1 BAL-005-1	COM-001-3 COM-002-4	CIP-002-5.1a CIP-003-6 CIP-004-6 CIP-005-5 CIP-006-6 CIP-007-6 CIP-008-5 CIP-009-6 CIP-010-2 CIP-011-2 CIP-014-2	EOP-004-4 EOP-005-3 EOP-006-3 EOP-008-2 EOP-010-1 EOP-011-1	FAC-001-3 FAC-002-2 FAC-003-4 FAC-008-3 FAC-010-3 FAC-011-3 FAC-013-2 FAC-014-2	INT-004-3.1 INT-006-4 INT-009-2.1 INT-010-2.1	IRO-001-4 IRO-002-5 IRO-006-5 IRO-008-2 IRO-009-2 IRO-010-2 IRO-014-2 IRO-017-1 IRO-018-1(ii)

MOD	NUC	PER	PRC	TOP	TPL	VAR
MOD-001-1a MOD-004-1 MOD-008-1 MOD-020-0 MOD-025-2 MOD-026-1 MOD-027-1 MOD-028-2 MOD-029-2a MOD-030-3 MOD-031-2 MOD-032-1 MOD-033-1	NUC-001-3	PER-003-1 PER-004-2 PER-005-2	PRC-001-1.1(ii) PRC-002-2 PRC-004-5(i) PRC-005-1.1b PRC-005-6 PRC-006-3 PRC-008-0 PRC-010-2 PRC-011-0 PRC-015-1 PRC-016-1 PRC-017-1 PRC-018-1 PRC-019-2 PRC-023-4 PRC-024-2 PRC-025-2 PRC-026-1	TOP-001-4 TOP-002-4 TOP-003-3 TOP-010-1(i)	TPL-001-4 TPL-007-1	VAR-001-5 VAR-002-4.1

Regional Standards were not included in the data analysis. Standards slated for retirement, but not yet formally retired were included in the analysis. The data analysis occurred on 6/14/2019. Since the date of that analysis some information may have changed.

Observations of Existing Evidence Retention Schemes

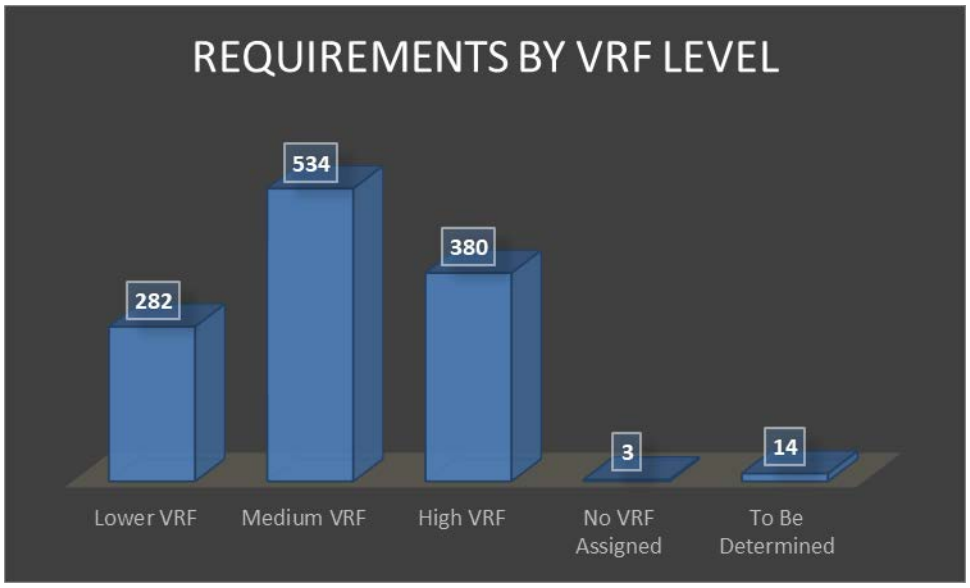
Number of Evidence Retention Schemes

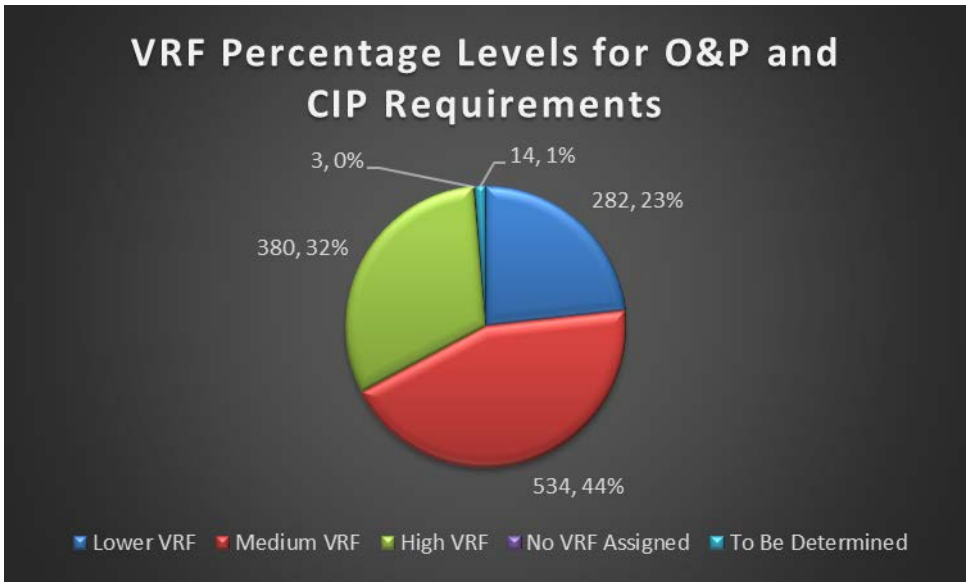
The Evidence Retention team discovered over 50 different evidence retention schemes strewn throughout various Standards and requirements. Specific information on each scheme and applicable Standards and requirements is included in Appendix A.

VRF Analysis

- Approximately 1/3rd (32%) of the O&P and CIP Standards requirements have a High VRF level. These requirements have the highest violation risk factors and therefore evidence retention schemes for these requirements are important. Evidence retention schemes for these requirements should be no longer than the previous 48 months.

- The majority (44%) of the VRF risk levels for O&P and CIP Standard requirements are medium. Evidence retention schemes for these requirements should be no longer than the previous 24 months.
- Approximately 1/4th (23%) of the O&P and CIP Standards requirements have a Lower VRF level. Evidence retention schemes for these requirements should be no longer than the previous 12 months.
- O&P and CIP Standard requirements with "No VRF Assigned" or "To Be Determined" were statistically insignificant and had no impact on existing or proposed evidence retention schemes.





Applicability of Evidence Retention Schemes

Many current evidence retention schemes apply to only one requirement in one Standard (See Appendix A) for example, PRC-026-1, R3. The largest current evidence retention schemes include:

- "Last 3 Calendar Years" with over 40 applicable requirements.
- "Since Last Compliance Audit" with 34 applicable requirements.

- "Current Plus 3 Previous Calendar Years" with 28 applicable requirements.

Similarity of Schemes

There was very little difference between certain evidence retention schemes, for example, the following retention schemes are described in Standard requirements and are basically the same (see Appendix A for detailed information by Standard and requirement):

- 12 Calendar Months vs. 12 Calendar Months Following Completion of each CAP
- 12 Calendar Months vs. One Calendar Year
- 12 Calendar Months vs. Current Year
- 12 Calendar Months vs. Last 12 Calendar Months
- Two Calendar Years vs. Current Calendar Year Plus One Previous Calendar Year

Plans, Assessments, Models, Tests and Documents Evidence Retention Schemes

There were many similarities when the current evidence retention schemes referred to plans, assessments, models, tests and documents. Many of the existing evidence retention schemes required the current document plus a previous version of the document, for example:

- Current and Previous Model Used to Determine Flowgates and TFC
- Current and Prior Transfer Capability Methodology Since Last Compliance Audit
- Current and Prior Versions
- Current Blackstart Testing Results and Previous Testing Results
- Current GMD Vulnerability Assessment and Preceding Assessment
- Current In-Force ATCID Provided by TSP and Prior Versions of ATCID
- Current In-Force Documents and Previous Documents

Poor Descriptions or Non-Existent Schemes

Some evidence retention schemes were poorly described, for example, "Current and Previous Calendar Years", but the exact number of previous calendar years was not specified. Six requirements had no evidence retention schemes specified at all. One evidence retention scheme was extremely general and potentially no longer applicable, for example, "Retain Evidence of Any Path and Rating Prior to 1/1/94", as shown in MOD-029-2a, R2.

Variations on a Theme

There were a lot of variations on the theme of "Current", for example (see Appendix A):

- Current In-Force Data Specification for Analysis and Real-Time Monitoring
- Current In-Force Documents
- Current In-Force Documents and Previous Documents
- Current In-Force Facility Ratings Methodology
- Current In-Force Outage Coordination Process
- Current Model Used to Calculate TTC
- Current Planning Analysis Results
- Current Plus 1 Previous Calendar Year
- Current Plus 2 Previous Calendar Years
- Current Plus 3 Previous Calendar Years
- Current Version and Prior Version of The TTC Study Reports
- Current Year

Evidence Retention Language

NERC Reliability Standards contain language in the data retention or evidence retention sections that are often exactly the same from Standard to Standard as noted below. Sometimes, however, the language differs slightly, which makes the evidence retention process complicated and confusing for both registered entities and compliance enforcement authorities (CEA).

- Evidence retention periods 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.
- In addition, entities found non-compliant shall keep information related to the non-compliance until found compliant.
- If a Transmission Service Provider or Transmission Operator is found noncompliant, it shall keep information related to the non-compliance until found compliant.
- If a Planning Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant or for the time periods specified above, whichever is longer.
- If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.
- If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.
- Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.
- The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.
- Not all NERC Standards have a “Data Retention” section.
- Some Standards have a single data retention directive.
- Some Standards have data retention specifications for each requirement in the Standard.
- Some Standards have data retention specifications related to the Standard’s measurements.
- Many Standards use the term, “Data Retention”. Newer Standards use the term, “Evidence Retention”, but there’s no clear direction on which to use.

Evidence Categories

The existing NERC Standards describe Data and Evidence retention periods that attempt to address evidence that falls into one or more of the following evidence categories:

1. Voice Data
2. Logs
3. Documents, Processes and Plans
4. Models and Methodologies
5. Assessments, Lists, Records and Studies
6. Agreements

Different Headings in NERC Standards

The team discovered that two headings were used interchangeably in the NERC Standards without any direction as to which one is preferred:

1. Data Retention
2. Evidence Retention

General Observations

The Evidence Retention team observed:

- The data/evidence retention schemes were somewhat arbitrary and without apparent rationale.
- Some evidence retention schemes were excessively long, some very short, but there was no consistent rationale for retention length.
- Similar evidence categories described in different Standards have different evidence retention schemes.
- Evidence retention schemes vary within specific Standards by requirement.
- Some evidence retention schemes are one-of-a-kind, that is, they appear only once. This is usually because they are so specific they apply only to one Standard and one requirement. These overly specific data retention schemes are not necessary, for example PRC-026-1, R3.
- The higher the risk the longer records should be kept. The lower the risk the shorter records should be kept.

Analysis of Requirement Text, Measures, and Evidence Retention

The Role of Measures vs. Evidence Retention

In its pure form, the Measures section of NERC Standards indicates what evidence must be collected. The Evidence Retention section indicates how long to keep the specified evidence. However, this gets complicated and confusing when the measures section of the Standard indicates how long to keep the evidence. There is no direction to Standard Drafting Teams (SDT) on what specific information should be included in a measure and what should be included in the evidence retention sections.

Rules of Procedure and Measures

The ROP speaks about measures using general guidance language:

> **Measurability — Each performance Requirement shall be stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that Requirement. Each performance Requirement shall have one or more associated measures used to objectively evaluate compliance with the Requirement. If performance can be practically measured quantitatively, metrics shall be provided to determine satisfactory performance.**[9]
>
> **Measure: Provides identification of the evidence or types of evidence that may demonstrate compliance with the associated requirement.**[10]

The ROP does not specifically speak to evidence retention schemes as related to measures. This is left to the discretion of SDTs.

Observations Regarding Measures and Evidence Retention

The evidence retention team analyzed measures and evidence retention for high VRF requirements and observed the following:

- Sometimes measures clearly indicate what evidence should be collected to demonstrate compliance with no reference to how long to retain the evidence.

[9] NERC ROP, Section 302, pg. 4. NERC ROP, Effective 7/19/18
[10] Ibid, Section 2.0: Elements of a Reliability Standard, Subsection 2.5: Elements of a Reliability Standard, pg. 8.

- In some instances, the measures indicate not only what evidence to collect, but how long to retain evidence. This creates confusion between what's listed in the measures and what's listed in the evidence retention section of the Standard.
- Some Standards have statements in them that give CEAs authority to ask an entity to provide evidence that it was compliance for the full-time period since the last audit even if the evidence retention section of the Standard indicates a much shorter retention period. This causes entities to save data for much longer periods just in case they are asked for it. General all-encompassing statements like this must be removed from the Standards. Evidence retention schemes should be clear for both CEAs and registered entities and data should not be stored beyond defined limits, then entities will keep evidence only for the prescribed period without fear of CEA fines or sanctions.
- There appears to be some uncertainty among different SDTs regarding the purpose and differences between measures and the data retention portions of a Standard.

Evidence Retention Recommendations

This section of the report presents SER Phase 2 recommendations for evidence retention.

Recommended Evidence Retention Schemes

The evidence retention team simplified the existing evidence retention schemes to a manageable set of eight evidence retention schemes to cover all NERC O&P and CIP Standards and requirements as shown in the following table.

Recommended Data/Evidence Retention Schemes	Rationale for the Data/Evidence Retention Scheme
1. Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.	This satisfies the need for auditors to see the most recent documentation in a variety of areas. What is most important is the current document and that document should have a revision history showing that it is regularly reviewed and updated. Keeping multiple years of document is not necessary, especially if there is no history of compliance violations.
2. Most recent full testing records with evidence of previous testing intervals.	This satisfies the requirements to complete and document various tests.
3. Rolling 03 Months data retention period for voice and audio recordings.	Voice and audio recordings take up a lot of space on computer systems. Therefore, only 90-days of history are necessary.
4. Rolling 06 Months data retention period for high volume data.	This is needed in only a small set of requirements (see Appendix C). In actual practice 30 days of rolling data may be enough to satisfy compliance-related questions.
5. Rolling 12 Calendar months data retention period.	This satisfies the requirement to have at least 12 months of data. Given the type of data it's not necessary to have 3 or more years of data. It is important that CEAs honor the rolling 12-month period and can't request data prior to 12 months from the current date.
6. Rolling 30-day data retention period.	This is high volume data and thus requires only 30 days of data to demonstrate compliance.
7. Rolling 36 Months data retention period.	Many existing evidence retention schemes call for a three year retention schedule, but a rolling 36-month evidence retention period provides a lot of data for CEAs to determine compliance.
8. Rolling 48 Months data retention period.	Unless specifically called out, this is the default data/evidence retention scheme, which is useful for high VRF requirements where an entity is audited every six years. It is not useful for medium and low VRF requirements.

Additional Recommendations

The SER Phase 2 team Data/Evidence Retention Project team recommends the following:

1. All NERC Standards should be consistent and bear the same heading of "Data and Evidence Retention Period" instead of the current headings of either "Data Retention" or "Evidence Retention".
2. Compliance Data and Evidence should be retained for the shortest possible time-frame to clearly demonstrate compliance. The higher the risk the longer evidence should be retained, the lower the risk the shorter the evidence retention period.
3. Update the NERC Auditor's Manual and associated training with the new data/evidence retention schemes. Retrain all auditors and SDTs on the new evidence retention schemes so that they don't ask for evidence outside the prescribed evidence retention scheme.
4. Update the NERC Rules of Procedure with specific guidance for Standard Drafting Teams (SDTs) that clearly specify when to use a specific evidence retention scheme given the risk to the BES. This can be done through a simple flowchart that ultimately determine the final evidence retention scheme. [11]
5. It's important to have TOs/GOs engaged in the socialization of these new evidence retention schemes. The primary proponents of this issue were originally TOs/GOs, and they pointed to standard families like PRC as forming the need for this type of relief. Their audit cycle experience – which also is pertinent to this issue – tends to be different than RC/BA/TOPs as well. It will be easier to socialize the issue if those entities most impacted by the proposed recommendation help communicate the importance of it.
6. It is important to have the SC/CCC Chairs and key NERC Personnel talk about what questions/issues each needs to resolve to determine what their role is in accepting the evidence retention recommendations. The process will move this concept more effectively if the Committees first understand what they are being asked to consider, and what steps NERC is willing to take on this as the ERO.
7. Define upfront an expected close out date for accepting/rejecting recommendations with the Committee Chairs and NERC personnel. The SER team suggests we map out who needs to review what, what additional information they need, what decisions they need to make and when those decisions can reasonably happen. That way if we start to approach a date and completion doesn't look imminent, we can discuss how to respond. Without a proposed completion date, discussion could get drawn out.
8. Create an implementation timeline for next steps to avoid what happened with the evidence retention work completed in 2014. NERC needs to assure that specific actions are taken and there is agreement on who "owns" the implementation of the evidence retention project and recommendations.
9. Determine how the new evidence retention schemes will be implemented, possibly through the Enhanced Periodic Review (EPR) to avoid confusion and a massive overhaul of existing Standards.
10. Assure that going forward evidence retention schemes are concentrated on the highest risk requirements and not necessarily on all requirements.
11. The industry should be surveyed to gather feedback on the proposed evidence retention schemes and the new recommended evidence retention schemes for each high VRF requirement.

[11] The evidence retention team stopped short of creating a flowchart that indicates a preferred evidence retention scheme, but a flowchart of this nature is strongly recommended.

Appendix A – Results of Analyzing Current Evidence Retention Schemes

List of Existing Evidence Retention Schemes in NERC Standards

The following table summarizes the results of analyzing the data/evidence retention schemes listed in all active NERC O&P and CIP Standards. NOTE: The list did not exclude Standards and requirements slated for retirement as part of SER Phase 1 efforts since, at the time of this report, retirements were not yet effective.

Current Evidence Retention Scheme	Total	Standards and Requirements List
1. 12 Calendar Months Following Completion of each CAP	1	PRC-026-1, R3
2. 90 Calendar Days	3	CIP-007-6, R4 IRO-018-1(i), R3 PRC-001-1.1(ii), R2
3. 90 Calendar Days Voice, 12 Months for Logs	2	FAC-003-4, R1 TOP-002-4, R1
4. Approved Plan and Previous Plan Since Last Compliance Audit	2	EOP-005-3, R1 EOP-006-3, R1
5. Current and Previous Calendar Years (time not specified)	1	EOP-008-2, R7
6. Current and Previous Model Used to Determine Flowgates and TFC	1	MOD-030-3, R2
7. Current and Previous Planning Assessment	1	TPL-001-4, R1
8. Current and Prior Transfer Capability Methodology Since Last Compliance Audit	1	FAC-013-2, R1
9. Current and Prior Versions	1	EOP-005-3, R6
10. Current Blackstart Testing Results and Previous Testing Results	1	EOP-005-3, R7
11. Current Calendar Year Plus One Previous Calendar Year, except operator logs and voice recordings - retain for 90 calendar days	7	COM-002-4, R1, R2 IRO-018-1(i), R1 TOP-001-4, R1, R15, R22 TOP-010-1(i), R1
12. Current GMD Vulnerability Assessment and Preceding Assessment	1	TPL-007-1, R4
13. Current In-Force Agreement	1	NUC-001-3, R2
14. Current In-Force ATCID Provided by TSP and Prior Versions of ATCID Since Last Compliance Audit	3	MOD-001-1a, R3 MOD-029-2a, R1 MOD-030-3, R1
15. Current In-Force Data Specification for Analysis and Real-Time Monitoring	1	TOP-003-3, R2
16. Current In-Force Documents	1	PRC-001-1.1(II), R1
17. Current In-Force Documents and Previous Documents Since Last Compliance Audit	3	EOP-008-2, R8 IRO-002-5, R1 IRO-014-3, R1
18. Current In-Force Facility Ratings Methodology Since Last Compliance Audit	2	FAC-008-3, R2, R3
19. Current In-Force Outage Coordination Process Since Last Compliance Audit	1	IRO-017-1, R1
20. Current Model Used to Calculate TTC	2	MOD-028-2, R2 MOD-029-2a, R1

Current Evidence Retention Scheme	Total	Standards and Requirements List
21. Current OPA, Real-time Monitoring, and Real-time Assessments Since Last Audit	2	IRO-010-2, R1 TOP-003-3, R1
22. Current Operating Plan and Previous Plans Since Last Compliance Audit	5	EOP-004-4, R1 EOP-008-2, R1, R6 EOP-011-1, R1, R2
23. Current Planning Analysis Results	1	NUC-001-3, R3
24. Current Plus 1 Previous Calendar Year	7	IRO-002-5, R5 MOD-001-1a, R2, R6 MOD-030-3, R5 TOP-001-4, R20, R23 VAR-002-4.1, R1
25. Current Plus 2 Previous Calendar Years	4	NUC-001-3, R4, R5 PER-004-2, R1 PRC-001-1.1(ii), R3
26. Current Plus 3 Previous Calendar Years	28	BAL-001-2, R1 BAL-002-3, R2 BAL-003-1.1, R1 BAL-005-1, R1 EOP-005-3, R2, R3, R4, R5 EOP-006-3, R2, R3, R4, R5, R6 FAC-008-3, R1 IRO-014-3, R6 MOD-001-1a, R5 MOD-004-1, R1, R2, R3, R4, R6, R10, R11 MOD-008-1, R2, R4 MOD-029-2a, R3, R7 MOD-030-3, R2.2.
27. Current Version and Prior Version of The TTC Study Reports	1	MOD-029-2a, R2
28. Current Year	1	EOP-008-2, R2
29. Five Calendar Years	4	PRC-002-2, R1, R5 TPL-007-1, R1, R7
30. Last 12 Calendar Months	13	FAC-014-2, R1 IRO-014-3, R5 MOD-028-2, R3, R4, R10 MOD-030-3, R2.1, R4 PRC-004-5(i), R1, R5, R6 PRC-006-3, R6 PRC-026-1, R2 VAR-001-5, R1
31. Last 12 Calendar Months Plus Current Month	3	IRO-006-5, R1 IRO-006-East-2, R1, R2
32. Last 14 Days, Past 30 Days Daily Values, And Past 60 Days for Monthly Values	3	MOD-028-2, R8 MOD-029-2a, R5 MOD-030-3, R6
33. Last 3 Calendar Years	Over 40	CIP-002-5.1a, All CIP-003-6, All CIP-004-6, All CIP-005-5, All CIP-006-6, All CIP-007-6, All CIP-008-5, All CIP-009-6, All CIP-010-2, All CIP-011-2, All CIP-014-2, All EOP-010-1, R1 FAC-001-3, R1 FAC-002-2, R1 FAC-003-4, R1, R2, R3, R5, R6, R7

Current Evidence Retention Scheme	Total	Standards and Requirements List
		FAC-008-3, R4, R7, R8 IRO-010-2, R2 IRO-017-1, R2, R3, R4 MOD-026-1, R1, R3 MOD-027-1, R1, R3 PRC-006-NPCC-1, R1 PRC-018-1, R1 PRC-023-4, R1 PRC-024-2, R1 PRC-025-2, R1 TOP-003-3, R3, R4
34. Last Load Control or Active Power/Frequency Control System Model Verification	1	MOD-027-1, R2
35. Latest Excitation Control System or Plant volt/var Control Function Model	1	MOD-026-1, R2
36. Latest Transmittals and Receipts	1	NUC-001-3, R1
37. Most Recent 12 Calendar Months Except Operator Logs and Voice Recordings - Retain for 90 Calendar Days	3	IRO-002-5, R3 TOP-001-4, R21, R24
38. Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	7	COM-001-3, R1, R12, R13, R3, R5, R7, R8
39. Most Recent 3 Calendar Months Plus Current Month	6	INT-004-3.1, R1, R3 INT-006-4, R1, R2 INT-009-2.1, R1 INT-010-2.1, R1
40. Most Recent 90 Calendar Days	2	IRO-010-2, R3 TOP-003-3, R5
41. Most Recent 90-Calendar Days Voice, Most Recent 12 Calendar Months Documentation	2	IRO-001-4, R1, R2
42. Most Recent List of Circuits	1	PRC-023-4, R6
43. None Specified	6	MOD-020-0, R1 PRC-008-0, R1 PRC-011-0, R1 PRC-015-1, R1 PRC-016-1, R1 PRC-017-1, R1
44. One Calendar Year	1	PRC-026-1, R1
45. One Year from SOL Methodology Change	2	FAC-010-3, R1 FAC-011-3, R1
46. Retain Evidence of Any Path and Rating Prior to 1/1/94	1	MOD-029-2a, R2
47. Rolling 12-Month Period	1	IRO-009-2, R1
48. Rolling 30-Days	4	IRO-008-2, R4 IRO-018-1(ii), R2 TOP-001-4, R13 TOP-010-1(i), R3
49. Rolling 90-Calendar Days for Voice, 12 Months for Operating Logs	3	IRO-008-2, R1 IRO-014-3, R3 TOP-002-4, R1
50. Since Last Compliance Audit	34	BAL-002-3, R1 EOP-004-4, R2 EOP-008-2, R3, R4, R5 EOP-011, R3, R5, R6 FAC-008-3, R1 FAC-013-2, R2 MOD-001-1a, R1 MOD-008-1, R1 MOD-025-2, R1, R3 MOD-028-2, R1

Current Evidence Retention Scheme	Total	Standards and Requirements List
		MOD-031-2, R1 MOD-032-1, R1 MOD-033-1, R1 PER-005-3, R1, R2 PRC-005-6, R1, R2, R5 PRC-006-3, R1, R10, R7, R8, R9 TPL-001-4, R2, R3, R4, R5, R6, R7
51. Since Last Compliance Audit Plus one Previous Compliance Audit	2	EOP-005-3, R10 EOP-006-3, R8
52. Six Calendar Years	3	PRC-006-3, R11 PRC-010-2, R1 PRC-019-2, R1
53. Three Calendar Years	6	PRC-002-2, R2, R6, R7 PRC-005-1.1b, R1 TOP-001-4, R12, R14
54. Three Years or Since Last Compliance Audit Whichever is Longer	1	PER-003-1, R1

Appendix B: VRF File Listings

This appendix contains the VRF designations for the CIP and O&P Standards.

High VRF List

For simplicity sake, the data from the NERC VRF Matrix was sorted on whole requirement numbers, for example, R1., R2., R3., etc. Sub-requirement numbers, for example, R1.1., R1.1.1. etc., were not included in the data analysis, because by default sub-requirements inherit the parent VRF level.

Standard	Req.	VRF
BAL-002-3	R1.	HIGH
BAL-002-3	R2.	HIGH
BAL-003-1.1	R1.	HIGH
CIP-002-5.1a	R1.	HIGH
CIP-014-2	R1.	HIGH
COM-001-3	R1.	HIGH
COM-001-3	R2.	HIGH
COM-001-3	R3.	HIGH
COM-001-3	R4.	HIGH
COM-001-3	R5.	HIGH
COM-001-3	R6.	HIGH
COM-001-3	R8.	HIGH
COM-001-3	R12.	HIGH
COM-002-4	R5.	HIGH
COM-002-4	R6.	HIGH
COM-002-4	R7.	HIGH
EOP-005-3	R1.	HIGH
EOP-006-3	R1.	HIGH
EOP-008-2	R3.	HIGH
EOP-008-2	R4.	HIGH
EOP-011-1	R1.	HIGH
EOP-011-1	R2.	HIGH
EOP-011-1	R3.	HIGH
EOP-011-1	R4.	HIGH
EOP-011-1	R5.	HIGH
EOP-011-1	R6.	HIGH
FAC-003-4	R1.	HIGH
FAC-003-4	R2.	HIGH
FAC-014-2	R5.	HIGH
IRO-001-4	R1.	HIGH
IRO-001-4	R2.	HIGH
IRO-001-4	R3.	HIGH
IRO-002-5	R2.	HIGH
IRO-002-5	R4.	HIGH
IRO-002-5	R5.	HIGH
IRO-002-5	R6.	HIGH
IRO-006-5	R1.	HIGH
IRO-008-2	R4.	HIGH
IRO-008-2	R5.	HIGH
IRO-009-2	R2.	HIGH
IRO-009-2	R3.	HIGH
IRO-009-2	R4.	HIGH
IRO-014-3	R4.	HIGH
IRO-014-3	R5.	HIGH
IRO-014-3	R6.	HIGH
IRO-014-3	R7.	HIGH
IRO-018-1(i)	R1.	HIGH
NUC-001-3	R4.	HIGH
NUC-001-3	R5.	HIGH
NUC-001-3	R7.	HIGH
NUC-001-3	R8.	HIGH
PER-003-1	R1.	HIGH
PER-003-1	R2.	HIGH
PER-003-1	R3.	HIGH
PER-004-2	R1.	HIGH
PER-004-2	R2.	HIGH
PER-005-2	R3.	HIGH
PRC-001-1.1(ii)	R1.	HIGH
PRC-001-1.1(ii)	R2.	HIGH
PRC-001-1.1(ii)	R4.	HIGH
PRC-001-1.1(ii)	R5.	HIGH
PRC-001-1.1(ii)	R6.	HIGH
PRC-004-5(i)	R1.	HIGH
PRC-004-5(i)	R2.	HIGH
PRC-004-5(i)	R3.	HIGH
PRC-004-5(i)	R4.	HIGH
PRC-004-5(i)	R5.	HIGH
PRC-004-5(i)	R6.	HIGH
PRC-005-1.1b	R1.	HIGH
PRC-005-6	R3.	HIGH
PRC-005-6	R4.	HIGH
PRC-006-3	R3.	HIGH
PRC-006-3	R4.	HIGH
PRC-006-3	R5.	HIGH
PRC-006-3	R9.	HIGH
PRC-006-3	R10.	HIGH
PRC-006-3	R15.	HIGH
PRC-010-2	R1.	HIGH
PRC-010-2	R2.	HIGH
PRC-017-1	R1.	HIGH
PRC-023-4	R1.	HIGH
PRC-023-4	R2.	HIGH
PRC-023-4	R6.	HIGH
PRC-025-2	R1.	HIGH
PRC-026-1	R2.	HIGH
TOP-001-4	R1.	HIGH
TOP-001-4	R2.	HIGH
TOP-001-4	R3.	HIGH
TOP-001-4	R4.	HIGH
TOP-001-4	R5.	HIGH
TOP-001-4	R6.	HIGH
TOP-001-4	R7.	HIGH
TOP-001-4	R8.	HIGH
TOP-001-4	R10.	HIGH
TOP-001-4	R11.	HIGH
TOP-001-4	R12.	HIGH
TOP-001-4	R13.	HIGH
TOP-001-4	R14.	HIGH
TOP-001-4	R16.	HIGH
TOP-001-4	R17.	HIGH
TOP-001-4	R18.	HIGH
TOP-001-4	R20.	HIGH
TOP-001-4	R23.	HIGH
TOP-010-1(i)	R1.	HIGH
TOP-010-1(i)	R2.	HIGH
TPL-001-4	R1.	HIGH
TPL-001-4	R2.	HIGH
TPL-007-1	R2.	HIGH
TPL-007-1	R4.	HIGH
TPL-007-1	R7.	HIGH

Standard	Req.	VRF
VAR-001-5	R1.	HIGH

Standard	Req.	VRF
VAR-001-5	R2.	HIGH

Standard	Req.	VRF
VAR-001-5	R3.	HIGH

Medium VRF

Standard	Req.	VRF
BAL-001-2	R1.	MEDIUM
BAL-001-2	R2.	MEDIUM
BAL-002-3	R3.	MEDIUM
BAL-003-1.1	R2.	MEDIUM
BAL-003-1.1	R3.	MEDIUM
BAL-003-1.1	R4.	MEDIUM
BAL-005-1	R1.	MEDIUM
BAL-005-1	R2.	MEDIUM
BAL-005-1	R3.	MEDIUM
BAL-005-1	R4.	MEDIUM
BAL-005-1	R5.	MEDIUM
BAL-005-1	R6.	MEDIUM
BAL-005-1	R7.	MEDIUM
CIP-003-6	R1.	MEDIUM
CIP-003-6	R3.	MEDIUM
CIP-004-6	R3.	MEDIUM
CIP-004-6	R4.	MEDIUM
CIP-004-6	R5.	MEDIUM
CIP-005-5	R1.	MEDIUM
CIP-005-5	R2.	MEDIUM
CIP-006-6	R1.	MEDIUM
CIP-006-6	R2.	MEDIUM
CIP-006-6	R3.	MEDIUM
CIP-007-6	R1.	MEDIUM
CIP-007-6	R2.	MEDIUM
CIP-007-6	R3.	MEDIUM

Standard	Req.	VRF
CIP-007-6	R4.	MEDIUM
CIP-007-6	R5.	MEDIUM
CIP-009-6	R1.	MEDIUM
CIP-010-2	R1.	MEDIUM
CIP-010-2	R2.	MEDIUM
CIP-010-2	R3.	MEDIUM
CIP-010-2	R4.	MEDIUM
CIP-011-2	R1.	MEDIUM
CIP-014-2	R2.	MEDIUM
COM-001-3	R7.	MEDIUM
COM-001-3	R9.	MEDIUM
COM-001-3	R10.	MEDIUM
COM-001-3	R11.	MEDIUM
COM-001-3	R13.	MEDIUM
COM-002-4	R4.	MEDIUM
EOP-004-4	R2.	MEDIUM
EOP-005-3	R2.	MEDIUM
EOP-005-3	R3.	MEDIUM
EOP-005-3	R4.	MEDIUM
EOP-005-3	R6.	MEDIUM
EOP-005-3	R7.	MEDIUM
EOP-005-3	R8.	MEDIUM
EOP-005-3	R9.	MEDIUM
EOP-005-3	R10.	MEDIUM
EOP-005-3	R11.	MEDIUM
EOP-005-3	R12.	MEDIUM

Standard	Req.	VRF
EOP-005-3	R13.	MEDIUM
EOP-005-3	R14.	MEDIUM
EOP-005-3	R15.	MEDIUM
EOP-005-3	R16.	MEDIUM
EOP-006-3	R3.	MEDIUM
EOP-006-3	R4.	MEDIUM
EOP-006-3	R5.	MEDIUM
EOP-006-3	R7.	MEDIUM
EOP-006-3	R8.	MEDIUM
EOP-008-2	R1.	MEDIUM
EOP-008-2	R5.	MEDIUM
EOP-008-2	R6.	MEDIUM
EOP-008-2	R7.	MEDIUM
EOP-008-2	R8.	MEDIUM
EOP-010-1	R1.	MEDIUM
EOP-010-1	R2.	MEDIUM
EOP-010-1	R3.	MEDIUM
FAC-002-2	R1.	MEDIUM
FAC-002-2	R2.	MEDIUM
FAC-002-2	R3.	MEDIUM
FAC-002-2	R4.	MEDIUM
FAC-002-2	R5.	MEDIUM
FAC-003-4	R4.	MEDIUM
FAC-003-4	R5.	MEDIUM
FAC-003-4	R6.	MEDIUM
FAC-003-4	R7.	MEDIUM

Standard	Req.	VRF
FAC-008-3	R2.	MEDIUM
FAC-008-3	R3.	MEDIUM
FAC-008-3	R6.	MEDIUM
FAC-008-3	R7.	MEDIUM
FAC-008-3	R8.	MEDIUM
FAC-011-3	R3.	MEDIUM
FAC-013-2	R1.	MEDIUM
FAC-013-2	R4.	MEDIUM
FAC-014-2	R1.	MEDIUM
FAC-014-2	R2.	MEDIUM
FAC-014-2	R3.	MEDIUM
FAC-014-2	R4.	MEDIUM
FAC-014-2	R6.	MEDIUM
INT-009-2.1	R1.	MEDIUM
INT-009-2.1	R2.	MEDIUM
INT-009-2.1	R3.	MEDIUM
IRO-002-5	R1.	MEDIUM
IRO-002-5	R3.	MEDIUM
IRO-008-2	R1.	MEDIUM
IRO-008-2	R2.	MEDIUM
IRO-008-2	R3.	MEDIUM
IRO-008-2	R6.	MEDIUM
IRO-009-2	R1.	MEDIUM
IRO-014-3	R1.	MEDIUM
IRO-014-3	R3.	MEDIUM
IRO-017-1	R1.	MEDIUM
IRO-017-1	R2.	MEDIUM
IRO-017-1	R3.	MEDIUM
IRO-017-1	R4.	MEDIUM
IRO-018-1(i)	R2.	MEDIUM

Standard	Req.	VRF
IRO-018-1(i)	R3.	MEDIUM
MOD-001-1a	R1.	MEDIUM
MOD-001-1a	R2.	MEDIUM
MOD-001-1a	R3.	MEDIUM
MOD-001-1a	R6.	MEDIUM
MOD-001-1a	R7.	MEDIUM
MOD-001-1a	R8.	MEDIUM
MOD-001-1a	R9.	MEDIUM
MOD-004-1	R1.	MEDIUM
MOD-004-1	R2.	MEDIUM
MOD-004-1	R3.	MEDIUM
MOD-004-1	R4.	MEDIUM
MOD-004-1	R5.	MEDIUM
MOD-004-1	R6.	MEDIUM
MOD-004-1	R7.	MEDIUM
MOD-004-1	R8.	MEDIUM
MOD-004-1	R11.	MEDIUM
MOD-004-1	R12.	MEDIUM
MOD-008-1	R1.	MEDIUM
MOD-008-1	R2.	MEDIUM
MOD-008-1	R4.	MEDIUM
MOD-008-1	R5.	MEDIUM
MOD-025-2	R1.	MEDIUM
MOD-025-2	R2.	MEDIUM
MOD-025-2	R3.	MEDIUM
MOD-026-1	R2.	MEDIUM
MOD-026-1	R6.	MEDIUM
MOD-027-1	R2.	MEDIUM
MOD-027-1	R5.	MEDIUM
MOD-031-2	R1.	MEDIUM

Standard	Req.	VRF
MOD-031-2	R2.	MEDIUM
MOD-031-2	R3.	MEDIUM
MOD-031-2	R4.	MEDIUM
MOD-032-1	R2.	MEDIUM
MOD-032-1	R4.	MEDIUM
MOD-033-1	R1.	MEDIUM
NUC-001-3	R1.	MEDIUM
NUC-001-3	R2.	MEDIUM
NUC-001-3	R3.	MEDIUM
NUC-001-3	R6.	MEDIUM
NUC-001-3	R9.	MEDIUM
PER-005-2	R1.	MEDIUM
PER-005-2	R2.	MEDIUM
PER-005-2	R4.	MEDIUM
PER-005-2	R5.	MEDIUM
PER-005-2	R6.	MEDIUM
PRC-005-6	R1.	MEDIUM
PRC-005-6	R2.	MEDIUM
PRC-005-6	R5.	MEDIUM
PRC-006-3	R1.	MEDIUM
PRC-006-3	R2.	MEDIUM
PRC-006-3	R11.	MEDIUM
PRC-006-3	R12.	MEDIUM
PRC-006-3	R13.	MEDIUM
PRC-008-0	R1.	MEDIUM
PRC-008-0	R2.	MEDIUM
PRC-010-2	R3.	MEDIUM
PRC-010-2	R4.	MEDIUM
PRC-010-2	R5.	MEDIUM
PRC-011-0	R1.	MEDIUM

Standard	Req.	VRF
PRC-015-1	R1.	MEDIUM
PRC-015-1	R2.	MEDIUM
PRC-016-1	R1.	MEDIUM
PRC-016-1	R2.	MEDIUM
PRC-019-2	R1.	MEDIUM
PRC-019-2	R2.	MEDIUM
PRC-023-4	R3.	MEDIUM
PRC-024-2	R1.	MEDIUM
PRC-024-2	R2.	MEDIUM
PRC-026-1	R1.	MEDIUM
PRC-026-1	R3.	MEDIUM
PRC-026-1	R4.	MEDIUM
TOP-001-4	R9.	MEDIUM
TOP-001-4	R15.	MEDIUM

Standard	Req.	VRF
TOP-001-4	R19.	MEDIUM
TOP-001-4	R21.	MEDIUM
TOP-001-4	R22.	MEDIUM
TOP-001-4	R24.	MEDIUM
TOP-002-4	R1.	MEDIUM
TOP-002-4	R2.	MEDIUM
TOP-002-4	R3.	MEDIUM
TOP-002-4	R4.	MEDIUM
TOP-002-4	R5.	MEDIUM
TOP-002-4	R6.	MEDIUM
TOP-002-4	R7.	MEDIUM
TOP-003-3	R5.	MEDIUM
TOP-010-1(i)	R3.	MEDIUM
TOP-010-1(i)	R4.	MEDIUM

Standard	Req.	VRF
TPL-001-4	R3.	MEDIUM
TPL-001-4	R4.	MEDIUM
TPL-001-4	R5.	MEDIUM
TPL-001-4	R6.	MEDIUM
TPL-001-4	R8.	MEDIUM
TPL-007-1	R3.	MEDIUM
TPL-007-1	R5.	MEDIUM
TPL-007-1	R6.	MEDIUM
VAR-001-5	R5.	MEDIUM
VAR-002-4.1	R1.	MEDIUM
VAR-002-4.1	R2.	MEDIUM
VAR-002-4.1	R3.	MEDIUM
VAR-002-4.1	R4.	MEDIUM

Lower VRF List

Standard Number	Req.	VRF
CIP-002-5.1a	R2.	LOWER
CIP-003-6	R2.	LOWER
CIP-003-6	R4.	LOWER
CIP-004-6	R1.	LOWER
CIP-004-6	R2.	LOWER
CIP-008-5	R1.	LOWER
CIP-008-5	R2.	LOWER
CIP-008-5	R3.	LOWER
CIP-009-6	R2.	LOWER
CIP-009-6	R3.	LOWER
CIP-011-2	R2.	LOWER
COM-002-4	R1.	LOWER
COM-002-4	R2.	LOWER
COM-002-4	R3.	LOWER
EOP-004-4	R1.	LOWER
EOP-005-3	R5.	LOWER

EOP-006-3	R2.	LOWER
EOP-006-3	R6.	LOWER
EOP-008-2	R2.	LOWER
FAC-001-3	R1.	LOWER
FAC-001-3	R2.	LOWER
FAC-001-3	R3.	LOWER
FAC-001-3	R4.	LOWER
FAC-003-4	R3.	LOWER
FAC-008-3	R1.	LOWER
FAC-008-3	R4.	LOWER
FAC-008-3	R5.	LOWER
FAC-010-3	R1.	LOWER

FAC-010-3	R3.	LOWER
FAC-010-3	R4.	LOWER
FAC-010-3	R5.	LOWER
FAC-011-3	R1.	LOWER
FAC-011-3	R4.	LOWER
FAC-013-2	R2.	LOWER
FAC-013-2	R3.	LOWER
FAC-013-2	R5.	LOWER
FAC-013-2	R6.	LOWER
INT-004-3.1	R1.	LOWER
INT-004-3.1	R2.	LOWER
INT-004-3.1	R3.	LOWER

INT-006-4	R1.	LOWER
INT-006-4	R2.	LOWER
INT-006-4	R3.	LOWER
INT-006-4	R4.	LOWER
INT-006-4	R5.	LOWER
INT-010-2.1	R1.	LOWER
INT-010-2.1	R2.	LOWER
INT-010-2.1	R3.	LOWER
IRO-010-2	R1.	LOWER
IRO-010-2	R2.	LOWER
IRO-010-2	R3.	LOWER
IRO-014-3	R2.	LOWER
MOD-001-1a	R4.	LOWER
MOD-001-1a	R5.	LOWER
MOD-004-1	R9.	LOWER
MOD-004-1	R10.	LOWER
MOD-008-1	R3.	LOWER
MOD-020-0	R1.	LOWER
MOD-026-1	R1.	LOWER
MOD-026-1	R3.	LOWER
MOD-026-1	R4.	LOWER
MOD-026-1	R5.	LOWER
MOD-027-1	R1.	LOWER
MOD-027-1	R3.	LOWER
MOD-027-1	R4.	LOWER

MOD-028-2	R1.	LOWER
MOD-028-2	R2.	LOWER
MOD-028-2	R3.	LOWER
MOD-028-2	R4.	LOWER
MOD-028-2	R5.	LOWER
MOD-028-2	R6.	LOWER
MOD-028-2	R7.	LOWER
MOD-028-2	R8.	LOWER
MOD-028-2	R9.	LOWER
MOD-028-2	R10.	LOWER
MOD-028-2	R11.	LOWER
MOD-029-2a	R1.	LOWER
MOD-029-2a	R2.	LOWER
MOD-029-2a	R3.	LOWER
MOD-029-2a	R4.	LOWER
MOD-029-2a	R5.	LOWER
MOD-029-2a	R6.	LOWER
MOD-029-2a	R7.	LOWER
MOD-029-2a	R8.	LOWER
MOD-032-1	R1.	LOWER
MOD-032-1	R3.	LOWER
MOD-033-1	R2.	LOWER
PRC-002-2	R1.	LOWER
PRC-002-2	R2.	LOWER
PRC-002-2	R3.	LOWER

PRC-002-2	R4.	LOWER
PRC-002-2	R5.	LOWER
PRC-002-2	R6.	LOWER
PRC-002-2	R7.	LOWER
PRC-002-2	R8.	LOWER
PRC-002-2	R9.	LOWER
PRC-002-2	R10.	LOWER
PRC-002-2	R11.	LOWER
PRC-002-2	R12.	LOWER
PRC-005-1.1b	R2.	LOWER
PRC-006-3	R6.	LOWER
PRC-006-3	R7.	LOWER
PRC-006-3	R8.	LOWER
PRC-006-3	R14.	LOWER
PRC-010-2	R6.	LOWER
PRC-010-2	R7.	LOWER
PRC-010-2	R8.	LOWER
PRC-011-0	R2.	LOWER
PRC-015-1	R3.	LOWER
PRC-016-1	R3.	LOWER
PRC-017-1	R2.	LOWER
PRC-018-1	R1.	LOWER
PRC-018-1	R2.	LOWER
PRC-018-1	R3.	LOWER
PRC-018-1	R4.	LOWER

Appendix C: Recommended Evidence Retention for High VRF Requirements

The following table is a compilation of all High VRF NERC Standard requirements for O&P and CIP Standards. It provides a summary of the current evidence retention scheme and the recommended evidence retention scheme. Medium and lower VRF requirements were also considered, but the Evidence Retention team decided to focus on the highest risks to the BES as indicated in the Standard requirements.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
BAL-002-3	R1.	Since Last Compliance Audit	Rolling 12 Calendar months data retention period.
BAL-002-3	R2.	Current Plus 3 Previous Calendar Years	Rolling 48 months data retention period.
BAL-003-1.1	R1.	Current Plus 3 Previous Calendar Years	Rolling 48 months data retention period.
CIP-002-5.1a	R1.	Last 3 Calendar Years	Rolling three-year data retention period.
CIP-014-2	R1.	Last 3 Calendar Years	Rolling three-year data retention period.
COM-001-3	R1.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-001-3	R2.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-001-3	R12.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-001-3	R3.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
COM-001-3	R4.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-001-3	R5.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-001-3	R6.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-001-3	R8.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-002-4	R5.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-002-4	R6.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
COM-002-4	R7.	Most Recent 12 Calendar Months Except Voice Recordings, Most Recent 90 Calendar Days	Rolling 12 Calendar months data retention period.
EOP-005-3	R1.	Approved Plan and Previous Plan Since Last Compliance Audit	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
EOP-006-3	R1.	Approved Plan and Previous Plan Since Last Compliance Audit	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
EOP-008-2	R3.	Since Last Compliance Audit	Rolling 48 months data retention period.
EOP-008-2	R4.	Since Last Compliance Audit	Rolling 48 months data retention period.
EOP-011-1	R1.	Current Operating Plan and Previous Plans Since Last Compliance Audit	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
EOP-011-1	R2.	Current Operating Plan and Previous Plans Since Last Compliance Audit	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
EOP-011-1	R3.	Since Last Compliance Audit	Rolling 48 months data retention period.
EOP-011-1	R4.	Since Last Compliance Audit	Rolling 48 months data retention period.
EOP-011-1	R5.	Since Last Compliance Audit	Rolling 48 months data retention period.
EOP-011-1	R6.	Since Last Compliance Audit	Rolling 48 months data retention period.
FAC-003-4	R1.	Last 3 Calendar Years	Rolling 36 Months data retention period.
FAC-003-4	R2.	Last 3 Calendar Years	Rolling 36 Months data retention period.
FAC-014-2	R5.	Last 3 Calendar Years	Rolling 36 Months data retention period.
IRO-001-4	R1.	Most Recent 90-Calendar Days Voice, Most Recent 12 Calendar Months Documentation	Rolling 90-day data retention period for voice and audio recordings.
IRO-001-4	R2.	Most Recent 90-Calendar Days Voice, Most Recent 12 Calendar Months Documentation	Rolling 90-day data retention period for voice and audio recordings.
IRO-001-4	R3.	Most Recent 90-Calendar Days Voice, Most Recent 12 Calendar Months Documentation	Rolling 90-day data retention period for voice and audio recordings.
IRO-002-5	R2.	Current In-Force Documents and Previous Documents Since Last Compliance Audit	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
IRO-002-5	R4.	Current In-Force Documents and Previous Documents Since Last Compliance Audit	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
IRO-002-5	R5.	Current Plus 1 Previous Calendar Year	Rolling 12 Calendar months data retention period.
IRO-002-5	R6.	Current Plus 1 Previous Calendar Year	Rolling 12 Calendar months data retention period.
IRO-006-5	R1.	Last 12 Calendar Months Plus Current Month	Rolling 12 Calendar months data retention period.
IRO-008-2	R4.	Rolling 30-Days	Rolling 30-day data retention period.
IRO-008-2	R5.	Rolling 90-Calendar Days for Voice, 12 Months for Operating Logs	Rolling 90-day data retention period for voice and audio recordings.
IRO-009-2	R2.	Rolling 12-Month Period	Rolling 12 Calendar months data retention period.
IRO-009-2	R3.	Rolling 12-Month Period	Rolling 12 Calendar months data retention period.
IRO-009-2	R4.	Rolling 12-Month Period	Rolling 12 Calendar months data retention period.
IRO-014-3	R4.	Rolling 90-Calendar Days for Voice, 12 Months for Operating Logs	Rolling 90-day data retention period for voice and audio recordings.
IRO-014-3	R5.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
IRO-014-3	R6.	Current Plus 3 Previous Calendar Years	Rolling 36 Months data retention period.
IRO-014-3	R7.	Rolling 90-Calendar Days for Voice, 12 Months for Operating Logs	Rolling 90-day data retention period for voice and audio recordings.
IRO-018-1(i)	R1.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
MOD-027-1	R2.	Last Load Control or Active Power/Frequency Control System Model Verification	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
MOD-027-1	R5.	Last 3 Calendar Years	Rolling 36 Months data retention period.
NUC-001-3	R4.	Current Plus 2 Previous Calendar Years	Rolling 12 Calendar months data retention period.
NUC-001-3	R5.	Current Plus 2 Previous Calendar Years	Rolling 12 Calendar months data retention period.
NUC-001-3	R7.	Current Plus 2 Previous Calendar Years	Rolling 12 Calendar months data retention period.
NUC-001-3	R8.	Current Plus 2 Previous Calendar Years	Rolling 12 Calendar months data retention period.
PER-003-1	R1.	Three Years or Since Last Compliance Audit Whichever is Longer	Rolling 36 Months data retention period.
PER-003-1	R2.	Three Years or Since Last Compliance Audit Whichever is Longer	Rolling 36 Months data retention period.
PER-003-1	R3.	Three Years or Since Last Compliance Audit Whichever is Longer	Rolling 36 Months data retention period.
PER-004-2	R1.	Current Plus 2 Previous Calendar Years	Rolling 36 Months data retention period.
PER-004-2	R2.	Current Plus 2 Previous Calendar Years	Rolling 36 Months data retention period.
PER-005-3	R3.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-001-1.1(ii)	R1.	Current In-Force Documents	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
PRC-001-1.1(ii)	R2.	90 Calendar Days	Rolling 90-day data retention period for voice and audio recordings.
PRC-001-1.1(ii)	R4.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-001-1.1(ii)	R5.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-001-1.1(ii)	R6.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-004-5(i)	R1.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
PRC-004-5(i)	R2.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
PRC-004-5(i)	R3.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
PRC-004-5(i)	R4.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
PRC-004-5(i)	R5.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
PRC-004-5(i)	R6.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
PRC-005-1.1b	R1.	Three Calendar Years	Rolling 36 Months data retention period.
PRC-005- 6	R3.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-005- 6	R4.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-006-3	R10.	Since Last Compliance Audit	Rolling 48 months data retention period.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
PRC-006-3	R15.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-006-3	R3.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-006-3	R4.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-006-3	R5.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-006-3	R9.	Since Last Compliance Audit	Rolling 48 months data retention period.
PRC-010-2	R1.	Six Calendar Years	Rolling 48 months data retention period.
PRC-010-2	R2.	Six Calendar Years	Rolling 48 months data retention period.
PRC-017-1	R1.	None Specified	Rolling 48 months data retention period.
PRC-023-4	R1.	Last 3 Calendar Years	Rolling 36 Months data retention period.
PRC-023-4	R2.	Last 3 Calendar Years	Rolling 36 Months data retention period.
PRC-023-4	R6.	Most Recent List of Circuits	Rolling 12 Calendar months data retention period.
PRC-025-2	R1.	Last 3 Calendar Years	Rolling 36 Months data retention period.
PRC-026-1	R2.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
TOP-001-4	R1.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
TOP-001-4	R2.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R3.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R4.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R5.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R6.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R7.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R8.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R10.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R11.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R12.	Three Calendar Years	Rolling 36 Months data retention period.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
TOP-001-4	R13.	Rolling 30-Days	Rolling 30-day data retention period.
TOP-001-4	R14.	Three Calendar Years	Rolling 36 Months data retention period.
TOP-001-4	R16.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R17.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R18.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-001-4	R20.	Current Plus 1 Previous Calendar Year	Rolling 12 Calendar months data retention period.
TOP-001-4	R23.	Current Plus 1 Previous Calendar Year	Rolling 12 Calendar months data retention period.
TOP-010-1(i)	R1.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TOP-010-1(i)	R2.	Current Calendar Year Plus One Previous Calendar Year, Except operator logs and voice recordings - retain for 90 calendar days	Rolling 12 Calendar months data retention period.
TPL-001-4	R1.	Current and Previous Planning Assessment	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
TPL-001-4	R2.	Since Last Compliance Audit	Rolling 36 Months data retention period.

Reliability Standard	Req.	Current Evidence Retention Summary	New Evidence Retention Recommendation
TPL-007-1	R4.	Current GMD Vulnerability Assessment and Preceding Assessment	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
TPL-007-1	R7.	Five Calendar Years	Rolling 48 months data retention period.
VAR-001-5	R1.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
VAR-001-5	R2.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.
VAR-001-5	R3.	Last 12 Calendar Months	Rolling 12 Calendar months data retention period.

Appendix D: Comparison of Requirements, Measures, Retention Detail and Recommended Retention

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
BAL-002-3	R1.	The Responsible Entity experiencing a Reportable Balancing Contingency Event shall: [Violation Risk Factor: High] [Time Horizon: Real-time Operations] 1.1. within the Contingency Event Recovery Period, demonstrate recovery by returning its Reporting ACE to at least the recovery value of: zero (if its Pre-Reporting Contingency Event ACE Value was positive or equal to zero); however, any Balancing Contingency Event that occurs during the Contingency Event Recovery Period shall reduce the required recovery: (i) beginning at the time of, and (ii) by the magnitude of, such individual Balancing Contingency Event, or, its Pre-Reporting Contingency Event ACE Value (if its Pre-Reporti ng Contingency Event ACE Value was negative); however, any Balancing Contingency Event that occurs during the Contingency Event Recovery Period shall reduce the required recovery: (i) beginning at the time of, and (ii) by the magnitude of, such individual Balancing Contingency Event. 1.2. document all Reportable Balancing Contingency Events using CR Form 1. 1.3. deploy Contingency Reserve, within system constraints, to respond to all Reportable Balancing Contingency Events, however, it is not subject to compliance with Requirement R1 part 1.1 if the Responsible Entity: 1.3.1 is (i) a Balancing Authority or (ii) a Reserve Sharing Group with at least one member that: is experiencing a Reliability Coordinator declared Energy Emergency Alert Level, and is utilizing its Contingency Reserve to mitigate an operating emergency in accordance with its emergency Operating Plan, and has depleted its Contingency Reserve to a level below its Most Severe Single Contingency, and has, during communications with its Reliability Coordinator in accordance with the Energy Emergency Alert procedures, (i) notified the Reliability Coordinator of the conditions described in the preceding two bullet points preventing the Responsible Entity from complying with Requirement R1 part 1.1, and (ii) provided the Reliability Coordinator with an ACE recovery plan,	Each Responsible Entity shall have, and provide upon request, as evidence, a CR Form 1 with date and time of occurrence to show compliance with Requirement R1. If Requirement R1 part 1.3 applies, then dated documentation that demonstrates compliance with Requirement R1 part 1.3 must also be provided.	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.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		including target recovery time or, 1.3.2 the Responsible Entity experiences: multiple Contingencies where the combined MW loss exceeds its Most Severe Single Contingency and that are defined as a single Balancing Contingency Event, or multiple Balancing Contingency Events within the sum of the time periods defined by the Contingency Event Recovery Period and Contingency Reserve Restoration Period whose combined magnitude exceeds the Responsible Entity's Most Severe Single Contingency.			
BAL-002-3	R2.	Each Responsible Entity shall develop, review and maintain annually, and implement an Operating Process as part of its Operating Plan to determine its Most Severe Single Contingency and make preparations to have Contingency Reserve equal to, or greater than the Responsible Entity's Most Severe Single Contingency available for maintaining system reliability. [Violation Risk Factor: High] [Time Horizon: Operations Planning]	Each Responsible Entity will have the following documentation to show compliance with Requirement R2: • a dated Operating Process; • evidence to indicate that the Operating Process has been reviewed and maintained annually; and, • evidence such as Operating Plans or other operator documentation that demonstrate that the entity determines its Most Severe Single Contingency and that Contingency Reserves equal to or greater than its Most Severe Single Contingency are included in this process.	The Responsible Entity shall retain data or evidence to show compliance for the current year, plus three previous calendar years, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 48 months data retention period.
BAL-003-1.1	R1.	Each Frequency Response Sharing Group (FRSG) or Balancing Authority that is not a member of a FRSG shall achieve an annual Frequency Response Measure (FRM) (as calculated and reported in accordance with Attachment A) that is equal to or more negative than its Frequency Response Obligation (FRO) to ensure that sufficient Frequency Response is provided by each FRSG or BA that is not a member of a FRSG to maintain Interconnection Frequency Response equal to or more negative than the Interconnection Frequency Response Obligation. [Risk Factor: High][Time Horizon: Real-time Operations]	Each Frequency Response Sharing Group or Balancing Authority that is not a member of a Frequency Response Sharing Group shall have evidence such as dated data plus documented formula in either hardcopy or electronic format that it achieved an annual FRM (in accordance with the methods specified by the ERO in Attachment A with data from FRS Form 1 reported to the ERO as specified in Attachment A) that is equal to or more negative than its FRO to demonstrate compliance with Requirement R1.	The BA shall retain data or evidence to show compliance with Requirements R1-R4, for the current year plus the previous three calendar years.	Rolling 48 months data retention period.
CIP-002-5.1a	R1.	Each Responsible Entity shall implement a process that considers each of the following assets for purposes of parts 1.1 through 1.3: [Violation Risk Factor: High][Time Horizon: Operations Planning] i.Control Centers and backup Control Centers; ii.Transmission stations and substations; iii.Generation resources; iv.Systems and facilities critical to system restoration, including Blackstart Resources and Cranking Paths and initial switching requirements; v.Special Protection Systems that support the reliable operation of the Bulk Electric System; and vi.For Distribution Providers, Protection Systems specified in Applicability section 4.2.1 above.	Acceptable evidence includes, but is not limited to, dated electronic or physical lists required by Requirement R1, and Parts 1.1 and 1.2.	Each Responsible Entity shall retain evidence of each requirement in this standard for three calendar years.	Rolling three-year data retention period.
CIP-014-2	R1.	Each Transmission Owner shall perform an initial risk assessment and subsequent risk assessments of its Transmission stations and Transmission substations (existing and planned to be in service	Examples of acceptable evidence may include, but are not limited to, dated written or electronic documentation of the risk assessment of its Transmission stations and Transmission substations	Each Responsible Entity shall retain evidence of each requirement in this standard for three calendar years.	Rolling three-year data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		within 24 months) that meet the criteria specified in Applicability Section 4.1.1. The initial and subsequent risk assessments shall consist of a transmission analysis or transmission analyses designed to identify the Transmission station(s) and Transmission substation(s) that if rendered inoperable or damaged could result in instability, uncontrolled separation, or Cascading within an Interconnection. [VRF: High; Time-Horizon: Long-term Planning] 1.1. Subsequent risk assessments shall be performed: · At least once every 30 calendar months for a Transmission Owner that has identified in its previous risk assessment (as verified according to Requirement R2) one or more Transmission stations or Transmission substations that if rendered inoperable or damaged could result in instability, uncontrolled separation, or Cascading within an Interconnection; or · At least once every 60 calendar months for a Transmission Owner that has not identified in its previous risk assessment (as verified according to Requirement R2) any Transmission stations or Transmission substations that if rendered inoperable or damaged could result in instability, uncontrolled separation, or Cascading within an Interconnection. 1.2. The Transmission Owner shall identify the primary control center that operationally controls each Transmission station or Transmission substation identified in the Requirement R1 risk assessment.	(existing and planned to be in service within 24 months) that meet the criteria in Applicability Section 4.1.1 as specified in Requirement R1. Additionally, examples of acceptable evidence may include, but are not limited to, dated written or electronic documentation of the identification of the primary control center that operationally controls each Transmission station or Transmission substation identified in the Requirement R1 risk assessment as specified in Requirement R1, Part 1.2.		
COM-001-3	R1.	Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [Violation Risk Factor: High] [Time Horizon: Real-time Operations]1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.1.2. Each adjacent Reliability Coordinator within the same Interconnection.	Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to: • physical assets, or • dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R1.)	The Reliability Coordinator for Requirements R1, R2, R9, and R10, Measures M1, M2, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.
COM-001-3	R2.	Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: [Violation Risk Factor: High] [Time Horizon: Real-time Operations] 2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area. 2.2. Each adjacent Reliability Coordinator within the same Interconnection.	Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to: • physical assets, or • dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice	The Reliability Coordinator for Requirements R1, R2, R9, and R10, Measures M1, M2, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
			recordings, transcripts of voice recordings, or electronic communications. (R2.)		
COM-001-3	R12.	Each Reliability Coordinator, Transmission Operator, Generator Operator, and Balancing Authority shall have internal Interpersonal Communication capabilities for the exchange of information that is necessary for the Reliable Operation of the BES. [Violation Risk Factor: High] [Time Horizon: Real-time Operations].	Each Reliability Coordinator, Transmission Operator, Generator Operator, and Balancing Authority shall have and provide upon request evidence that it has internal Interpersonal Communication capability, which could include, but is not limited to: • physical assets, or • dated evidence, such as, equipment specifications and installation documentation, operating procedures, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications.	Responsible entities under Requirement R12, Measure M12 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.
COM-001-3	R3.	Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [Violation Risk Factor: High] [Time Horizon: Real-time Operations] 3.1. Its Reliability Coordinator. 3.2. Each Balancing Authority within its Transmission Operator Area. 3.3. Each Distribution Provider within its Transmission Operator Area. 3.4. Each Generator Operator within its Transmission Operator Area. 3.5. Each adjacent Transmission Operator synchronously connected. 3.6. Each adjacent Transmission Operator asynchronously connected.	Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously or synchronously connected, which could include, but is not limited to: • Physical assets, or • Dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communication. (R3.)	The Transmission Operator for Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.
COM-001-3	R4.	Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: [Violation Risk Factor: High] [Time Horizon: Real-time Operations] 4.1. Its Reliability Coordinator. 4.2. Each Balancing Authority within its Transmission Operator Area. 4.3. Each adjacent Transmission Operator synchronously connected. 4.4. Each adjacent Transmission Operator asynchronously connected.	Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to: • Physical assets, or • Dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)	The Transmission Operator for Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.
COM-001-3	R5.	Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [Violation Risk Factor: High] [Time Horizon: Real-time Operations]5.1. Its Reliability Coordinator.5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.5.3. Each Distribution Provider within its Balancing Authority Area.5.4.	Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to: • Physical assets, or • Dated evidence, such as, equipment specifications	The Balancing Authority for Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		Each Generator Operator that operates Facilities within its Balancing Authority Area.5.5. Each Adjacent Balancing Authority.	and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)		
COM-001-3	R6.	Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: [Violation Risk Factor: High] [Time Horizon: Real-time Operations] 6.1. Its Reliability Coordinator. 6.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area. 6.3. Each Adjacent Balancing Authority.	Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to: • Physical assets, or • Dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)	The Balancing Authority for Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.
COM-001-3	R8.	Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): [Violation Risk Factor: High] [Time Horizon: Real-time Operations] 8.1. Its Balancing Authority. 8.2. Its Transmission Operator.	Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to: • Physical assets, or • Dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)	The Generator Operator for Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.
COM-002-4	R5.	Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: Confirm the receiver's response if the repeated information is correct (in accordance with Requirement R6). • Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or • Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issued an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence that the issuer either: 1) confirmed that the response from the recipient of the Operating Instruction was correct; 2) reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver; or 3) took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver. Such evidence could include, but is not limited to, dated and timestamped voice recordings, or dated and time-stamped transcripts of voice recordings, or dated operator logs in fulfillment of Requirement R5.	The Generator Operator for Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.
COM-002-4	R6.	Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: • Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or• Request that the issuer reissue the Operating Instruction.	Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that was the recipient of an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence to show that the recipient either repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer	The Generator Operator for Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
			reissue the Operating Instruction in fulfillment of Requirement R6. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, an attestation from the issuer of the Operating Instruction, memos or transcripts.		
COM-002-4	R7.	Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.	Each Balancing Authority, Reliability Coordinator and Transmission Operator that issued a written or oral single or multiple-party burst Operating Instruction during an Emergency shall provide evidence that the Operating Instruction was received by at least one receiver. Such evidence may include, but is not limited to, dated and timestamped voice recordings (if the entity has such recordings), dated operator logs, electronic records, memos or transcripts.	The Generator Operator for Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.	Rolling 12 Calendar months data retention period.
EOP-005-3	R1.	Each Transmission Operator shall develop and implement a restoration plan approved by its Reliability Coordinator. The restoration plan shall allow for restoring the Transmission Operator's System following a Disturbance in which one or more areas of the Bulk Electric System (BES) shuts down and the use of Blackstart Resources is required to restore the shutdown area to service. The restoration plan shall include: [Violation Risk Factor = High] [Time Horizon = Operations Planning, Real-time Operations]1.1. Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy for restoring the Interconnection.1.2. A description of how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.1.3. Procedures for restoring interconnections with other Transmission Operators under the direction of the Reliability Coordinator.1.4. Identification of each Blackstart Resource and its characteristics including but not limited to the following: the name of the Blackstart Resource, location, megawatt and megavar capacity, and type of unit.1.5. Identification of Cranking Paths and initial switching requirements between each Blackstart Resource and the unit(s) to be started.1.6. Identification of acceptable operating voltage and frequency limits during restoration.1.7. Operating Processes to reestablish connections within the Transmission Operator's System for areas that have been restored and are prepared for reconnection.1.8. Operating Processes to restore Loads required to restore the System, such as station service for substations, units to be restarted or stabilized, the Load needed to stabilize generation and frequency, and provide voltage control.1.9.	M1. M2. M3. M4. M5. M6. M7. M8. M9. Each Transmission Operator shall have a dated, documented System restoration plan developed in accordance with Requirement R1 that has been approved by its Reliability Coordinator as shown with the documented approval from its Reliability Coordinator and will have evidence, such as operator logs, voice recordings or other operating documentation, voice recordings or other communication documentation to show that its restoration plan was implemented for times when a Disturbance has occurred, in accordance with Requirement R1.	Approved restoration plan and any restoration plans in effect since the last compliance audit for Requirement R1, Measure M1.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		Operating Processes for transferring authority back to the Balancing Authority in accordance with the Reliability Coordinator's criteria.			
EOP-006-3	R1.	Each Reliability Coordinator shall develop, maintain, and implement a Reliability Coordinator Area restoration plan. The scope of the Reliability Coordinator's restoration plan starts when Blackstart Resources are utilized to re-energize a shutdown area of the Bulk Electric System (BES), or separation has occurred between neighboring Reliability Coordinators, or an energized island has been formed on the BES within the Reliability Coordinator Area. The scope of the Reliability Coordinator's restoration plan ends when all of its Transmission Operators are interconnected and its Reliability Coordinator Area is connected to all of its neighboring Reliability Coordinator Areas. The restoration plan shall include: [Violation Risk Factor = High] [Time Horizon = Operations Planning, Real-time Operations]1.1. A description of the high-level strategy to be employed during restoration events for restoring the Interconnection, including minimum criteria for meeting the objectives of the Reliability Coordinator's restoration plan.1.2. Criteria and conditions for re-establishing interconnections with other Transmission Operators within its Reliability Coordinator Area, with adjacent Transmission Operators in other Reliability Coordinator Areas, and with adjacent Reliability Coordinators.1.3. Reporting requirements for the entities within the Reliability Coordinator Area during a restoration event.1.4. Criteria for sharing information regarding restoration with neighboring Reliability Coordinators and with Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.1.5. Identification of the Reliability Coordinator as the primary contact for disseminating information regarding restoration to neighboring Reliability Coordinators, and to Transmission Operators, and Balancing Authorities within its Reliability Coordinator Area.1.6. Criteria for transferring operations and authority back to the Balancing Authority.	Each Reliability Coordinator shall have available a dated copy of its restoration plan and will have evidence, such as operator logs or other operating documentation, voice recordings, or other communication documentation to show that its restoration plan was implemented in accordance with Requirement R1.	The current restoration plan and any restoration plans in effect since the last compliance audit for Requirement R1, Measure M1.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
EOP-008-2	R3.	Each Reliability Coordinator shall have a backup control center facility (provided through its own dedicated backup facility or at another entity's control center staffed with certified Reliability Coordinator operators when control has been transferred to the backup facility) that provides the functionality required for maintaining compliance with all Reliability Standards that depend on primary control center functionality. To avoid requiring a tertiary facility, a backup facility is not required	Each Reliability Coordinator shall provide dated evidence that it has a backup control center facility (provided through its own dedicated backup facility or at another entity's control center staffed with certified Reliability Coordinator operators when control has been transferred to the backup facility) that provides the functionality required for maintaining compliance with all Reliability Standards that are applicable to the primary control	Each Reliability Coordinator shall retain dated evidence for the time period since its last compliance audit, that it has demonstrated that it has a backup control center facility (provided through its own dedicated backup facility or at another entity's control center staffed with certified Reliability Coordinator operators when control has been transferred to the backup facility) in accordance with Requirement R3 that provides the functionality required for maintaining compliance with all Reliability Standards	Rolling 48 months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		during: [Violation Risk Factor = High] [Time Horizon = Operations Planning]• Planned outages of the primary or backup facilities of two weeks or less• Unplanned outages of the primary or backup facilities	center functionality in accordance with Requirement R3.	that are applicable to the primary control center functionality in accordance with Measurement M3.	
EOP-008-2	R4.	Each Balancing Authority and Transmission Operator shall have backup functionality (provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location) that includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all Reliability Standards that depend on a Balancing Authority and Transmission Operator's primary control center functionality respectively. To avoid requiring tertiary functionality, backup functionality is not required during: [Violation Risk Factor = High] [Time Horizon = Operations Planning] • Planned outages of the primary or backup functionality of two weeks or less • Unplanned outages of the primary or backup functionality	Each Balancing Authority and Transmission Operator shall provide dated evidence that its backup functionality (provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location) includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all Reliability Standards that are applicable to a Balancing Authority's or Transmission Operator's primary control center functionality in accordance with Requirement R4.	Each Balancing Authority and Transmission Operator shall retain dated evidence for the time period since its last compliance audit, that it has demonstrated that it's backup functionality (provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location) in accordance with Requirement R4 includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all Reliability Standards that are applicable to a Balancing Authority's and Transmission Operator's primary control center functionality in accordance with Measurement M4.	Rolling 48 months data retention period.
EOP-011-1	R1.	Each Transmission Operator shall develop, maintain and implement a Reliability Coordinator-approved Emergency Operating Plan to mitigate operating Emergencies on its Transmission System. At a minimum, the Emergency Operating Plan shall include the following elements: [Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning]	Each Transmission Operator will have a dated Operating Plan(s) developed in accordance with Requirement R1 and reviewed by its Reliability Coordinator; evidence such as a review or revision history to indicate that the Operating Plan(s) has been maintained; and will have as evidence, such as operator logs or other operating documentation, voice recordings or other communication documentation to show that its Operating Plan(s) was implemented for times when an Emergency has occurred, in accordance with Requirement R1.	The Transmission Operator shall retain the current Operating Plan(s), evidence of review or revision history plus each version issued since the last audit and evidence of compliance since the last audit for Requirements R1 and R4 and Measures M1 and M4.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
EOP-011-1	R2.	Each Balancing Authority shall develop, maintain, and implement a Reliability Coordinator-approved Emergency Operating Plan to mitigate Capacity and Energy Emergencies. At a minimum, the Emergency Operating Plan shall include the following elements: [Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning]	Each Balancing Authority will have a dated Operating Plan(s) developed in accordance with Requirement R2 and reviewed by its Reliability Coordinator; evidence such as a review or revision history to indicate that the Operating Plan(s) has been maintained; and will have as evidence, such as operator logs or other operating documentation, voice recordings, or other communication documentation to show that its Operating Plan(s) was implemented for times when an Emergency has occurred, in accordance with Requirement R2.	The Balancing Authority shall retain the current Operating Plan(s), evidence of review or revision history plus each version issued since the last audit and evidence of compliance since the last audit for Requirements R2 and R4, and Measures M2 and M4.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
EOP-011-1	R3.	Each Reliability Coordinator shall approve or disapprove, with stated reasons for disapproval, Emergency Operating Plans submitted by Transmission Operators and Balancing Authorities within 30 calendar days of submittal. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning]	The Reliability Coordinator will have documentation, such as dated e-mails or other correspondences that it reviewed Transmission Operator and Balancing Authority Operating Plans within 30 calendar days of submittal in accordance with Requirement R3.	The Reliability Coordinator shall maintain evidence of compliance since the last audit for Requirements R3, R5, and R6 and Measures M3, M5, and M6.	Rolling 48 months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
EOP-011-1	R4.	Each Reliability Coordinator that receives an Emergency notification from a Transmission Operator or Balancing Authority shall notify, as soon as practical, other impacted Reliability Coordinators, Balancing Authorities and Transmission Operators. [Violation Risk Factor: High] [Time Horizon: Real-Time Operations]	The Transmission Operator and Balancing Authority will have documentation, such as dated emails or other correspondence, with an Operating Plan(s) version history showing that it responded and updated the Operating Plan(s) within the timeframe identified by its Reliability Coordinator in accordance with Requirement R4.	The Reliability Coordinator shall maintain evidence of compliance since the last audit for Requirements R3, R5, and R6 and Measures M3, M5, and M6.	Rolling 48 months data retention period.
EOP-011-1	R5.	Each Reliability Coordinator that has a Balancing Authority experiencing a potential or actual Energy Emergency within its Reliability Coordinator Area shall initiate an Energy Emergency Alert, as detailed in Attachment 1. [Violation Risk Factor: High] [Time Horizon: Real-Time Operations]	Each Reliability Coordinator that receives an Emergency notification from a Balancing Authority or Transmission Operator within its Reliability Coordinator Area will have, and provide upon request, evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent evidence that will be used to determine if the Reliability Coordinator communicated, in accordance with Requirement R5, with other Balancing Authorities and Transmission Operators in its Reliability Coordinator Area, and neighboring Reliability Coordinators.	The Reliability Coordinator shall maintain evidence of compliance since the last audit for Requirements R3, R5, and R6 and Measures M3, M5, and M6.	Rolling 48 months data retention period.
EOP-011-1	R6.	Each Reliability Coordinator that has a Balancing Authority experiencing a potential or actual Energy Emergency within its Reliability Coordinator Area shall declare an Energy Emergency Alert, as detailed in Attachment 1. [Violation Risk Factor: High] [Time Horizon: Real-Time Operations]	Each Reliability Coordinator, with a Balancing Authority experiencing a potential or actual Energy Emergency within its Reliability Coordinator Area, will have, and provide upon request, evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent evidence that it declared an Energy Emergency Alert, as detailed in Attachment 1, in accordance with Requirement R6.	The Reliability Coordinator shall maintain evidence of compliance since the last audit for Requirements R3, R5, and R6 and Measures M3, M5, and M6.	Rolling 48 months data retention period.
FAC-003-4	R1.	Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the Minimum Vegetation Clearance Distance (MVCD) of its applicable line(s) which are either an element of an IROL, or an element of a Major WECC Transfer Path; operating within their Rating and all Rated Electrical Operating Conditions of the types shown below4 [Violation Risk Factor: High] [Time Horizon: Real-time] 1.1 An encroachment into the MVCD as shown in FAC-003-Table 2, observed in Real-time, absent a Sustained Outage, 1.2. An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage 6, 1.3. An encroachment due to the blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage7, 1.4. An encroachment due to vegetation growth into the MVCD that caused a vegetation-related Sustained Outage.	Each applicable Transmission Owner and applicable Generator Owner has evidence that it managed vegetation to prevent encroachment into the MVCD as described in R1. Examples of acceptable forms of evidence may include dated attestations, dated reports containing no Sustained Outages associated with encroachment types 2 through 4 above, or records confirming no Real-time observations of any MVCD encroachments. (R1)	The applicable Transmission Owner and applicable Generator Owner retains data or evidence to show compliance with Requirements R1, R2, R3, R5, R6 and R7, for three calendar years.	Rolling 36 Months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
FAC-003-4	R2.	Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the MVCD of its applicable line(s) which are not either an element of an IROL, or an element of a Major WECC Transfer Path; operating within its Rating and all Rated Electrical Operating Conditions of the types shown below [Violation Risk Factor: High] [Time Horizon: Real-time] 2.1. An encroachment into the MVCD, observed in Real-time, absent a Sustained Outage, 2.2. An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage, 2.3. An encroachment due to blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage, 2.4. An encroachment due to vegetation growth into the line MVCD that caused a vegetation-related Sustained Outage.	Each applicable Transmission Owner and applicable Generator Owner has evidence that it managed vegetation to prevent encroachment into the MVCD as described in R2. Examples of acceptable forms of evidence may include dated attestations, dated reports containing no Sustained Outages associated with encroachment types 2 through 4 above, or records confirming no Real-time observations of any MVCD encroachments. (R2)	The applicable Transmission Owner and applicable Generator Owner retains data or evidence to show compliance with Requirements R1, R2, R3, R5, R6 and R7, for three calendar years.	Rolling 36 Months data retention period.
FAC-014-2	R5.	The Reliability Coordinator, Planning Authority and Transmission Planner shall each provide its SOLs and IROLs to those entities that have a reliability-related need for those limits and provide a written request that includes a schedule for delivery of those limits as follows: The Reliability Coordinator shall provide its SOLs (including the subset of SOLs that are IROLs) to adjacent Reliability Coordinators and Reliability Coordinators who indicate a reliability-related need for those limits, and to the Transmission Operators, Transmission Planners, Transmission Service Providers and Planning Authorities within its Reliability Coordinator Area. For each IROL, the Reliability Coordinator shall provide the following supporting information:	See R2. Measure	The applicable Transmission Owner and applicable Generator Owner retains data or evidence to show compliance with Requirements R1, R2, R3, R5, R6 and R7, for three calendar years.	Rolling 36 Months data retention period.
IRO-001-4	R1.	Each Reliability Coordinator shall act, or direct others to act, by issuing Operating Instructions, to ensure the reliability of its Reliability Coordinator Area. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Each Reliability Coordinator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to address the reliability of its Reliability Coordinator Area via direct actions or by issuing Operating Instructions.	The Reliability Coordinator for Requirement R1, Measure M1 shall retain voice recordings for the most recent 90-calendar days and documentation for the most recent 12-calendar months.	Rolling 90-day data retention period for voice and audio recordings.
IRO-001-4	R2.	Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's Operating Instructions unless compliance with the Operating Instructions cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. [Violation Risk	Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its	The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings for the most recent 90-calendar days and documentation for the most recent 12-calendar months.	Rolling 90-day data retention period for voice and audio recordings.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Reliability Coordinator's Operating Instructions, unless the instruction could not be physically implemented, or such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall have and provide copies of the safety, equipment, regulatory, or statutory requirements as evidence for not complying with the Reliability Coordinator's Operating Instructions. If such a situation has not occurred, the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider may provide an attestation.		
IRO-001-4	R3.	Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator of its inability to perform the Operating Instruction issued by its Reliability Coordinator in Requirement R1. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it informed its Reliability Coordinator of its inability to perform an Operating Instruction issued by its Reliability Coordinator in Requirement R1.	The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings for the most recent 90-calendar days and documentation for the most recent 12-calendar months.	Rolling 90-day data retention period for voice and audio recordings.
IRO-002-5	R2.	Each Reliability Coordinator shall have data exchange capabilities, with redundant and diversely routed data exchange infrastructure within the Reliability Coordinator's Control Center, for the exchange of Real-time data with its Balancing Authorities and Transmission Operators, and with other entities it deems necessary, for performing its Real-time monitoring and Real-time Assessments. [Violation Risk Factor: High] [Time Horizon: Same-Day Operations, Real-time Operations]	Each Reliability Coordinator shall have, and provide upon request, evidence that could include, but is not limited to, system specifications, system diagrams, or other documentation that lists its data exchange capabilities, including redundant and diversely routed data exchange infrastructure within the Reliability Coordinator's primary Control Center, for the exchange of Real-time data with its Balancing Authorities and Transmission Operators, and with other entities it deems necessary, as specified in the requirement.	The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R1, R2, and R4 and Measures M1, M2, and M4.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
IRO-002-5	R4.	Each Reliability Coordinator shall provide its System Operators with the authority to approve planned outages and maintenance of its telecommunication, monitoring and analysis capabilities. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Each Reliability Coordinator shall have, and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operators with the authority to approve planned outages and maintenance of its telecommunication, monitoring and analysis capabilities.	The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R1, R2, and R4 and Measures M1, M2, and M4.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
IRO-002-5	R5.	Each Reliability Coordinator shall monitor Facilities, the status of Remedial Action Schemes, and non-BES facilities identified as necessary by the Reliability Coordinator, within its Reliability Coordinator Area and neighboring Reliability Coordinator Areas to identify any System Operating Limit exceedances and to determine any Interconnection Reliability Operating Limit	Each Reliability Coordinator shall monitor Facilities, the status of Remedial Action Schemes, and non-BES facilities identified as necessary by the Reliability Coordinator, within its Reliability Coordinator Area and neighboring Reliability Coordinator Areas to identify any System Operating Limit exceedances and to determine any Interconnection Reliability Operating Limit	The Reliability Coordinator shall keep data or evidence for Requirements R5 and R6 and Measures M5 and M6 for the current calendar year and one previous calendar year.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		exceedances within its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-Time Operations]	exceedances within its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-Time Operations]		
IRO-002-5	R6.	Each Reliability Coordinator shall have monitoring systems that provide information utilized by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant infrastructure. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]	Each Reliability Coordinator shall have monitoring systems that provide information utilized by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant infrastructure. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]	The Reliability Coordinator shall keep data or evidence for Requirements R5 and R6 and Measures M5 and M6 for the current calendar year and one previous calendar year.	Rolling 12 Calendar months data retention period.
IRO-006-5	R1.	Each Reliability Coordinator and Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a reliability reason to the requestor why it cannot comply with the request.	Each Reliability Coordinator and Balancing Authority shall provide evidence (such as dated logs, voice recordings, Tag histories, and studies, in electronic or hard copy format) that, when a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure was made from another Reliability Coordinator, Balancing Authority, or Transmission Operator in that other Interconnection, it complied with the request or provided a reliability reason why it could not comply with the request (R1).	The Reliability Coordinator and Balancing Authority shall maintain evidence to show compliance with R1 for the most recent twelve calendar months plus the current month.	Rolling 12 Calendar months data retention period.
IRO-008-2	R4.	Each Reliability Coordinator shall ensure that a Real-time Assessment is performed at least once every 30 minutes. [Violation Risk Factor: High] [Time Horizon: Same-day Operations, Real-time Operations]	Each Reliability Coordinator shall have, and make available upon request, evidence to show it ensured that a Real-time Assessment is performed at least once every 30 minutes. This evidence could include but is not limited to dated computer logs showing times the assessment was conducted, dated checklists, or other evidence.	Each Reliability Coordinator shall each keep data or evidence for Requirement R4 and Measure M4 for a rolling 30-calendar day period, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 30-day data retention period.
IRO-008-2	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 Reliability Coordinator Wide Area. [Violation Risk Factor: High] [Time Horizon: Same-Day Operations, Real-time Operations]	Each Reliability Coordinator shall make available upon request, evidence that it informed impacted Transmission Operators and Balancing Authorities within its Reliability Coordinator Area, and other impacted Reliability Coordinators as indicated in its Operating Plan, of its actual or expected operations that result in, or could result in, a System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) exceedance within its Wide Area. Such evidence could include but is not limited to dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence. If such a situation has not occurred, the Reliability Coordinator may provide an attestation.	Each Reliability Coordinator shall keep data or evidence to show compliance for Requirements R1 through R3, R5, and R6 and Measures M1 through M3, M5, and M6 for a rolling 90-calendar days period for analyses, the most recent 90- calendar days for voice recordings, and 12 months for operating logs and e-mail records unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 90-day data retention period for voice and audio recordings.
IRO-009-2	R2.	Each Reliability Coordinator shall initiate one or more Operating Processes, Procedures, or Plans (not limited to the Operating Processes, Procedures, or Plans developed for Requirement R1) that are intended to prevent an IROL exceedance, as identified in the Reliability Coordinator's Real-time	Each Reliability Coordinator shall have, and make available upon request, evidence to confirm that it initiated one or more Operating Processes, Procedures or Plans (not limited to the Operating Processes, Procedures, or Plans developed for Requirements R1) in accordance with Requirement R2. This evidence could include, but is not limited	The Reliability Coordinator shall retain evidence of Requirement R1; Requirement R2; Requirement R3; and Requirement R4 for a rolling 12 months.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		monitoring or Real-time Assessment. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]	to, Operating Processes, Procedures, or Plans from Requirement R1, dated operating logs, dated voice recordings, dated transcripts of voice recordings, or other evidence.		
IRO-009-2	R3.	Each Reliability Coordinator shall act or direct others to act so that the magnitude and duration of an IROL exceedance is mitigated within the IROL's Tv, as identified in the Reliability Coordinator's Real-time monitoring or Real-time Assessment. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]	Each Reliability Coordinator shall have, and make available upon request, evidence to confirm that it acted or directed others to act in accordance with Requirement R3. This evidence could include, but is not limited to, Operating Processes, Procedures, or Plans, dated operating logs, dated voice recordings, dated transcripts of voice recordings, or other evidence.	The Reliability Coordinator shall retain evidence of Requirement R1; Requirement R2; Requirement R3; and Requirement R4 for a rolling 12 months.	Rolling 12 Calendar months data retention period.
IRO-009-2	R4.	Each Reliability Coordinator shall operate to the most limiting IROL and Tv in instances where there is a difference in an IROL or its Tv between Reliability Coordinators that are responsible for that Facility (or group of Facilities). [Violation Risk Factor: High] [Time Horizon: Real-time Operations]	Each Reliability Coordinator shall have, and make available upon request, evidence to confirm that it operated to the most limiting IROL and Tv in instances where there was a difference in an IROL or its Tv. Such evidence could include, but is not limited to, dated computer printouts, dated operator logs, dated voice recordings, dated transcripts of voice recordings, or other equivalent evidence in accordance with Requirement R4.	The Reliability Coordinator shall retain evidence of Requirement R1; Requirement R2; Requirement R3; and Requirement R4 for a rolling 12 months.	Rolling 12 Calendar months data retention period.
IRO-014-3	R4.	Each impacted Reliability Coordinator shall operate as though the Emergency exists during each instance where Reliability Coordinators disagree on the existence of an Emergency. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Each Reliability Coordinator shall have and provide evidence which may include but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated as though an Emergency existed during each instance where Reliability Coordinators disagreed on the existence of an Emergency.	Each Reliability Coordinator shall retain evidence for 90-calendar days for operator logs and voice recordings and for the period since the last compliance audit for other evidence for Requirements R3, R4, and R7 and Measures M3, M4, and M7.	Rolling 90-day data retention period for voice and audio recordings.
IRO-014-3	R5.	Each Reliability Coordinator that Identifies an Emergency in its Reliability Coordinator Area shall develop an action plan to resolve the Emergency during those instances where impacted Reliability Coordinators disagree on the existence of an Emergency. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Each Reliability Coordinator that identifies an Emergency in its Reliability Coordinator Area shall have evidence that it developed an action plan during those instances where impacted Reliability Coordinators disagreed on the existence of an Emergency. This evidence may include but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation.	Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R5 and Measure M5.	Rolling 12 Calendar months data retention period.
IRO-014-3	R6.	Each impacted Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identifies the Emergency during those instances where Reliability Coordinators disagree on the existence of an Emergency, unless such actions would violate safety, equipment, regulatory, or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Each impacted Reliability Coordinator shall have and provide evidence which may include but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it implemented the action plan developed by the Reliability Coordinator who identifies the Emergency when Reliability Coordinators disagree on the existence of an Emergency unless such actions would have violated safety, equipment, regulatory, or statutory requirements.	Each Reliability Coordinator shall retain 3-calendar years plus current calendar year of evidence for Requirement R6 and Measure M6.	Rolling 36 Months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
IRO-014-3	R7.	Each Reliability Coordinator shall assist Reliability Coordinators, if requested and able, provided that the requesting Reliability Coordinator has implemented its emergency procedures, unless such actions cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]	Each Reliability Coordinator shall make available upon request, evidence that requested assistance was provided, if able, to requesting Reliability Coordinators unless such actions could not be physically implemented or would violate safety, equipment, regulatory, or statutory requirements. Such evidence could include but is not limited to dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence in electronic or hard copy format. If such a situation has not occurred, the Reliability Coordinator may provide an attestation.	Each Reliability Coordinator shall retain evidence for 90-calendar days for operator logs and voice recordings and for the period since the last compliance audit for other evidence for Requirements R3, R4, and R7 and Measures M3, M4, and M7.	Rolling 90-day data retention period for voice and audio recordings.
IRO-018-1(i)	R1.	Each Reliability Coordinator shall implement an Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its Real-time monitoring and Real-time Assessments. The Operating Process or Operating Procedure shall include: [Violation Risk Factor: High] [Time Horizon: Real-time Operations]1.1. Criteria for evaluating the quality of Real-time data;1.2. Provisions to indicate the quality of Real-time data to the System Operator; and1.3. Actions to address Real-time data quality issues with the entity(ies) responsible for providing the data when data quality affects Real-time Assessments.	Each Reliability Coordinator shall have evidence it implemented its Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its Real-time monitoring and Real-time Assessments. This evidence could include, but is not limited to: 1) an Operating Process or Operating Procedure in electronic or hard copy format meeting all provisions of Requirement R1; and 2) evidence the Reliability Coordinator implemented the Operating Process or Operating Procedure as called for in the Operating Process or Operating Procedure, such as dated operator or supporting logs, dated checklists, voice recordings, voice transcripts, or other evidence.	The Reliability Coordinator shall retain evidence of compliance for Requirements R1 and R3 and Measures M1 and M3 for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
MOD-027-1	R2.	Each Generator Owner shall provide, for each applicable unit, a verified turbine/governor and load control or active power/frequency control model, including documentation and data (as specified in Part 2.1) to its Transmission Planner in accordance with the periodicity specified in MOD-027 Attachment 1. 2.1. Each applicable unit's model shall be verified by the Generator Owner using one or more models acceptable to the Transmission Planner. Verification for individual units rated less than 20 MVA (gross nameplate rating) in a generating plant (per Section 4.2.1.2, 4.2.2.2, or 4.2.3.2) may be performed using either individual unit or aggregate unit model(s) or both. Each verification shall include the following: 2.1.1. Documentation comparing the applicable unit's MW model response to the recorded MW response for either: • A frequency excursion from a system disturbance that meets MOD-027 Attachment 1 Note 1 with the applicable unit on-line, • A speed governor reference change with the applicable unit on-line, or • A partial load rejection test, 2.1.2. Type of governor and load control or active power control/frequency control1 equipment,	The Generator Owner must have and provide dated evidence it verified each generator turbine/governor and load control or active power/frequency control model according to Part 2.1 for each applicable unit and a dated transmittal (e.g., electronic mail message, postal receipt, or confirmation of facsimile) as evidence it provided the model, documentation, and data to its Transmission Planner, in accordance with Requirement R2.	The Generator Owner shall retain the latest turbine/governor and load control or active power/frequency control system model verification evidence of Requirement R2, Measure M2.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		2.1.3. A description of the turbine (e.g. for hydro turbine - Kaplan, Francis, or Pelton; for steam turbine - boiler type, normal fuel type, and turbine type; for gas turbine - the type and manufacturer; for variable energy plant - type and manufacturer), 2.1.4. Model structure and data for turbine/governor and load control or active power/frequency control, and 2.1.5. Representation of the real power response effects of outer loop controls (such as operator set point controls, and load control but excluding AGC control) that would override the governor response (including blocked or nonfunctioning governors or modes of operation that limit Frequency Response), if applicable.			
MOD-027-1	R5.	Each Transmission Planner shall provide a written response to the Generator Owner within 90 calendar days of receiving the turbine/governor and load control or active power/frequency control system verified model information in accordance with Requirement R2 that the model is usable (meets the criteria specified in Parts 5.1 through 5.3) or is not usable. 5.1. The turbine/governor and load control or active power/frequency control function model initializes to compute modeling data without error,5.2. A no-disturbance simulation results in negligible transients, and5.3. For an otherwise stable simulation, a disturbance simulation results in the turbine/governor and load control or active power/frequency control model exhibiting positive damping.If the model is not usable, the Transmission Planner shall provide a technical description of why the model is not usable.	Evidence of Requirement R5 must include, for each model received, the dated response indicating the model was usable or not usable according to the criteria specified in Parts 5.1 through 5.3 and for a model that is not useable, a technical description is the model is not usable, and dated evidence of transmittal (e.g., electronic mail messages, postal receipts, or confirmation of facsimile) that the Generator Owner was notified within 90 calendar days of receipt of model information in accordance with Requirement R5.	The Transmission Planner shall retain the information/data request and provided response evidence of Requirements R1 and R5, Measures M1 and M5 for 3 calendar years from the date the document was provided.	Rolling 36 Months data retention period.
NUC-001-3	R4.	Per the Agreements developed in accordance with this standard, the applicable Transmission Entities shall [Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-time Operations]	Each Transmission Entity responsible for operating the electric system in accordance with the Agreement shall demonstrate or provide evidence of the following, upon request of the Compliance Enforcement Authority: · The NPIRs have been incorporated into the current operating analysis of the electric system. (Requirement 4.1) · The electric system was operated to meet the NPIRs. (Requirement 4.2) · The Transmission Entity informed the Nuclear Plant Generator Operator when it became aware it lost the capability to assess the operation of the electric system affecting the NPIRs	For Measures 4, 6 and 8, the Transmission Entity shall keep evidence for two years plus current.	Rolling 12 Calendar months data retention period.
NUC-001-3	R5.	Per the Agreements developed in accordance with this standard, the Nuclear Plant Generator Operator shall operate the nuclear plant to meet the NPIRs. [Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-time Operations]	The Nuclear Plant Generator Operator shall, upon request of the Compliance Enforcement Authority, demonstrate or provide evidence that the nuclear power plant is being operated consistent with the NPIRs.	For Measures 5, 6 and 7, the Nuclear Plant Generator Operator shall keep evidence for two years plus current.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
NUC-001-3	R7.	Per the Agreements developed in accordance with this standard, the Nuclear Plant Generator Operator shall inform the applicable Transmission Entities of actual or proposed changes to nuclear plant design (e.g., protective relay setpoints), configuration, operations, limits, or capabilities that may impact the ability of the electric system to meet the NPIRs. [Violation Risk Factor: High] [Time Horizon: Long-term Planning]	The Nuclear Plant Generator Operator shall provide evidence that it informed the applicable Transmission Entities of changes to nuclear plant design (e.g., protective relay setpoints), configuration, operations, limits, or capabilities that may impact the ability of the Transmission Entities to meet the NPIRs.	For Measures 5, 6 and 7, the Nuclear Plant Generator Operator shall keep evidence for two years plus current.	Rolling 12 Calendar months data retention period.
NUC-001-3	R8.	Per the Agreements developed in accordance with this standard, the applicable Transmission Entities shall inform the Nuclear Plant Generator Operator of actual or proposed changes to electric system design (e.g., protective relay setpoints), configuration, operations, limits, or capabilities that may impact the ability of the electric system to meet the NPIRs. [Violation Risk Factor: High] [Time Horizon: Long-term Planning]	The Transmission Entities shall each provide evidence that the entities informed the Nuclear Plant Generator Operator of changes to electric system design (e.g., protective relay setpoints), configuration, operations, limits, or capabilities that may impact the ability of the Nuclear Plant Generator Operator to meet the NPIRs.	For Measures 4, 6 and 8, the Transmission Entity shall keep evidence for two years plus current.	Rolling 12 Calendar months data retention period.
PER-003-1	R1.	Each Reliability Coordinator shall staff its Real-time operating positions performingReliability Coordinator reliability-related tasks with System Operators who havedemonstrated minimum competency in the areas listed by obtaining and maintaining avalid NERC Reliability Operator certificate (11.1. Areas of Competency) : [Risk Factor: High][Time Horizon:Real-time Operations]1.1.1. Resource and demand balancing1.1.2. Transmission operations1.1.3. Emergency preparedness and operations1.1.4. System operations1.1.5. Protection and control1.1.6. Voltage and reactive1.1.7. Interchange scheduling and coordination1.1.8. Interconnection reliability operations and coordination	Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have the following evidence to show that it staffed its Real-time operating positions performing reliability-related tasks with System Operators who have demonstrated the applicable minimum competency by obtaining and maintaining the appropriate, valid NERC certificate (R1, R2, R3): M1.1 A list of Real-time operating positions.M1.2 A list of System Operators assigned to its Real-time operating positions.M1.3 A copy of each of its System Operator's NERC certificate or NERC certificate number with expiration date which demonstrates compliance with the applicable Areas of Competency.M1.4 Work schedules, work logs, or other equivalent evidence showing which System Operators were assigned to work in Real-time operating positions.	Each Reliability Coordinator, Transmission Operator and Balancing Authority shall keep data or evidence to show compliance for three years or since its last compliance audit, whichever time frame is the greatest, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 36 Months data retention period.
PER-003-1	R2.	Each Transmission Operator shall staff its Real-time operating positions performing Transmission Operator reliability-related tasks with System Operators who have demonstrated minimum competency in the areas listed by obtaining and maintaining one of the following valid NERC certificates (1 2.1. Areas of Competency) : [Risk Factor: High][Time Horizon: Real-time Operations]: 2.1.1. Transmission operations 2.1.2. Emergency preparedness and operations 2.1.3. System operations 2.1.4. Protection and control 2.1.5. Voltage and reactive 2.2. Certificates • Reliability Operator	Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have the following evidence to show that it staffed its Real-time operating positions performing reliability-related tasks with System Operators who have demonstrated the applicable minimum competency by obtaining and maintaining the appropriate, valid NERC certificate (R1, R2, R3): M1.1 A list of Real-time operating positions. M1.2 A list of System Operators assigned to its Real-time operating positions. M1.3 A copy of each of its System Operator's NERC certificate or NERC certificate number with expiration date which demonstrates compliance with the applicable Areas of Competency. M1.4 Work schedules, work logs, or other equivalent evidence showing which System	Three Years or Since Last Compliance Audit Whichever is Longer	Rolling 36 Months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		• Balancing, Interchange and Transmission Operator • Transmission Operator	Operators were assigned to work in Real-time operating positions.		
PER-003-1	R3.	Each Balancing Authority shall staff its Real-time operating positions performingBalancing Authority reliability-related tasks with System Operators who havedemonstrated minimum competency in the areas listed by obtaining and maintainingone of the following valid NERC certificates (1) : [Risk Factor: High][Time Horizon:Real-time Operations]:3.1. Areas of Competency3.1.1. Resources and demand balancing3.1.2. Emergency preparedness and operations3.1.3. System operations3.1.4. Interchange scheduling and coordination3.2. Certificates• Reliability Operator• Balancing, Interchange and Transmission Operator• Balancing and Interchange Operator	Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have the following evidence to show that it staffed its Real-time operating positions performing reliability-related tasks with System Operators who have demonstrated the applicable minimum competency by obtaining and maintaining the appropriate, valid NERC certificate (R1, R2, R3): M1.1 A list of Real-time operating positions.M1.2 A list of System Operators assigned to its Real-time operating positions.M1.3 A copy of each of its System Operator's NERC certificate or NERC certificate number with expiration date which demonstrates compliance with the applicable Areas of Competency.M1.4 Work schedules, work logs, or other equivalent evidence showing which System Operators were assigned to work in Real-time operating positions.	Three Years or Since Last Compliance Audit Whichever is Longer	Rolling 36 Months data retention period.
PER-004-2	R1.	Each Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]	No measures in the Standard.	Each Reliability Coordinator shall keep evidence of compliance for the previous two calendar years plus the current year. If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer. Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor. The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.	Rolling 36 Months data retention period.
PER-004-2	R2.	Reliability Coordinator operating personnel shall place particular attention on SOLs and IROLs and inter-tie facility limits. The Reliability Coordinator shall ensure protocols are in place to allow Reliability Coordinator operating personnel to have the best available information at all times. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]	No measures in the Standard.	Each Reliability Coordinator shall keep evidence of compliance for the previous two calendar years plus the current year. If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer. Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.	Rolling 36 Months data retention period.
PER-005-3	R3.	Each Transmission Owner, Generator Owner, and Distribution Provider that utilizes time-based maintenance program(s) shall maintain its Protection System and Automatic Reclosing Components that are included within the time-based maintenance program in accordance with the minimum maintenance activities and maximum maintenance	Each Transmission Owner, Generator Owner, and Distribution Provider that utilizes time-based maintenance program(s) shall have evidence that it has maintained its Protection System and Automatic Reclosing Components included within its time-based program in accordance with Requirement R3. The evidence may include but is	For Requirement R2, Requirement R3, Requirement R4, and Requirement R5, the Transmission Owner, Generator Owner, and Distribution Provider shall each keep documentation of the two most recent performances of each distinct maintenance activity for the Protection System or Automatic Reclosing Component, or all performances of each distinct	Rolling 48 months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		intervals prescribed within Tables 1-1 through 1-5, Table 2, Table 3, and Table 4-1 through 4-2. [Violation Risk Factor: High] [Time Horizon: Operations Planning]	not limited to dated maintenance records, dated maintenance summaries, dated check-off lists, dated inspection records, or dated work orders.	maintenance activity for the Protection System or Automatic Reclosing Component since the previous scheduled audit date, whichever is longer.	
PRC-001-1.1(ii)	R1.	Each Transmission Operator, Balancing Authority, and Generator Operator shall be familiar with the purpose and limitations of Protection System schemes applied in its area.	Each Generator Operator and Transmission Operator shall have and provide upon request evidence that could include but is not limited to, revised fault analysis study, letters of agreement on settings, notifications of changes, or other equivalent evidence that will be used to confirm that there was coordination of new protective systems or changes as noted in Requirements 3, 3.1, and 3.2.	Each Generator Operator and Transmission Operator shall have current, in-force documents available as evidence of compliance for Measure 1.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
PRC-001-1.1(ii)	R2.	Each Generator Operator and Transmission Operator shall notify reliability entities of relay or equipment failures as follows:	Each Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, documentation, electronic logs, computer printouts, or computer demonstration or other equivalent evidence that will be used to confirm that it monitors the Special Protection Systems in its area. (Requirement 6 Part 1)	Each Transmission Operator and Balancing Authority shall keep 90 days of historical data (evidence) for Measures 2 and 3.	Rolling 90-day data retention period for voice and audio recordings.
PRC-001-1.1(ii)	R4.	Each Transmission Operator shall coordinate Protection Systems on major transmission lines and interconnections with neighboring Generator Operators, Transmission Operators, and Balancing Authorities.	Each Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, documentation, electronic logs, computer printouts, or computer demonstration or other equivalent evidence that will be used to confirm that it monitors the Special Protection Systems in its area. (Requirement 6 Part 1)	Each Generator Operator and Transmission Operator shall have current, in-force documents available as evidence of compliance for Measure 1. Each Transmission Operator and Balancing Authority shall keep 90 days of historical data (evidence) for Measures 2 and 3.	Rolling 48 months data retention period.
PRC-001-1.1(ii)	R5.	A Generator Operator or Transmission Operator shall coordinate changes in generation, transmission, load or operating conditions that could require changes in the Protection Systems of others:	Each Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, documentation, electronic logs, computer printouts, or computer demonstration or other equivalent evidence that will be used to confirm that it monitors the Special Protection Systems in its area. (Requirement 6 Part 1)	Each Generator Operator and Transmission Operator shall have current, in-force documents available as evidence of compliance for Measure 1. Each Transmission Operator and Balancing Authority shall keep 90 days of historical data (evidence) for Measures 2 and 3.	Rolling 48 months data retention period.
PRC-001-1.1(ii)	R6.	Each Transmission Operator and Balancing Authority shall monitor the status of each Remedial Action Scheme in their area, and shall notify affected Transmission Operators and Balancing Authorities of each change in status.	Each Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, documentation, electronic logs, computer printouts, or computer demonstration or other equivalent evidence that will be used to confirm that it monitors the Special Protection Systems in its area. (Requirement 6 Part 1)	Each Generator Operator and Transmission Operator shall have current, in-force documents available as evidence of compliance for Measure 1. Each Transmission Operator and Balancing Authority shall keep 90 days of historical data (evidence) for Measures 2 and 3.	Rolling 48 months data retention period.
PRC-004-5(i)	R1.	Each Transmission Owner, Generator Owner, and Distribution Provider that owns a BES interrupting device that operated under the circumstances in Parts 1.1 through 1.3 shall, within 120 calendar days of the BES interrupting device operation, identify whether its Protection System component(s) caused a Misoperation: [Violation Risk Factor: High][Time Horizon: Operations Assessment, Operations	Each Transmission Owner, Generator Owner, and Distribution Provider shall have dated evidence that demonstrates it identified the Misoperation of its Protection System component(s), if any, that meet the circumstances in Requirement R1, Parts 1.1, 1.2, and 1.3 within the allotted time period. Acceptable evidence for Requirement R1, including Parts 1.1, 1.2, and 1.3 may include, but is	The Transmission Owner, Generator Owner, and Distribution Provider shall retain evidence of Requirements R1, R2, R3, and R4, Measures M1, M2, M3,and M4 for a minimum of 12 calendar months following the completion of each Requirement.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		Planning] 1.1 The BES interrupting device operation was caused by a Protection System or by manual intervention in response to a Protection System failure to operate; and 1.2 The BES interrupting device owner owns all or part of the Composite Protection System; and 1.3 The BES interrupting device owner identified that its Protection System component(s) caused the BES interrupting device(s) operation or was caused by manual intervention in response to its Protection System failure to operate.	not limited to the following dated documentation (electronic or hardcopy format): reports, databases, spreadsheets, emails, facsimiles, lists, logs, records, declarations, analyses of sequence of events, relay targets, Disturbance Monitoring Equipment (DME) records, test results, or transmittals.		
PRC-004-5(i)	R2.	R2. Each Transmission Owner, Generator Owner, and Distribution Provider that owns a BES interrupting device that operated shall, within 120 calendar days of the BES interrupting device operation, provide notification as described in Parts 2.1 and 2.2. [Violation Risk Factor: High][Time Horizon: Operations Assessment, Operations Planning] 2.1 For a BES interrupting device operation by a Composite Protection System or by manual intervention in response to a Protection System failure to operate, notification of the operation shall be provided to the other owner(s) that share Misoperation identification responsibility for the Composite Protection System under the following circumstances: 2.1.1 The BES interrupting device owner shares the Composite Protection System ownership with any other owner; and 2.1.2 The BES interrupting device owner has determined that a Misoperation occurred or cannot rule out a Misoperation; and 2.1.3 The BES interrupting device owner has determined that its Protection System component(s) did not cause the BES interrupting device(s) operation or cannot determine whether its Protection System components caused the BES interrupting device(s) operation. 2.2 For a BES interrupting device operation by a Protection System component intended to operate as backup protection for a condition on another entity's BES Element, notification of the operation shall be provided to the other Protection System owner(s) for which that backup protection was provided.	Each Transmission Owner, Generator Owner, and Distribution Provider shall have dated evidence that demonstrates notification to the other owner(s), within the allotted time period for either Requirement R2, Part 2.1, including subparts 2.1.1, 2.1.2, and 2.1.3 and Requirement R2, Part 2.2. Acceptable evidence for Requirement R2, including Parts 2.1 and 2.2 may include, but is not limited to the following dated documentation (electronic or hardcopy format): emails, facsimiles, or transmittals.	The Transmission Owner, Generator Owner, and Distribution Provider shall retain evidence of Requirements R1, R2, R3, and R4, Measures M1, M2, M3, and M4 for a minimum of 12 calendar months following the completion of each Requirement.	Rolling 12 Calendar months data retention period.
PRC-004-5(i)	R3.	R3. Each Transmission Owner, Generator Owner, and Distribution Provider that receives notification, pursuant to Requirement R2 shall, within the later of 60 calendar days of notification or 120 calendar days of the BES interrupting device(s) operation, identify whether its Protection System component(s) caused a Misoperation. [Violation Risk Factor: High][Time Horizon: Operations Assessment, Operations Planning]	Each Transmission Owner, Generator Owner, and Distribution Provider shall have dated evidence that demonstrates it identified whether its Protection System component(s) caused a Misoperation within the allotted time period. Acceptable evidence for Requirement R3 may include, but is not limited to the following dated documentation (electronic or hardcopy format): reports, databases, spreadsheets, emails, facsimiles, lists, logs, records, declarations, analyses of sequence of events, relay targets, DME records, test results, or transmittals. Standard PRC-004-5(i) — Protection System	The Transmission Owner, Generator Owner, and Distribution Provider shall retain evidence of Requirements R1, R2, R3, and R4, Measures M1, M2, M3, and M4 for a minimum of 12 calendar months following the completion of each Requirement.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
			Misoperation Identification and Correction Page 4 of 37		
PRC-004-5(i)	R4.	R4. Each Transmission Owner, Generator Owner, and Distribution Provider that has not determined the cause(s) of a Misoperation, for a Misoperation identified in accordance with Requirement R1 or R3, shall perform investigative action(s) to determine the cause(s) of the Misoperation at least once every two full calendar quarters after the Misoperation was first identified, until one of the following completes the investigation: [Violation Risk Factor: High] [Time Horizon: Operations Assessment, Operations Planning] • The identification of the cause(s) of the Misoperation; or • A declaration that no cause was identified.	Each Transmission Owner, Generator Owner, and Distribution Provider shall have dated evidence that demonstrates it performed at least one investigative action according to Requirement R4 every two full calendar quarters until a cause is identified or a declaration is made. Acceptable evidence for Requirement R4 may include, but is not limited to the following dated documentation (electronic or hardcopy format): reports, databases, spreadsheets, emails, facsimiles, lists, logs, records, declarations, analyses of sequence of events, relay targets, DME records, test results, or transmittals.	The Transmission Owner, Generator Owner, and Distribution Provider shall retain evidence of Requirements R1, R2, R3, and R4, Measures M1, M2, M3,and M4 for a minimum of 12 calendar months following the completion of each Requirement.	Rolling 12 Calendar months data retention period.
PRC-004-5(i)	R5.	R5. Each Transmission Owner, Generator Owner, and Distribution Provider that owns the Protection System component(s) that caused the Misoperation shall, within 60 calendar days of first identifying a cause of the Misoperation: [Violation Risk Factor: High] [Time Horizon: Operations Planning, Long-Term Planning] • Develop a Corrective Action Plan (CAP) for the identified Protection System component(s), and an evaluation of the CAP's applicability to the entity's other Protection Systems including other locations; or • Explain in a declaration why corrective actions are beyond the entity's control or would not improve BES reliability, and that no further corrective actions will be taken.	Each Transmission Owner, Generator Owner, and Distribution Provider shall have dated evidence that demonstrates it developed a CAP and an evaluation of the CAP's applicability to other Protection Systems and locations, or a declaration in accordance with Requirement R5. Acceptable evidence for Requirement R5 may include, but is not limited to the following dated documentation (electronic or hardcopy format): CAP and evaluation, or declaration.	The Transmission Owner, Generator Owner, and Distribution Provider shall retain evidence of Requirement R5, Measure M5, including any supporting analysis per Requirements R1, R2, R3, and R4, for a minimum of 12 calendar months following completion of each CAP, completion of each evaluation, and completion of each declaration.	Rolling 12 Calendar months data retention period.
PRC-004-5(i)	R6.	R6. Each Transmission Owner, Generator Owner, and Distribution Provider shall implement each CAP developed in Requirement R5, and update each CAP if actions or timetables change, until completed. [Violation Risk Factor: High][Time Horizon: Operations Planning, Long-Term Planning]	Each Transmission Owner, Generator Owner, and Distribution Provider shall have dated evidence that demonstrates it implemented each CAP, including updating actions or timetables. Acceptable evidence for Requirement R6 may include, but is not limited to the following dated documentation (electronic or hardcopy format): records that document the implementation of each CAP and the completion of actions for each CAP including revision history of each CAP. Evidence may also include work management program records, work orders, and maintenance records.	The Transmission Owner, Generator Owner, and Distribution Provider shall retain evidence of Requirement R6, Measure M6 for a minimum of 12 calendar months following completion of each CAP.	Rolling 12 Calendar months data retention period.
PRC-005-1.1b	R1.	Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation or generator interconnection Facility Protection System shall have a Protection System maintenance and testing program for Protection Systems that affect the reliability of the BES. The program shall include:	Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation or generator interconnection Facility Protection System that affects the reliability of the BES, shall have an associated Protection System maintenance and testing program as defined in Requirement 1.	The Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation or generator interconnection Facility Protection System, shall retain evidence of the implementation of its Protection System maintenance and testing program for three years. The Compliance Monitor shall retain any audit data for three years.	Rolling 36 Months data retention period.
PRC-005-6	R3.	Each Transmission Owner, Generator Owner, and Distribution Provider that utilizes time-based maintenance program(s) shall maintain its Protection System, Automatic Reclosing, and Sudden Pressure	Each Transmission Owner, Generator Owner, and Distribution Provider that utilizes time-based maintenance program(s) shall have evidence that it has maintained its Protection System, Automatic	For Requirement R2, Requirement R3, and Requirement R4, in cases where the interval of the maintenance activity is longer than the audit cycle, the Transmission Owner, Generator Owner, and	Rolling 48 months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		Relaying Components that are included within the time-based maintenance program in accordance with the minimum maintenance activities and maximum maintenance intervals prescribed within Tables 1-1 through 1- 5, Table 2, Table 3, Table 4-1 through 4-3, and Table 5. [Violation Risk Factor: High] [Time Horizon: Operations Planning]	Reclosing, and Sudden Pressure Relaying Components included within its time-based program in accordance with Requirement R3. The evidence may include, but is not limited to, dated maintenance records, dated maintenance summaries, dated check-off lists, dated inspection records, or dated work orders.	Distribution Provider shall each keep documentation of the most recent performance of that maintenance activity for the Protection System, Automatic Reclosing, or Sudden Pressure Relaying Component. In cases where the interval of the maintenance activity is shorter than the audit cycle, documentation of all performances (in accordance with the tables) of that maintenance activity for the Protection System, Automatic Reclosing, or Sudden Pressure Relaying Component since the previous scheduled audit date shall be retained.	
PRC-005-6	R4.	Each Transmission Owner, Generator Owner, and Distribution Provider that utilizes performance-based maintenance program(s) in accordance with Requirement R2 shall implement and follow its PSMP for its Protection System, Automatic Reclosing, and Sudden Pressure Relaying Components that are included within the performance based program(s). [Violation Risk Factor: High] [Time Horizon: Operations Planning]	Each Transmission Owner, Generator Owner, and Distribution Provider that utilizes performance-based maintenance intervals in accordance with Requirement R2 shall have evidence that it has implemented the PSMP for the Protection System, Automatic Reclosing, and Sudden Pressure Relaying Components included in its performance-based program in accordance with Requirement R4. The evidence may include, but is not limited to, dated maintenance records, dated maintenance summaries, dated check-off lists, dated inspection records, or dated work orders.	For Requirement R2, Requirement R3, and Requirement R4, in cases where the interval of the maintenance activity is longer than the audit cycle, the Transmission Owner, Generator Owner, and Distribution Provider shall each keep documentation of the most recent performance of that maintenance activity for the Protection System, Automatic Reclosing, or Sudden Pressure Relaying Component. In cases where the interval of the maintenance activity is shorter than the audit cycle, documentation of all performances (in accordance with the tables) of that maintenance activity for the Protection System, Automatic Reclosing, or Sudden Pressure Relaying Component since the previous scheduled audit date shall be retained.	Rolling 48 months data retention period.
PRC-006-3	R10.	Each Transmission Owner shall provide automatic switching of its existing capacitor banks, Transmission Lines, and reactors to control over-voltage as a result of underfrequency load shedding if required by the UFLS program and schedule for implementation, including any Corrective Action Plan, as determined by the Planning Coordinator(s) in each Planning Coordinator area in which the Transmission Owner owns transmission. [VRF: High][Time Horizon: Long-term Planning]	Each Transmission Owner shall have dated evidence such as relay settings, tripping logic or other dated documentation that it provided automatic switching of its existing capacitor banks, Transmission Lines, and reactors in order to control over-voltage as a result of underfrequency load shedding if required by the UFLS program and schedule for implementation, including any Corrective Action Plan, per Requirement R10.	Transmission Owner shall retain the current evidence of adherence with the UFLS program in accordance with Requirement R10, Measure M10, and evidence of adherence since the last compliance audit.	Rolling 48 months data retention period.
PRC-006-3	R15.	Each Planning Coordinator that conducts a UFLS design assessment under Requirement R4, R5, or R12 and determines that the UFLS program does not meet the performance characteristics in Requirement R3, shall develop a Corrective Action Plan and a schedule for implementation by the UFLS entities within its area. [VRF: High][Time Horizon: Long-term Planning]	Each Planning Coordinator that conducts a UFLS design assessment under Requirement R4, R5, or R12 and determines that the UFLS program does not meet the performance characteristics in Requirement R3, shall have a dated Corrective Action Plan and a schedule for implementation by the UFLS entities within its area, that was developed within the time frame identified in Part 15.1 or 15.2.	Transmission Owner shall retain the current evidence of adherence with the UFLS program in accordance with Requirement R10, Measure M10, and evidence of adherence since the last compliance audit.	Rolling 48 months data retention period.
PRC-006-3	R3.	Each Planning Coordinator shall develop a UFLS program, including notification of and a schedule for implementation by UFLS entities within its area, that meets the following performance characteristics in simulations of underfrequency conditions resulting from an imbalance scenario, where an imbalance = [(load — actual generation output) / (load)], of up to	Each Planning Coordinator shall have evidence such as reports, memorandums, e-mails, program plans, or other documentation of its UFLS program, including the notification of the UFLS entities of implementation schedule, that meet the criteria in Requirement R3, Parts 3.1 through 3.3.	Transmission Owner shall retain the current evidence of adherence with the UFLS program in accordance with Requirement R10, Measure M10, and evidence of adherence since the last compliance audit.	Rolling 48 months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		25 percent within the identified island(s). [VRF: High][Time Horizon: Long-term Planning]			
PRC-006-3	R4.	Each Planning Coordinator shall conduct and document a UFLS design assessment at least once every five years that determines through dynamic simulation whether the UFLS program design meets the performance characteristics in Requirement R3 for each island identified in Requirement R2. The simulation shall model each of the following: [VRF: High][Time Horizon: Long-term Planning]	Each Planning Coordinator shall have dated evidence such as reports, dynamic simulation models and results, or other dated documentation of its UFLS design assessment that demonstrates it meets Requirement R4, Parts 4.1 through 4.7.	Transmission Owner shall retain the current evidence of adherence with the UFLS program in accordance with Requirement R10, Measure M10, and evidence of adherence since the last compliance audit.	Rolling 48 months data retention period.
PRC-006-3	R5.	Each Planning Coordinator, whose area or portions of whose area is part of an island identified by it or another Planning Coordinator which includes multiple Planning Coordinator areas or portions of those areas, shall coordinate its UFLS program design with all other Planning Coordinators whose areas or portions of whose areas are also part of the same identified island through one of the following: [VRF: High][Time Horizon: Long-term Planning]	Each Planning Coordinator, whose area or portions of whose area is part of an island identified by it or another Planning Coordinator which includes multiple Planning Coordinator areas or portions of those areas, shall have dated evidence such as joint UFLS program design documents, reports describing a joint UFLS design assessment, letters that include recommendations, or other dated documentation demonstrating that it coordinated its UFLS program design with all other Planning Coordinators whose areas or portions of whose areas are also part of the same identified island per Requirement R5.	Transmission Owner shall retain the current evidence of adherence with the UFLS program in accordance with Requirement R10, Measure M10, and evidence of adherence since the last compliance audit.	Rolling 48 months data retention period.
PRC-006-3	R9.	Each UFLS entity shall provide automatic tripping of Load in accordance with the UFLS program design and schedule for implementation, including any Corrective Action Plan, as determined by its Planning Coordinator(s) in each Planning Coordinator area in which it owns assets. [VRF: High][Time Horizon: Long-term Planning]	Each UFLS Entity shall have dated evidence such as spreadsheets summarizing feeder load armed with UFLS relays, spreadsheets with UFLS relay settings, or other dated documentation that it provided automatic tripping of load in accordance with the UFLS program design and schedule for implementation, including any Corrective Action Plan, per Requirement R9.	Each UFLS entity shall retain the current evidence of adherence with the UFLS program in accordance with Requirement R9, Measure M9, and evidence of adherence since the last compliance audit.	Rolling 48 months data retention period.
PRC-010-2	R1.	Each Planning Coordinator or Transmission Planner that is developing a UVLS Program shall evaluate its effectiveness and subsequently provide the UVLS Program's specifications and implementation schedule to the UVLS entities responsible for implementing the UVLS Program. The evaluation shall include, but is not limited to, studies and analyses that show: [Violation Risk Factor: High] [Time Horizon: Long-term Planning] 1.1. The implementation of the UVLS Program resolves the identified undervoltage issues that led to its development and design. 1.2. The UVLS Program is integrated through coordination with generator voltage ride-through capabilities and other protection and control systems, including, but not limited to, transmission line protection, autoreclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.	Acceptable evidence may include, but is not limited to, date-stamped studies and analyses, reports, or other documentation detailing the effectiveness of the UVLS Program, and date-stamped communications showing that the UVLS Program specifications and implementation schedule were provided to UVLS entities.	The applicable entity shall retain documentation as evidence for six calendar years.	Rolling 48 months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
PRC-010-2	R2.	Each UVLS entity shall adhere to the UVLS Program specifications and implementation schedule determined by its Planning Coordinator or Transmission Planner associated with UVLS Program development per Requirement R1 or with any Corrective Action Plans per Requirement R5. [Violation Risk Factor: High] [Time Horizon: Long-term Planning]	Acceptable evidence must include date-stamped documentation on the completion of actions and may include, but is not limited to, identifying the equipment armed with UVLS relays, the UVLS relay settings, associated Load summaries, work management program records, work orders, and maintenance records.	The applicable entity shall retain documentation as evidence for six calendar years.	Rolling 48 months data retention period.
PRC-017-1	R1.	The Transmission Owner, Generator Owner, and Distribution Provider that owns a RAS shall have a system maintenance and testing program(s) in place. The program(s) shall include: R1.1. RAS identification shall include but is not limited to: R1.1.1. Relays. R1.1.2. Instrument transformers. R1.1.3. Communications systems, where appropriate. R1.1.4. Batteries. R1.2. Documentation of maintenance and testing intervals and their basis. R1.3. Summary of testing procedure. R1.4. Schedule for system testing. R1.5. Schedule for system maintenance. R1.6. Date last tested/maintained.	The Transmission Owner, Generator Owner, and Distribution Provider that owns a RAS shall have a system maintenance and testing program(s) in place that includes all items in Reliability Standard PRC-017-1_R1.	None specified.	Rolling 48 months data retention period.
PRC-023-4	R1.	Each Transmission Owner, Generator Owner, and Distribution Provider shall use any one of the Set transmission line relays applied at the load center terminal, remote from generation stations, so they do not operate at or below 115% of the maximum current flow from the load to the generation source under any system configuration. Set transmission line relays applied on the bulk system-end of transmission lines that serve load remote to the system so they do not operate at or below 115% of the maximum current flow from the system to the load under any system configuration. Set transmission line relays applied on the load-end of transmission lines that serve load remote to the bulk system so they do not operate at or below 115% of the maximum current flow from the load to the system under any system configuration. Set transformer fault protection relays and transmission line relays on transmission lines terminated only with a transformer so that the relays do not operate at or below the greater of:· 150% of the applicable maximum transformer nameplate rating (expressed in amperes), including the forced cooled ratings corresponding to all installed supplemental cooling equipment.· 115% of the highest operator established emergency transformer rating. Set load-responsive transformer fault protection relays, if used, such that the protection settings do not expose the transformer to a fault level and duration that exceeds the transformer's mechanical withstand capability. For transformer	Each Transmission Owner, Generator Owner, and Distribution Provider shall have evidence such as spreadsheets or summaries of calculations to show that each of its transmission relays is set according to one of the criteria in Requirement R1, criterion 1 through 13 and shall have evidence such as coordination curves or summaries of calculations that show that relays set per criterion 10 do not expose the transformer to fault levels and durations beyond those indicated in the standard. (R1)	The Transmission Owner, Generator Owner, and Distribution Provider shall each retain documentation to demonstrate compliance with Requirements R1 through R5 for three calendar years.	Rolling 36 Months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		overload protection relays that do not comply with the loadability component of Requirement R1, criterion 10 set the relays according to one of the following:· Set the relays to allow the transformer to be operated at an overload level of at least 150% of the maximum applicable nameplate rating, or 115% of the highest operator established emergency transformer rating, whichever is greater, for at least 15 minutes to provide time for the operator to take controlled action to relieve the overload.· Install supervision for the relays using either a top oil or simulated winding hot spot temperature element set no less than 100° C for the top oil temperature or no less than 140° C for the winding hot spot temperature.12. When the desired transmission line capability is limited by the requirement to adequately protect the transmission line, set the transmission line distance relays to a maximum of 125% of the apparent impedance (at the impedance angle of the transmission line) subject to the following constraints:a. Set the maximum torque angle (MTA) to 90 degrees or the highest supported by the manufacturer.B. Evaluate the relay loadability in amperes at the relay trip point at 0.85 per unit voltage and a power factor angle of 30 degrees.C. Include a relay setting component of 87% of the current calculated in Requirement R1, criterion 12 in the Facility Rating determination for the circuit. 13. Where other situations present practical limitations on circuit capability, set the phase protection relays so they do not operate at or below 115% of such limitations. Following criteria (Requirement R1, criteria 1 through 13) for any specific circuit terminal to prevent its phase protective relay settings from limiting transmission system loadability while maintaining reliable protection of the BES for all fault conditions. Each Transmission Owner, Generator Owner, and Distribution Provider shall evaluate relay loadability at 0.85 per unit voltage and a power factor angle of 30 degrees. [Violation Risk Factor: High] [Time Horizon: Long Term Planning].Criteria:1. Set transmission line relays so they do not operate at or below 150% of the highest seasonal Facility Rating of a circuit, for the available defined loading duration nearest 4 hours (expressed in amperes).2. Set transmission line relays so they do not operate at or below 115% of the highest seasonal 15-minute Facility Rating1 of a circuit (expressed in amperes).3. Set transmission			
PRC-023-4	R2.	Each Transmission Owner, Generator Owner, and Distribution Provider shall set its out-of-step blocking elements to allow tripping of phase protective relays for faults that occur during the	Each Transmission Owner, Generator Owner, and Distribution Provider shall have evidence such as spreadsheets or summaries of calculations to show that each of its out-of-step blocking elements is set	The Transmission Owner, Generator Owner, and Distribution Provider shall each retain documentation to demonstrate compliance with Requirements R1 through R5 for three calendar years.	Rolling 36 Months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		loading conditions used to verify transmission line relay loadability per Requirement R1. [Violation Risk Factor: High] [Time Horizon: Long Term Planning]	to allow tripping of phase protective relays for faults that occur during the loading conditions used to verify transmission line relay loadability per Requirement R1. (R2)		
PRC-023-4	R6.	Each Planning Coordinator shall conduct an assessment at least once each calendar year, with no more than 15 months between assessments, by applying the criteria in PRC-023-4, Attachment B to determine the circuits in its Planning Coordinator area for which Transmission Owners, Generator Owners, and Distribution Providers must comply with Requirements R1 through R5. The Planning Coordinator shall: [Violation Risk Factor: High] [Time Horizon: Long Term Planning] 6.1 Maintain a list of circuits subject to PRC-023-4 per application of Attachment B, including identification of the first calendar year in which any criterion in PRC-023-4, Attachment B applies. 6.2 Provide the list of circuits to all Regional Entities, Reliability Coordinators, Transmission Owners, Generator Owners, and Distribution Providers within its Planning Coordinator area within 30 calendar days of the establishment of the initial list and within 30 calendar days of any changes to that list.	Each Planning Coordinator shall have evidence such as power flow results, calculation summaries, or study reports that it used the criteria established within PRC-023-4, Attachment B to determine the circuits in its Planning Coordinator area for which applicable entities must comply with the standard as described in Requirement R6. The Planning Coordinator shall have a dated list of such circuits and shall have evidence such as dated correspondence that it provided the list to the Regional Entities, Reliability Coordinators, Transmission Owners, Generator Owners, and Distribution Providers within its Planning Coordinator area within the required timeframe. (R6)	The Planning Coordinator shall retain documentation of the most recent review process required in Requirement R6. The Planning Coordinator shall retain the most recent list of circuits in its Planning Coordinator area for which applicable entities must comply with the standard, as determined per Requirement R6.	Rolling 12 Calendar months data retention period.
PRC-025-2	R1.	Each Generator Owner, Transmission Owner, and Distribution Provider shall apply settings that are in accordance with PRC-025-2 – Attachment 1: Relay Settings, on each load-responsive protective relay while maintaining reliable fault protection. [Violation Risk Factor: High] [Time Horizon: Long-Term Planning]	For each load-responsive protective relay, each Generator Owner, Transmission Owner, and Distribution Provider shall have evidence (e.g., summaries of calculations, spreadsheets, simulation reports, or setting sheets) that settings were applied in accordance with PRC-025-2 – Attachment 1: Relay Settings.	The Generator Owner, Transmission Owner, and Distribution Provider shall retain evidence of Requirement R1 and Measure M1 for the most recent three calendar years.	Rolling 36 Months data retention period.
PRC-026-1	R2.	Each Generator Owner and Transmission Owner shall, once each calendar year, identify each Element for which it applies a load-responsive protective relay at a terminal of an Element that meets either of the following criteria, if any: [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Long-term Planning] Criteria: 1. An Element that has tripped since January 1, 2003, due to a power swing during an actual system Disturbance where the Disturbance(s) that caused the trip due to a power swing continues to be credible. 2. An Element that has formed the boundary of an island since January 1, 2003, during an actual system Disturbance where the Disturbance(s) that caused the islanding condition continues to be credible.	Each Generator Owner and Transmission Owner shall have dated evidence that demonstrates the evaluation was performed according to Requirement R2. Evidence may include, but is not limited to, the following documentation: apparent impedance characteristic plots, email, design drawings, facsimiles, R-X plots, software output, records, reports, transmittals, lists, settings sheets, or spreadsheets.	The Generator Owner and Transmission Owner shall retain evidence of Requirement R2 evaluation for a minimum of 12 calendar months following completion of each evaluation where a CAP is not developed.	Rolling 12 Calendar months data retention period.
TOP-001-4	R1.	Each Transmission Operator shall act to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicableRequirement R1 through R11, and Measure	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		[Violation Risk Factor: High][Time Horizon: Same-Day Operations, Real-time Operations]	voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	
TOP-001-4	R2.	Each Balancing Authority shall act to maintain the reliability of its Balancing Authority Area via its own actions or by issuing Operating Instructions. [Violation Risk Factor: High][Time Horizon: Same-Day Operations, Real-time Operations]	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicable Requirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
TOP-001-4	R3.	Each Balancing Authority, Generator Operator, and Distribution Provider shall comply with each Operating Instruction issued by its Transmission Operator(s), unless such action cannot be physically implemented or it would violate safety, equipment, regulatory, or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Same-Day Operations, Real-Time Operations]	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicableRequirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
TOP-001-4	R4.	Each Balancing Authority, Generator Operator, and Distribution Provider shall inform its Transmission Operator of its inability to comply with an Operating Instruction issued by its Transmission Operator. [Violation Risk Factor: High] [Time Horizon: Same-Day Operations, Real-Time Operations]	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicable Requirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
TOP-001-4	R5.	Each Transmission Operator, Generator Operator, and Distribution Provider shall comply with each Operating Instruction issued by its Balancing Authority, unless such action cannot be physically implemented or it would violate safety, equipment, regulatory, or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Same-Day Operations, Real-Time Operations]	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicableRequirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
TOP-001-4	R6.	Each Transmission Operator, Generator Operator, and Distribution Provider shall inform its Balancing Authority of its inability to comply with an Operating Instruction issued by its Balancing Authority. [Violation Risk Factor: High] [Time Horizon: Same-Day Operations, Real-Time Operations]	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicable Requirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
TOP-001-4	R7.	Each Transmission Operator shall assist other Transmission Operators within its Reliability Coordinator Area, if requested and able, provided that the requesting Transmission Operator has implemented its comparable Emergency procedures, unless such assistance cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-Time Operations]	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicableRequirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
TOP-001-4	R8.	Each Transmission Operator shall inform its Reliability Coordinator, known impacted Balancing Authorities, and known impacted Transmission Operators of its actual or expected operations that result in, or could result in, an Emergency. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-Time Operations]	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicable Requirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
TOP-001-4	R10.	Each Transmission Operator shall perform the following for determining System Operating Limit (SOL) exceedances within its Transmission Operator Area: [Violation Risk Factor: High] [Time Horizon: Real-Time Operations]	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicableRequirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
TOP-001-4	R11.	Each Transmission Operator shall perform the following for determining System Operating Limit (SOL) exceedances within its Transmission Operator Area: [Violation Risk Factor: High] [Time Horizon: Real-Time Operations] 10.1. Monitor Facilities within its Transmission Operator Area; 10.2. Monitor the status of Remedial Action Schemes within its Transmission Operator Area;	Each Transmission Operator shall have and provide evidence which may include but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.	Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall each keep data or evidence for each applicable Requirement R1 through R11, and Measure M1 through M11, for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		10.3. Monitor non-BES facilities within its Transmission Operator Area identified as necessary by the Transmission Operator; 10.4. Obtain and utilize status, voltages, and flow data for Facilities outside its Transmission Operator Area identified as necessary by the Transmission Operator; 10.5. Obtain and utilize the status of Remedial Action Schemes outside its Transmission Operator Area identified as necessary by the Transmission Operator; and 10.6. Obtain and utilize status, voltages, and flow data for non-BES facilities outside its Transmission Operator Area identified as necessary by the Transmission Operator.		evidence for a longer period of time as part of an investigation.	
TOP-001-4	R12.	Each Balancing Authority shall monitor its Balancing Authority Area, including the status of Remedial Action Schemes that impact generation or Load, in order to maintain generation-Load-interchange balance within its Balancing Authority Area and support Interconnection frequency. [Violation Risk Factor: High] [Time Horizon: Real-Time Operations]	Each Transmission Operator shall make available evidence to show that for any occasion in which it operated outside any identified Interconnection Reliability Operating Limit (IROL), the continuous duration did not exceed its associated IROL Tv. Such evidence could include but is not limited to dated computer logs or reports in electronic or hard copy format specifying the date, time, duration, and details of the excursion. If such a situation has not occurred, the Transmission Operator may provide an attestation that an event has not occurred.	Each Transmission Operator shall retain evidence for three calendar years of any occasion in which it has exceeded an identified IROL and its associated IROL Tv as specified in Requirement R12 and Measure M12.	Rolling 36 Months data retention period.
TOP-001-4	R13.	Each Transmission Operator shall keep data or evidence for Requirement R13 and Measure M13 for a rolling 30-day period, 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 have, and make available upon request, evidence to show it ensured that a Real-Time Assessment was performed at least once every 30 minutes. This evidence could include but is not limited to dated computer logs showing times the assessment was conducted, dated checklists, or other evidence.	Each Transmission Operator shall keep data or evidence for Requirement R13 and Measure M13 for a rolling 30-day period, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 30-day data retention period.
TOP-001-4	R14.	Each Transmission Operator shall retain evidence and that it initiated its Operating Plan to mitigate a SOL exceedance as specified in Requirement R14 and Measurement M14 for three calendar years.	Each Transmission Operator shall have evidence that it initiated its Operating Plan for mitigating SOL exceedances identified as part of its Real-time monitoring or Real-time Assessments. This evidence could include but is not limited to dated computer logs showing times the Operating Plan was initiated, dated checklists, or other evidence.	Each Transmission Operator shall retain evidence and that it initiated its Operating Plan to mitigate a SOL exceedance as specified in Requirement R14 and Measurement M14 for three calendar years.	Rolling 36 Months data retention period.
TOP-001-4	R16.	Each Transmission Operator shall provide its System Operators with the authority to approve planned outages and maintenance of its telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between affected entities. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Each Transmission Operator shall have, and provide upon request, evidence that could include but is not limited to a documented procedure or equivalent evidence that will be used to confirm that the Transmission Operator has provided its System Operators with the authority to approve planned outages and maintenance of telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between affected entities.	Each Transmission Operator and Balancing Authority shall each keep data or evidence for each applicable Requirement R15 through R19, and Measure M15 through M19 for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days.	Rolling 12 Calendar months data retention period.
TOP-001-4	R17.	Each Balancing Authority shall provide its System Operators with the authority to approve planned outages and maintenance of its telemetering and	Each Balancing Authority shall have, and provide upon request, evidence that could include but is not limited to a documented procedure or equivalent	Each Transmission Operator and Balancing Authority shall each keep data or evidence for each applicable Requirement R15 through R19, and Measure M15	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		control equipment, monitoring and assessment capabilities, and associated communication channels between affected entities. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	evidence that will be used to confirm that the Balancing Authority has provided its System Operators with the authority to approve planned outages and maintenance of its telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between affected entities.	through M19 for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days.	
TOP-001-4	R18.	Each Transmission Operator shall operate to the most limiting parameter in instances where there is a difference in SOLs. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]	Each Transmission Operator shall have, and provide upon request, evidence that could include but is not limited to operator logs, voice recordings, electronic communications, or equivalent evidence that will be used to determine if it operated to the most limiting parameter in instances where there is a difference in SOLs.	Each Transmission Operator and Balancing Authority shall each keep data or evidence for each applicable Requirement R15 through R19, and Measure M15 through M19 for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days.	Rolling 12 Calendar months data retention period.
TOP-001-4	R20.	Each Transmission Operator shall have data exchange capabilities, with redundant and diversely routed data exchange infrastructure within the Transmission Operator's primary Control Center, for the exchange of Real-time data with its Reliability Coordinator, Balancing Authority, and the entities it has identified it needs data from in order for it to perform its Real-time monitoring and Real-time Assessments. [Violation Risk Factor: High] [Time Horizon: Same-Day Operations, Real-time Operations]	Each Transmission Operator shall have, and provide upon request, evidence that could include, but is not limited to, system specifications, system diagrams, or other documentation that lists its data exchange capabilities, including redundant and diversely routed data exchange infrastructure within the Transmission Operator's primary Control Center, for the exchange of Real-time data with its Reliability Coordinator, Balancing Authority, and the entities it has identified it needs data from in order to perform its Real-time monitoring and Real-time Assessments as specified in the requirement.	Each Transmission Operator shall keep data or evidence for Requirement R20 and Measure M20 for the current calendar year and one previous calendar year.	Rolling 12 Calendar months data retention period.
TOP-001-4	R23.	Each Balancing Authority shall have data exchange capabilities, with redundant and diversely routed data exchange infrastructure within the Balancing Authority's primary Control Center, for the exchange of Real-time data with its Reliability Coordinator, Transmission Operator, and the entities it has identified it needs data from in order for it to perform its Real-time monitoring and analysis functions. [Violation Risk Factor: High] [Time Horizon: Same-Day Operations, Real-time Operations]	Each Balancing Authority shall have, and provide upon request, evidence that could include, but is not limited to, system specifications, system diagrams, or other documentation that lists its data exchange capabilities, including redundant and diversely routed data exchange infrastructure within the Balancing Authority's primary Control Center, for the exchange of Real-time data with its Reliability Coordinator, Transmission Operator, and the entities it has identified it needs data from in order to perform its Real-time monitoring and analysis functions as specified in the requirement.	Each Balancing Authority shall keep data or evidence for Requirement R23 and Measure M23 for the current calendar year and one previous calendar year.	Rolling 12 Calendar months data retention period.
TOP-010-1(i)	R1.	R1. Each Transmission Operator shall implement an Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its Real-time monitoring and Real-time Assessments. The Operating Process or Operating Procedure shall include: [Violation Risk Factor: High] [Time Horizon: Real-time Operations]1.1. Criteria for evaluating the quality of Real-time data;1.2. Provisions to indicate the quality of Real-time data to the System Operator; and1.3. Actions to address Real-time data quality issues with the entity(ies) responsible for providing the data when data quality affects Real-time Assessments.	Each Transmission Operator shall have evidence that it implemented its Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its Real-time monitoring and Real-time Assessments. This evidence could include, but is not limited to: 1) an Operating Process or Operating Procedure in electronic or hard copy format meeting all provisions of Requirement R1; and 2) evidence the Transmission Operator implemented the Operating Process or Operating Procedure as called for in the Operating Process or Operating Procedure, such as dated operator logs, dated checklists, voice recordings, voice transcripts, or other evidence.	The applicable entity shall retain evidence of compliance for Requirements R1, R2, and R4, and Measures M1, M2, and M4 for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
TOP-010-1(i)	R2.	Each Balancing Authority shall implement an Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its analysis functions and Real-time monitoring. The Operating Process or Operating Procedure shall include: [Violation Risk Factor: High] [Time Horizon: Real-time Operations] 2.1. Criteria for evaluating the quality of Real-time data; 2.2. Provisions to indicate the quality of Real-time data to the System Operator; and 2.3. Actions to address Real-time data quality issues with the entity(ies) responsible for providing the data when data quality affects its analysis functions.	Each Balancing Authority shall have evidence that it implemented its Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its analysis functions and Real-time monitoring. This evidence could include, but is not limited to: 1) an Operating Process or Operating Procedure in electronic or hard copy format meeting all provisions of Requirement R2; and 2) evidence the Balancing Authority implemented the Operating Process or Operating Procedure as called for in the Operating Process or Operating Procedure, such as dated operator logs, dated checklists, voice recordings, voice transcripts, or other evidence.	The applicable entity shall retain evidence of compliance for Requirements R1, R2, and R4, and Measures M1, M2, and M4 for the current calendar year and one previous calendar year, with the exception of operator logs and voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.	Rolling 12 Calendar months data retention period.
TPL-001-4	R1.	Each Transmission Planner and Planning Coordinator shall maintain System models within its respective area for performing the studies needed to complete its Planning Assessment. The models shall use data consistent with that provided in accordance with the MOD-010 and MOD-012 standards, supplemented by other sources as needed, including items represented in the Corrective Action Plan, and shall represent projected System conditions. This establishes Category P0 as the normal System condition in Table 1. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]	Each Transmission Planner and Planning Coordinator shall provide evidence, in electronic or hard copy format, that it is maintaining System models within their respective area, using data consistent with MOD-010 and MOD-012, including items represented in the Corrective Action Plan, representing projected System conditions, and that the models represent the required information in accordance with Requirement R1.	The models utilized in the current in-force Planning Assessment and one previous Planning Assessment in accordance with Requirement R1 and Measure M1.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.
TPL-001-4	R2.	Each Transmission Planner and Planning Coordinator shall prepare an annual Planning Assessment of its portion of the BES. This Planning Assessment shall use current or qualified past studies (as indicated in Requirement R2, Part 2.6), document assumptions, and document summarized results of the steady state analyses, short circuit analyses, and Stability analyses. [Violation Risk Factor: High] [Time Horizon: Long-term Planning]	Each Transmission Planner and Planning Coordinator shall provide dated evidence, such as electronic or hard copies of its annual Planning Assessment, that it has prepared an annual Planning Assessment of its portion of the BES in accordance with Requirement R2.	The Planning Assessments performed since the last compliance audit in accordance with Requirement R2 and Measure M2.	Rolling 36 Months data retention period.
TPL-007-1	R4.	Each responsible entity, as determined in Requirement R1, shall complete a GMD Vulnerability Assessment of the Near-Term Transmission Planning Horizon once every 60 calendar months. This GMD Vulnerability Assessment shall use a study or studies based on models identified in Requirement R2, document assumptions, and document summarized results of the steady state analysis. [Violation Risk Factor: High] [Time Horizon: Long-term Planning]	Each responsible entity, as determined in Requirement R1, shall have dated evidence such as electronic or hard copies of its GMD Vulnerability Assessment meeting all of the requirements in Requirement R4. Each responsible entity, as determined in Requirement R1, shall also provide evidence, such as email records, web postings with an electronic notice of posting, or postal receipts showing recipient and date, that it has distributed its GMD Vulnerability Assessment within 90 calendar days of completion to its Reliability Coordinator, adjacent Planning Coordinator(s), adjacent Transmission Planner(s), and to any functional entity who has submitted a written request and has a reliability-related need as specified in Requirement R4. Each responsible entity, as determined in Requirement R1, shall also provide evidence, such as email notices or postal	For Requirement R4, each responsible entity shall retain documentation of the current GMD Vulnerability Assessment and the preceding GMD Vulnerability Assessment.	Current plan, model, agreement, methodology, study, program or procedure with a revision history specifying changes and dates of review.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
			receipts showing recipient and date, that it has provided a documented response to comments received on its GMD Vulnerability Assessment within 90 calendar days of receipt of those comments in accordance with Requirement R4.		
TPL-007-1	R7.	Responsible entities as determined in Requirement R1that conclude through the GMD Vulnerability Assessment conducted in Requirement R3 that their System does not meet the performance requirements of Table 1 shall develop a Corrective Action Plan addressing how the performance requirements will be met. The Corrective Action Plan shall: [Violation Risk Factor: High] [Time Horizon: Long-term Planning]	Each responsible entity, as determined in Requirement R1, that concludes, through the GMD Vulnerability Assessment conducted in Requirement R4, that the responsible entity's System does not meet the performance requirements of Table 1 shall have evidence such as electronic or hard copies of its Corrective Action Plan, as specified in Requirement R7. Each responsible entity, as determined in Requirement R1, shall also provide evidence, such as email records, web postings with an electronic notice of posting, or postal receipts showing recipient and date, that it has distributed its Corrective Action Plan or relevant information, if any, within 90 calendar days of its completion to its Reliability Coordinator, adjacent Planning Coordinator(s), adjacent Transmission Planner(s), a functional entity referenced in the Corrective Action Plan, and any functional entity that submits a written request and has a reliability-related need, as specified in Requirement R7. Each responsible entity, as determined in Requirement R1, shall also provide evidence, such as email notices or postal receipts showing recipient and date, that it has provided a documented response to comments received on its Corrective Action Plan within 90 calendar days of receipt of those comments, in accordance with Requirement R7.	For Requirement R7, each responsible entity shall retain documentation as evidence for five years or until all actions in the Corrective Action Plan are completed, whichever is later.	Rolling 48 months data retention period.
VAR-001-5	R1.	Each Transmission Operator shall specify a system voltage schedule (which is either a range or a target value with an associated tolerance band) as part of its plan to operate within System Operating Limits and Interconnection Reliability Operating Limits. [Violation Risk Factor: High] [Time Horizon: Operations Planning]1.1. Each Transmission Operator shall provide a copy of the voltage schedules (which is either a range or a target value with an associated tolerance band) to its Reliability Coordinator and adjacent Transmission Operators within 30 calendar days of a request.	The Transmission Operator shall have evidence that it specified system voltage schedules using either a range or a target value with an associated tolerance band.For part 1.1, the Transmission Operator shall have evidence that the voltage schedules (which is either a range or a target value with an associated tolerance band) were provided to its Reliability Coordinator and adjacent Transmission Operators within 30 calendar days of a request. Evidence may include, but is not limited to, emails, website postings, and meeting minutes.	The Transmission Operator shall retain evidence for Measures M1 through M6 for 12 months.	Rolling 12 Calendar months data retention period.
VAR-001-5	R2.	Each Transmission Operator shall schedule sufficient reactive resources to regulate voltage levels under normal and Contingency conditions. Transmission Operators can provide sufficient reactive resources through various means including, but not limited to, reactive generation scheduling, transmission line and reactive resource switching, and using controllable load. [Violation Risk Factor: High] [Time Horizon:	Each Transmission Operator shall have evidence of scheduling sufficient reactive resources based on their assessments of the system. For the operations planning time horizon, Transmission Operators shall have evidence of assessments used as the basis for how resources were scheduled.	The Transmission Operator shall retain evidence for Measures M1 through M6 for 12 months.	Rolling 12 Calendar months data retention period.

Reliability Standard	Req.	Requirement Text	Measure	Data Retention Period Detail	New Evidence Retention Recommendation
		Real-time Operations, Same-day Operations, and Operations Planning]			
VAR-001-5	R3.	Each Transmission Operator shall operate or direct the Real-time operation of devices to regulate transmission voltage and reactive flow as necessary. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same-day Operations, and Operations Planning]	Each Transmission Operator shall have evidence that actions were taken to operate capacitive and inductive resources as necessary in Real-time. This may include, but is not limited to, instructions to Generator Operators to: 1) provide additional voltage support; 2) bring resources on-line; or 3) make manual adjustments.	The Transmission Operator shall retain evidence for Measures M1 through M6 for 12 months.	Rolling 12 Calendar months data retention period.

NERC Legal and Regulatory Update

July 4, 2019 – August 5, 2019

NERC FILINGS TO FERC SUBMITTED SINCE LAST SC UPDATE

FERC Docket No.	Filing Description	FERC Submittal Date
RR19-7-000	2019 Five-Year ERO Performance Assessment NERC submitted the Five-Year ERO Performance Assessment for the period of 2014-2018.	7/22/2019
RM15-11-003	First Informational Filing of NERC Regarding Work Performed Under the Geomagnetic Disturbance Research Work Plan NERC submitted the First Informational Filing regarding the results of research performed to date under the NERC Geomagnetic Disturbance Research Work Plan.	7/26/2019

FERC ISSUANCES SINCE LAST SC UPDATE

FERC Docket No.	Issuance Description	FERC Issuance Date
RD19-6-000	Letter Order Approving Proposed Reliability Standard IRO-002-6 FERC issued a letter order approving the joint petition of NERC and WECC for approval of proposed reliability standard IRO-002-6. This version of the standard adds a regional variance for the Western Interconnection to promote coordination among Reliability Coordinators (RCs). The continent-wide requirements are unchanged.	7/11/2019
RD19-5-000	Letter Order Approving Proposed Reliability Standard CIP-003-8 FERC issued a letter order approving NERC's request for approval of proposed Reliability Standard CIP-003-8 (Cyber Security — Security Management Controls), the associated implementation plan, violation risk factors and violation severity levels; and the retirement of Reliability Standard CIP-003-7.	7/31/2019

NERC PLANNED UPCOMING FILINGS

FERC Docket No.	Filing Description	Planned Filing Date
RM19-10-000	Comments on the TPL-001-5 Rulemaking NERC will submit comments in response to the Notice of Proposed Rulemaking regarding Reliability Standard TPL-001-5 - Transmission System Planning Performance Requirements issued by FERC on June 20, 2019.	8/26/2019
TBD	PRC-006-NPCC-2 – Automatic Underfrequency Load Shedding NERC and NPCC will submit a joint petition for the approval of Regional Reliability Standard PRC-006-NPCC-2 – Automatic Underfrequency Load Shedding.	9/15/2019
TBD	BAL-002-WECC-3 NERC and WECC will submit a joint petition for the approval of Regional Reliability Standard BAL-002-WECC-3 – Contingency Reserve.	9/15/2019

Standards Committee Expectations

Approved by Standards Committee January 12, 2012

Background

Standards Committee (SC) members are elected by members of their segment of the Registered Ballot Body, to help the SC fulfill its purpose. According to the Standards Committee Charter, the SC's purpose is:

> *In compliance with the NERC Reliability Standards Development Procedure, the Standards Committee manages the NERC standards development process for the North American-wide reliability standards with the support of the NERC staff to achieve broad bulk power system reliability goals for the industry. The Standards Committee protects the integrity and credibility of the standards development process.*

The purpose of this document is to outline the key considerations that each member of the SC must make in fulfilling his or her duties. Each member is accountable to the members of the Segment that elected them, other members of the SC, and the NERC Board of Trustees for carrying out their responsibilities in accordance with this document.

Expectations of Standards Committee Members

1. SC members represent their segment, not their organization or personal views. Each member is expected to identify and use mechanisms for being in contact with members of the segment in order to maintain a current perspective of the views, concerns, and input from that segment. NERC can provide mechanisms to support communications if an SC member requests such assistance.
2. SC members base their decisions on what is best for reliability and must consider not only what is best for their segment, but also what is in the best interest of the broader industry and reliability.
3. SC members should make every effort to attend scheduled meetings, and when not available are required to identify and brief a proxy from the same segment. SC business cannot be conducted in the absence of a quorum, and it is essential that each SC member make a commitment to being present.
4. SC members should not leverage or attempt to leverage their position on the SC to influence the outcome of standards projects.
5. The role of the SC is to manage the standards process and the quality of the output, not the technical content of standards.

Parliamentary Procedures

Based on Robert's Rules of Order, Newly Revised, 11th Edition, plus "Organization and Procedures Manual for the NERC Standing Committees"

Motions

Unless noted otherwise, all procedures require a "second" to enable discussion.

When you want to…	Procedure	Debatable	Comments
Raise an issue for discussion	Move	Yes	The main action that begins a debate.
Revise a Motion currently under discussion	Amend	Yes	Takes precedence over discussion of main motion. Motions to amend an amendment are allowed, but not any further. The amendment must be germane to the main motion, and cannot reverse the intent of the main motion.
Reconsider a Motion already approved	Reconsider	Yes	Allowed only by member who voted on the prevailing side of the original motion.
End debate	Call for the Question *or* End Debate	No	If the Chair senses that the committee is ready to vote, he may say "if there are no objections, we will now vote on the Motion." The vote is subject to a 2/3 majority approval. Also, any member may call the question. This motion is not debatable. The vote is subject to a 2/3 vote.
Record each member's vote on a Motion	Request a Roll Call Vote	No	Takes precedence over main motion. No debate allowed, but the members must approve by 2/3 majority.
Postpone discussion until later in the meeting	Lay on the Table	Yes	Takes precedence over main motion. Used only to postpone discussion until later in the meeting.
Postpone discussion until a future date	Postpone until	Yes	Takes precedence over main motion. Debatable only regarding the date (and time) at which to bring the Motion back for further discussion.
Remove the motion for any further consideration	Postpone indefinitely	Yes	Takes precedence over main motion. Debate can extend to the discussion of the main motion. If approved, it effectively "kills" the motion. Useful for disposing of a badly chosen motion that can not be adopted or rejected without undesirable consequences.
Request a review of procedure	Point of order	No	Second not required. The Chair or secretary shall review the parliamentary procedure used during the discussion of the Motion.

Notes on Motions

Seconds. A Motion must have a second to ensure that at least two members wish to discuss the issue. The “seconder” is not recorded in the minutes. Neither are motions that do not receive a second.

Announcement by the Chair. The Chair should announce the Motion before debate begins. This ensures that the wording is understood by the membership. Once the Motion is announced and seconded, the Committee “owns” the motion, and must deal with it according to parliamentary procedure.

Voting

Voting Method	When Used	How Recorded in Minutes
Unanimous Consent The standard practice.	When the Chair senses that the Committee is substantially in agreement, and the Motion needed little or no debate. No actual vote is taken.	The minutes show "by unanimous consent."
Vote by Voice	The standard practice.	The minutes show Approved or Not Approved (or Failed).
Vote by Show of Hands (tally)	To record the number of votes on each side when an issue has engendered substantial debate or appears to be divisive. Also used when a Voice Vote is inconclusive. (The Chair should ask for a Vote by Show of Hands when requested by a member).	The minutes show both vote totals, and then Approved or Not Approved (or Failed).
Vote by Roll Call	To record each member's vote. Each member is called upon by the Secretary, and the member indicates either "Yes," "No," or "Present" if abstaining.	The minutes will include the list of members, how each voted or abstained, and the vote totals. Those members for which a "Yes," "No," or "Present" is not shown are considered absent for the vote.