



**RCC Meeting  
February 24, 2021  
Agenda Item 8.11**

**Reliability Assessment Program  
(NRAP)  
HIGHLIGHT REPORT**  
*Prepared for the  
Reliability Coordinating Committee  
February 24, 2021*

Distributed to:

Members, Reliability Coordinating Committee  
Members, Compliance Committee  
Members, Regional Standards Committee  
Members, Task Force on System Studies  
Members, Task Force on System Protection  
Members, Task Force on Coordination of Planning  
Members, Task Force on Coordination of Operation  
Members, Task Force on Infrastructure Security and Technology  
Chairmen, Working Groups  
and  
NPCC Staff



# Reliability Assessment Program

## HIGHLIGHT REPORT

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# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program Regional Standards Committee

Item	Name	Assignment
RSC	Regional Standards Committee	<p>The NPCC Regional Standards Committee (RSC), a committee of the NPCC Board, is charged with management and maintenance of the NPCC Regional Standard Processes Manual (approved by FERC Dec. 23, 2014). The RSC considers requests for new or revised regional standards and be available for advisement to the NPCC Board of Directors on standards related matters. The RSC works in coordination with the Regional Standards Process Manager (RSPM) who is the administrator for the NPCC Regional Standard Processes Manual. In addition, the RSC reviews, comments on, and develops ballot recommendations for the NERC Reliability Standards under review or development. The RSC also provides oversight for the NPCC Regional Reliability Directories which contain NPCC’s more stringent regional Criteria and supporting procedures and guidelines. The RSC also conducts and coordinates the NPCC Cost Effectiveness Analysis Procedure (CEAP) for evaluation of the cost effectiveness of NPCC’s Regional Standards and Directories. The RSC provides input to the NERC “Periodic Review Projects” and the NERC version of the CEAP being referred to as cost effectiveness and is providing input into the “Standards Efficiency Review” (SER) project. The SER allows the industry the opportunity to identify potential standard requirements which could be candidates for retirement. The RSC also discusses potential avenues to address potential reliability related issues as well as opportunities to enhance reliability associated with the deployment of Distributed Energy Resources (DER). In addition, the RSC coordinates work with the RCC and CC to address any issues identified with standards to improve standards and reliability. The RSC also is sanctioned in the Compliance Guidance Policy process to vet potential approaches to compliance prior to submission to NERC and is engaged in revising the NPCC Regional Standard Processes Manual. The RSC will also serve as a liaison for the Northeast Region to the NERC RSTC for any Standards related recommendations.</p>

**Status/ Comments:**

The RSC is focused on the review of each of the NERC Reliability Standards (as they are developed, revised or reviewed for reaffirmation or retirement). The RSC is currently reviewing all the FERC Orders and NOPRs that pertain to Reliability Standards. The RSC develops recommendations for the membership on ballots when posted. The RSC also supports the NERC Standards Efficiency Review, Functional Model Working Group, NERC Standards Committee, and the NERC Standards Committee Process Subcommittee. The RSC is in the process of reviewing the NPCC Regional Reliability Standards Development Procedure, renamed the Regional Standard Processes Manual. The RSC continues to participate in the NERC Standard Processes Manual revisions and the Results Based Standards Initiative through its support of the Standards Committee Process Subcommittee and solicits members for the NERC drafting teams as necessary to ensure NPCC is adequately represented. The RSC has been overseeing the Strategic Review of NPCC Criteria.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Regional Standards Committee

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>RSC</b>	<b>Regional Standards Committee</b>	<p>The RSC continues to consider enhancements to the NPCC Website to provide further uniformity and consistency with that of NERC and other Regions.</p> <p>The RSC is currently engaged in reviewing a potential approach to penetration of utility scale Distributed Energy Resources (DERs) on the distribution system, and adverse impact on the BES. The Distributed Energy Resource BES impact reporting form is posted on the NPCC website. The RSC hosted three DER forums in 2019 and 2020. The DER Forums are open to the public. The next DER Forum is tentatively scheduled on May 13, 2021. The DER Forums are hosted on the second day of RSC meetings. The NPCC Standards staff developed Version 1 of the DER Guidance Document which was endorsed by the members of RSC in 2019. All comments from the DER Guidance Document comment period were reviewed and responded by the NPCC Standards staff and members of RSC. Version 2 of the NPCC DER Guidance Document was posted for a 45-day comment period. All comments were addressed and reflected in Version 2 of the NPCC DER Guidance Document. The RSC, in conjunction with various industry participants, has approved Version 2 of the NPCC DER Guidance Document; it has been posted onto the NPCC website on November 20, 2020. The plan is to do a third round of review for the DER Guidance Document this year.</p>



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-1	Basic Criteria for the Design And Operation of the Bulk Power System	Appendix A – ERO Standards Appendix B – Guidelines and Procedures for NPCC Area Transmission Review Appendix C – Procedure for Testing and Analysis of Extreme Contingencies Appendix D – Guidelines for Area Review of Resource Adequacy Appendix E – Guidelines for Requesting Exclusions to Sections 5.4.1 (B) and 5.5.1 (B) of NPCC Directory No. 1 - Design and Operation of the Bulk Power System Appendix F – Procedure for Operational Planning Coordination Appendix G – Procedure for Inter Reliability Coordinator Area Voltage Control	TFCP           TFCO* TFCO*	September 30, 2015

**Status/ Comments:**

The Task Force on Coordination of Planning (TFCP) and the Task Force on Coordination of Operation (TFCO) completed a collaborative review of Directory No. 1 in 2015. The NPCC Full Member committee approved the most recent version of Directory No. 1 on September 30, 2015.

Currently the RCC is monitoring an Implementation Plan governing protection upgrades in New England. The TFCP and TFCO will jointly develop a scope of work for the pending comprehensive review of Directory No.1.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-2	Emergency Operation	Appendix A – Definition of Terms Appendix B - Guideline and Procedure for Emergency Operation	TFCO TFCO TFCO	June 29, 2018

**Status/ Comments:**

The Task Force on Coordination of Operation (TFCO) and its CO-8 Working Group posted a revised version of Directory No. 2 *Emergency Operations* to the Open Process on December 30, 2017.

The Directory No. 2 criteria has been reformatted into NERC style requirements and has been reviewed to ensure the criteria is consistent with recently approved ERO Standards.

The NPCC Open Process posting concluded on February 13, 2018 and the TFCO has considered comments received and developed responses to the comments. Subsequent to RCC approval, the NPCC Full Member Committee approved the revised version of Directory No. 2 on June 29, 2018.

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-3	Maintenance Criteria for Bulk Power System Protection	Appendix A – Definition of Terms Appendix B – Guidelines and Procedures for Maintenance of Bulk Power System Protection	TFSP TFSP TFSP	Retired April 1, 2015

**Status/ Comments:**

The Task Force on System Protection (TFSP) completed a technical comparison of the criteria in Directory No. 3 with PRC-005-2 *Protection System Maintenance* and recommended that the criteria in Directory No. 3 be retired.

The RCC approved the TFSP recommendation and on October 15, 2014 the NPCC Full Membership voted to approve the retirement of Directory No. 3, effective April 1, 2015, upon the enforcement date of PRC -005-2 *Protection System Maintenance*.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-4	BPS Protection Criteria		TFSP	January 30, 2020
		Appendix A – Guideline for Bulk Power System Protection	TFSP	
		Appendix B - Procedure for Reporting to TFSP New and Modified Protection Systems	TFSP	
	<b>Status/ Comments:</b>	An updated version of Directory No. 4 was approved at the December 3, 2019 RCC meeting. The NPCC Full Membership approved the proposed RCC revisions to Directory No. 4 on January 30, 2020.		



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-5	Reserve	Appendix A – Monitoring Procedure for Operating Reserve Criteria Frequency Response	TFCO	September 27, 2019
		Appendix B – Procedures during Abnormal Operating Conditions	TFCO	
		Appendix C – Participation Request Form – Simultaneous Activation of Reserve and ACE Diversity Interchange	TFCO	
		Appendix D – Guidelines for Determining the Time T+0	TFCO	

**Status/ Comments:**

The Task Force on Coordination of Operation (TFCO) completed a comprehensive review of Directory No. 5 in 2019 with the NPCC Full Membership approving the revised version of Directory No.5 on September 27, 2019. The review considered the impact of evolving ERO standards, NPCC Glossary updates and revisions, revised synchronized reserve criteria, and retired procedures detailed within the Appendices.





# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-6	Regional Reserve Sharing		TFCO	September 27, 2019

**Status/Comments:**

The Task Force on Coordination of Operation (TFCO) and its CO-8 Working Group completed a comprehensive review of Directory No. 6 and posted a revised version of the document to the NPCC Open Process. The TFCO review considered the impact of evolving ERO standards, emerging industry technologies and the recommendations contained in the Phase 2 Final Report on the A-10 Methodology. An updated version of Directory No. 6 was approved by the RCC for approval at its September 4, 2019 meeting. The NPCC Full Membership approved the revised version of Directory No.6 on September 27, 2019.

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-7	Remedial Action Schemes		TFCP	Dec. 22, 2020
		Attachment 1 – Definition of Terms	TFSP	
		Appendix A – Guidance for Consideration in SPS Design Criteria	TFSP	
		Appendix B – Procedure for Review of Special Protection Systems	TFCP	

**Status/ Comments:**

The Task Force on Coordination of Planning (TFCP) and the Task Force on System Protection (TFSP) completed a comprehensive review of Directory No. 7 to ensure that the existing regional review process and the specific criteria attributes within the document are consistent with PRC-012-2. The title of the document and the existing NPCC Glossary term for Special Protection Systems was revised to be consistent with NERC’s Glossary term for Remedial Action Scheme. The RCC recommended the NPCC Full Member Committee approval of these changes at its December 1, 2020 meeting. The NPCC Full Membership approved the revised version of Directory No.6 on December 22, 2020.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-8	System Restoration	<p>Appendix A - Table 1 “Standard Test Procedures for key facilities and associated critical components required for system restoration.</p> <p>Appendix B: NERC ERO Reliability Standards</p> <p>Appendix C - Table 2: Comparison of Test Procedures for Critical Components of Key Facilities of the System Restoration Plan</p>	TFCO	September 25, 2018
	<b>Status/ Comments:</b>	<p>The Task Force on Coordination of Operation (TFCO) and its CO-11 Working Group developed a clarification on the applicability of the criteria to certain Key Facilities. The clarification was approved at the September 9, 2020 RCC meeting. Additionally, an Implementation Plan governing the clarification was developed and approved by the RCC at its December 1, 2020 meeting.</p> <p>The CO-11 Working Group developed a scope of work for the 2021 triennial review of Directory No. 8 in November and December 2020. The draft scope of work was approved by the TFCO at its January 13-14, 2021 meeting. The triennial review will address non-substantive and deferred NPCC member comments from the previous triennial review in 2018, Criteria Clarification requests, reviews of recently updated, relevant NERC mandatory reliability standards, and relevant industry trends and topics.</p>		

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-9	NPCC Verification of Generator Gross and Net Real Power Capability	<p>Appendix A – Definition of Terms</p> <p>Appendix B – Basic Flow Chart for Verification Generator Gross and Net Real Power Capability</p>	<p>TFCO</p> <p>TFCO/TFCP <sup>1</sup></p> <p>TFCO/TFCP <sup>1</sup></p>	Retired July 1, 2019
	<b>Status/ Comments:</b>	<p>The NPCC Full Membership voted to approve the retirement of NPCC Regional Reliability Directory No. 9 <i>Verification of Real Power Capability</i> and seven existing NPCC Glossary terms contained solely within Directories No. 9 and No. 10, effective July 1, 2019. Directory No. 9 is posted on the NPCC website marked with a ‘retired’ watermark.</p>		



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-10	NPCC Verification of Generator Gross and Net Reactive Power Capability	Appendix A – Definition of Terms Appendix B1 – Basic Flow Chart for Verification of Generator Gross and Net Reactive Power Capability Appendix B2 – Generator Reactive Capability Form	TFCO  TFCO/TFCP <sup>1</sup> TFCO/TFCP <sup>1</sup>  TFCO/TFCP <sup>1</sup>	Retired July 1, 2019

**Status/ Comments:**

The Task Force on Coordination of Operation has completed a technical comparison of the Directory No. 10 criteria with the requirements of MOD-25-2 and concluded that Directory No. 10 can be retired without creating a reliability gap. The RCC approved TFCO’s recommendation to retire Directory No. 10 along with seven existing NPCC Glossary terms contained solely within Directories No. 9 and No. 10 at its May 31, 2017 meeting, with the effective date to coincide with the completion of the MOD-25-2 Implementation Plan.

On August 3, 2017, the NPCC Full Member Committee voted to approve the retirement of NPCC Regional Reliability Directory No. 10 Verification of Reactive Power Capability and seven existing NPCC Glossary terms contained solely within Directories No. 9 and No.10, effective July 1, 2019. Directory No. 10 is posted on the NPCC website marked with a ‘retired’ watermark.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-11	Disturbance Monitoring Equipment Criteria		TFSP	October 24, 2016
		Appendix A – Guide to Time Synchronization of Substation Equipment	TFSP	
		Appendix B – Guide for Application of DME	TFSP	
		Appendix C – Guide for Generator Sequence of Events Monitoring	TFSP	

**Status/ Comments:**

On October 24, 2016 the NPCC Full Member Committee voted to approve regional Reliability Directory No. 11 *Disturbance Monitoring Equipment Criteria*.

Also approved was the concurrent retirement of the following NPCC documents:

- A-15 – “*Disturbance Monitoring Criteria*”
- B-25 – “*Guide to Time Synchronization of Substation Equipment*”
- B-26 – “*Guide for Application Disturbance Monitoring Equipment*”
- B-28 – “*Guide for Generator Sequence of Events Monitoring*”

Directory No. 11 augments PRC-002-2 *Disturbance Monitoring and Reporting Requirements* and guides effective application of equipment necessary to capture the data required by the NERC standard.

The Task Force on System Protection has begun its periodic review of Directory No.11.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-12	UFLS Load Shedding Program Requirements	Appendix A – Definition of Terms	TFSS TFSS	July 9, 2013
	<b>Status/ Comments:</b>	Directory No. 12 was revised by the Task Force on System Studies (TFSS) to synchronize the UFLS program tolerance bands in Directory No. 12 with those in the UFLS Regional Standard PRC-006-NPCC-1, allowing Regional entities to implement a program that is consistent with the Regional Standard and the SS-38 Working Group design recommendations as part of the ongoing six-year UFLS Implementation Plan. The NPCC Full Membership approved the revised Directory No. 12 on July 9, 2013. Pending all regulatory approvals of recently revised PRC -006-NPCC-2 Directory No. 12 will be considered for retirement.		
<u>Item</u>	<u>Name</u>	<u>Criteria</u>	<u>Lead TF</u>	<u>Current Version</u>
A-01	Criteria for Review and Approval of Documents		TFCP	Retired Sept. 25, 2018
	<b>Status/ Comments:</b>	The Regional Standards Committee (RSC) updated the NPCC <i>Directory Development and Revision Manual</i> and relevant sections of the A-01 <i>Criteria for Review and Approval of Documents</i> have been incorporated into the Directory Manual for the purposes of retiring the A-01. The revised and updated NPCC Directory Manual, including sections of the A-01 document, was approved by the RSC in August 2018. Concurrent with the RSC review of the revised Directory Manual, the RCC approved the retirement of the A-01 document and on September 25, 2018 the NPCC Full Membership approved the retirement of the A-01 Document.		



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Directories, Appendices & Criteria

<u>Item</u>	<u>Name</u>	<u>Criteria</u>	<u>Lead TF</u>	<u>Current Version</u>
A-10	Classification of Bulk Power System Elements		TFCP	March 27, 2020

**Status/ Comments:**

The Task Force on Coordination of Planning (TFCP) and its CP-11 Working Group conducted a review of the A-10 methodology. The CP-11 Working Group effort focused on three objectives as highlighted by the TFCP in the project scope: 1) Identify critical facilities for the applicability of NPCC Directories; 2) improve consistency of application and outcome across the region; and 3) simplify the methodology to make it less resource intensive.

The RCC approved testing of three proposed methodologies developed by the CP-11 Working Group during Phase I of the review in 2017. These proposals included revisions to the existing methodology and two new methodologies. The CP-11 Working Group Final Report concluded that a revised and improved existing methodology is the most effective of the proposals in identifying those facilities critical to the design and operation of the BPS. The recommended improvements include revisions to the overall testing strategy (i.e., where to begin and conclude testing), base case set-up (i.e., load levels, interface stress and generation patterns) and the use of performance requirements to assess testing outcomes. The RCC approved the CP-11 Working Group's recommendations in December of 2018 and these recommendations have been incorporated into a revised version of the A-10 Document.

The TFCP posted a revised version of the A-10 to the Open Process for two Open Process comment periods and the TFCP has responded to all comments. The RCC approved the revised A-10 Document and an associated implementation plan at its February 27, 2020 meeting. The NPCC Full Member Committee voted to approve the revised A-10 Document on March 27, 2020.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Standards Program

#### Directory Development and Revision Manual

<b>Item</b>	<b>Name</b>	<b>Assignment</b>	<b>Current Version</b>
Directory	Directory Development and Revision Manual	<p>The NPCC Directory Development and Revision Manual is intended to provide guidance regarding the process of establishing a new or revised Directory and will clarify the roles and responsibilities of the NPCC Task Force responsible for Directory content.</p> <p><b>Status/ Comments:</b></p> <p>The Directory Development and Revision Manual was revised in 2013 to incorporate changes in the approval process for a Criteria Interpretation (clarification) and to consider revisions to the Manual that incorporate cost considerations for new or revised criteria.</p> <p>A revised version of the Directory Manual which incorporated relevant sections of the A-01 document to facilitate retirement of the A-01 was approved by the RSC in August 2018. A repeatable cost- effective evaluation has also been incorporated into the Directory Manual in order to ensure a cost- effective evaluation of the criteria during periodic Task Force reviews of each Directory. The RSC approved minor updates to the Manual in October 2020.</p>	October 3, 2014



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### NPCC Glossary of Terms

<b>Item</b>	<b>Name</b>	<b>Assignment</b>	<b>Current Version</b>
<b>Glossary</b>	<b>NPCC Glossary of Terms</b>	<p>The NPCC Glossary of Terms has replaced the A7 document and was approved by the RSC on October 26, 2011. The Glossary contains the definitions of all terms found within NPCC Directories, Guidelines, and Procedures.</p> <p>The Glossary is organized in sections containing those terms found in Directories (including Appendices) which support the NPCC criteria and another Section for definitions found within remaining NPCC B and C documents.</p> <p>The Glossary is located in the Directory section of the NPCC website.</p>	<b>October 26, 2011</b>





# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Regional Standards

<u>Item</u>	<u>Name</u>	<u>Assignment</u>	<u>Current Version</u>	
PRC-002-NPCC-01	Disturbance Monitoring	This Standard establishes the technical and reporting requirements for disturbance monitoring equipment. This will lead to improved system reliability by providing the resources to do post event analyses.	<b>Latest Version:</b>	<b>Retired</b>
			<b>Date:</b>	<b>August 16, 2016</b>

**Status/ Comments:**

The proposal to retire PRC-002-NPCC-01 *Disturbance Monitoring* regional standard was approved by the NPCC Board on March 23, 2016 and by the NERC Board of Trustees on May 5, 2016. After NERC Board approval, a petition to retire the regional standard was filed with FERC on June 9, 2016 and it was filed with all Canadian Provinces on June 14, 2016.

FERC issued an approval letter for the retirement of Regional Reliability Standard PRC-002-NPCC-01 *Disturbance Monitoring* on August 16, 2016.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Regional Standards

<b>Item</b>	<b>Name</b>	<b>Assignment</b>	<b>Current Version</b>	
<b>PRC-006 NPCC-1</b>	<b>Under Frequency Load Shedding (UFLS)</b>	This Standard will provide the requirements for implementing an automatic under frequency load shedding program in order to effectively respond to system under frequency events.	<b>Latest Version:</b>	<b>Feb. 2020</b>
			<b>Frequency of Reviews:</b>	<b>3 years</b>
			<b>Next Review Date:</b>	<b>Feb. 2023</b>

**Status/ Comments:**

FERC approved PRC-006-NPCC-1 and its Implementation Plan on February 21, 2013. Based on the FERC approved Implementation Plan the enforcement date for requirements R1 – R7 is January 1, 2016. Requirements R8 – R23 became on enforceable on July 1, 2015.

As a result of developments regarding NERC PRC-006-1/PRC-006-2 *Automatic Underfrequency Load Shedding*, PRC-024-1/PRC-024-2 *Generator Frequency and Voltage Protective Relay Settings*, Project 2014-01 *Standards Applicability for Dispersed Generation Resources*, NPCC Directory No. 12 *Underfrequency Load Shedding Program Requirements*, and the 2013 *NPCC UFLS Adequacy Assessment*, a Regional Standard Authorization Request (RSAR) for revision of Automatic Underfrequency Load Shedding PRC-006-NPCC-1 was approved by the Regional Standards Committee at its June 23, 2015 meeting. The RCC approved the Regional Standards Committee’s request to assign the TFSS to the project scope outlined in the RSAR and to populate the Drafting Team. On October 7, 2015, the RSC approved the drafting team roster as per the recommendation of the TFSS leadership. The PRC-006-NPCC-01 Automatic UFLS drafting team met eleven times and three conference calls. All requirements have been reviewed by the SDT and the draft standard was posted for three open process comment periods and for a 90-day pre-ballot review. A ballot was then conducted which closed on February 10, 2019. The ballot achieved 80.95% quorum and approval of 76%. Due to an ERRATA, the standard was re-approved by the NPCC Board at their September 5, 2019 meeting. It was approved at the November 5, 2019 BOT meeting. The petition for approval is sent to FERC on December 23, 2019 and FERC has assigned Docket RD20-1-000 open for comment period which closed on January 22, 2020. The PRC-006-NPCC-02 was endorsed by FERC on February 18, 2020.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Regional Standards

<b>Item</b>	<b>Name</b>	<b>Assignment</b>	<b>Current Version</b>	
BAL-002- NPCC-01	<b>Regional Reserve Sharing Groups</b>	The Standard provides the measures for implementing Reserve Sharing Groups within NPCC in order to meet their reserve obligations.	Latest Version:	<b>New</b>
			<b>Frequency of Reviews:</b>	<b>3 years</b>
			<b>Next Review Date:</b>	
	<b>Status/ Comments:</b>	A Regional Standard Authorization Request (RSAR) has been developed and approved by the RSC. The RCC has assigned the Task Force on Coordination of Operation (TFCO) to act as the drafting team and a request for drafting team members was sent to the NPCC membership. At its meeting of April 14 and 15, 2011, the TFCO established a sub-group of TFCO members and NPCC staff that will work on the Reserve Sharing Groups Standard's development. The development of Regional Standards has been held in abeyance pending further direction from NERC.		



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Standards Program

### Regional Standards Development Procedure

<u>Item</u>	<u>Name</u>	<u>Assignment</u>	<u>Current Version</u>
RSPM	Regional Standard	<p>The NPCC Regional Standard Processes Manual describes the procedures, policies, and practices implemented to ensure an “open, fair, and inclusive” process for the transparent initiation, development, implementation and revision of the NPCC Regional Standards necessary for the reliable operation of the Interconnected Bulk Power System in northeastern North America.</p> <p><b>Status/ Comments:</b> The Regional Standard Processes Manual (RSPM) is posted on the NPCC Website. The RSC actively reviewed the activities at the NERC level to ensure the regional procedure is consistent with the NERC Standard Processes Manual and achieves a consistency with the NERC common attributes adhered to by the other Regions. During the June 20, 2018 RSC meeting, a small team was formed to review the current RSPM for any potential updates. The RSC reviewed and updated the existing RSPM. The revised RSPM was approved by the RSC for comment posting on August 7, 2019. The RSPM was posted for a 45-day comment period from September 11, 2019 to October 26, 2019. The RSPM was posted for a ballot period from January 17, 2020 to February 25, 2020. The results of the ballot were as follows: 81.65% quorum and 100% approval. The RSPM was approved by the NPCC Board at their meeting on May 6, 2020.</p> <p>The NPCC RSPM was posted by NERC for a 45-day industry wide comment period that concluded on July 29, 2020. The proposal to approve Regional Standard Processes Manual was submitted to the NERC Board of Trustees and approved at their August 19-20, 2020 meeting. NERC and NPCC filed the joint petition to FERC on September 10, 2020. On November 23, 2020, FERC issued a letter order endorsing the revised NPCC Regional Standard Processes Manual. Docket Number: RR20-7-000.</p>	<p><b>Latest Version:</b> Nov. 2020</p> <p><b>Frequency of Reviews:</b> 3 years</p> <p><b>Next Review Date:</b> Nov. 2023</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Compliance Enforcement and Organization Registration and Certification Program

#### Compliance Committee

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
CC	NPCC Compliance Committee	The NPCC Compliance Committee is charged with providing objective stakeholder input for the NPCC Compliance Monitoring and Enforcement Program (CMEP). The NPCC CMEP covers compliance assessment and enforcement of NERC Reliability Standards, Regional Reliability Standards, and NPCC Reliability Criteria (NPCC Directories). Regarding NERC Reliability Standards and Regional Reliability Standards, the CC provides input on the NPCC Compliance Staff's implementation of the CMEP. In this role, the CC will endorse the compliance procedures (CP) used by the NPCC Compliance Staff in the conduct of the CMEP. In addition, the CC is responsible for providing non-monetary sanction recommendations to the RCC for incidents of non-compliance with monitored Reliability Criteria.

**Status/ Comments:**

At the June, July, August, September, and October CC calls, NPCC Staff shared with the CC updates and explanations on CIP-013 outreach and the CIP-013 FAQ, status of 2020 NPCC outreach to stakeholders, the status of the review of the ICP for self-logging and self-reporting entities, and explained NPCC FAC-008 outreach. On June 17, the CC accepted revisions to CP-01 CMEP Implementation, CP-04 Registration, and CP-07 TFE's that were presented by NPCC Staff. The CC Scope and Work Plan was discussed at the December 3, 2020 CC webinar.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

# Compliance Enforcement and Organization Registration and Certification Program

### NPCC Compliance Committee

#### Documents

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
CCEP	<b>Criteria Compliance and Enforcement Program</b>	<p>The CC will maintain the <i>NPCC Criteria Compliance and Enforcement Program Process Document (CCEP-1)</i> which documents the process for actively monitoring and enforcing compliance on a subset of the Reliability Criteria.</p> <p>The Compliance Committee will provide to the RCC for approval an annual CCEP Implementation Plan which identifies the Reliability Criteria that will be monitored in the upcoming CCEP compliance year and identifies the due dates for the Reliability Criteria Certification forms.</p> <p>The Compliance Committee will provide to the RCC for approval an annual written assessment of the submitted Reliability Criteria Certification forms which will include recommendations as necessary of non-monetary sanctions for incidents of non-compliance.</p> <p><b>Status/ Comments:</b> At the December 3, 2019 meeting, the 2020 CC Scope and CC Work Plan were discussed and approved. Both documents were approved by the NPCC Board on January 29, 2020. The CCEP Working Group has updated the CCEP-1 process document and it was presented and endorsed by the CC on April 22, 2020. It was provided to the RCC and posted on the NPCC website. In addition, the CC provided a recommendation to the RCC on April 23, 2020 on how issues with Full Member Directory noncompliance due to COVID response should be documented. On July 15, 2020 the CC developed and endorsed the 2019 CCEP Assessment Report which was presented for acceptance at the September 9, 2020 RCC meeting. The 2021 CCEP Implementation Plan and the blank forms for the 2021 Implementation Plan (IP) were approved at the September 16 CC meeting. The 2021 CCEP IP was accepted at the December 1, 2020 RCC meeting.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Training, Education, and Operator Certification Program

#### TASK FORCE ON COORDINATION OF OPERATION

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
CO-2	<b>System Operator Training</b>	<p>This Working Group establishes a program for system operator training relating to NPCC Inc. inter-Area matters, Working Group criteria, terminology, policies, and operating instructions. It prepares and presents material at system operator training sessions, exchanges information on internal system operator training methods. The CO-2 Working Group also evaluates and proposes new techniques and training aids as they become available.</p>
	<b>Status/ Comments:</b>	<p>The Working Group is scheduled to meet on March 10, 2021 for the 2021 Spring Seminar Planning Meeting. The 2021 Spring 86<sup>th</sup> NPCC System Operator Seminar will be held on Wednesday, May 5, 2021 and will be conducted in a virtual format via WebEx due to ongoing COVID-19 pandemic related travel restrictions. The group continues to evaluate options for System Operator Credential Maintenance with social distancing measures and other pandemic related restrictions. The Working Group members continue to make enhancements to their training programs and share lessons learned in order to provide system operators with the necessary CEHs and safe training opportunities for reliable system operations during the COVID-19 pandemic. These continued efforts are frequently discussed at the Working Group meetings.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### TASK FORCE ON COORDINATION OF OPERATION

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
CO-1	<b>Control Performance Working Group</b>	<p>The Working Group ensures coordination between adjacent control areas in establishing interchange schedules, reviews time error correction procedures, and monitors the conformance of the Areas with NPCC Control Performance Criteria and Operating Reserve Criteria. At the request of the Task Force on Coordination of Operation (TFCO), it conducts investigations of control performance problems.</p> <p><b>Status/ Comments:</b> The Working Group most recently met via WebEx on February 9-10, 2021 due to COVID-19 pandemic related travel restrictions. In addition to the regular periodic Control Performance monitoring activities, the Working Group continues to closely monitor activities involving the BAL-003.1 Phase II SDT Whitepaper and is prepared to provide comments, in coordination with TFCO and the CO-8 Working Group, once released to industry. The Working Group continues to also conduct periodic monitoring as required by NERC and NPCC Control Performance and Operating Reserve Criteria, and in coordination with the CO-8 Working Group and the TFCO. No discernable operational trends have been identified. The Working Group continues to closely follow industry related storage integration discussions and monitor developments to their relevant BAL and FAC standards. The Working Group will meet next on April 27-28, 2021 via WebEx.</p>
CO-7	<b>Operational Planning Working Group</b>	<p>The Working Group CO-07 was restructured to serve the Task Force on Coordination of Operation as an Ad Hoc Working Group, populated and charged to address specific issues as required to assist the Task Force on Coordination of Operation (TFCO). It has been renamed the “Operational Planning Working Group.”</p> <p><b>Status/ Comments:</b> The Working Group is currently being populated in preparation for the 2021-22 TFCO/Task Force on Coordination of Planning coordinated comprehensive triennial review of Directory No. 1.</p>





## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### TASK FORCE ON COORDINATION OF OPERATION

Item	Name	Assignment
CO-8	System Operations Managers Working Group	Provide a forum for the Managers of the NPCC control centers to identify and discuss security concerns in the operation of the interconnected bulk power supply system, and specific concerns related to the integration of operation between and among the evolving ISOs. The System Operations Managers Working Group will also assist the Task Force on Coordination of Operation (TFCO) in their work on issues related to system security and the operation of the ISOs, and provide advice to the TFCO, as requested.
	<b>Status/ Comments:</b>	The Working Group is completed a triennial review of the C-15 – <i>Procedures for Geomagnetic Disturbances Which Affect Electric Power System</i> in 2020. Revised C-15 has been posted to the NPCC Website. The Working Group completed its review of the NPCC Regional Reliability Plan (RRP) document during its November 4-5, 2020 meeting, including conforming changes with the NERC Reliability Coordinator Reliability Plan Reference Document. Revised RRP was approved by Task Force of Coordination of Operation at its December 3-4, 2020 meeting to go to the NERC Real Time Operating Subcommittee (RTOS) (formerly ORS) for endorsement. NPCC Area’s representative on the RTOS will be presenting revision of NPCC’s RRP for RTOS’ endorsement at its February 9, 2021 meeting.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program TASK FORCE ON COORDINATION OF OPERATION

Item	Name	Assignment
CO-11	Restoration Working Group	<p>The CO-11 Restoration Working Group facilitates effective and coordinated power system restoration among the NPCC Reliability Coordinator areas, and with adjacent Regions. It annually reviews the restoration plans of the NPCC Reliability Coordinator areas to identify in each individual plan the physical points requiring coordination, the general elements of the restoration plan, the Key Facilities associated with the restoration plan, the communication protocols employed, and the roles and responsibilities of the restoration participants. It identifies opportunities for mutual assistance during restoration and the extent to which each system can rely on its neighbors for assistance. Coordinates Reliability Coordinator restoration exercises and develops and supervises annual wide-area restoration drills. CO-11 monitors the NERC Reliability Standards EOP-005, <i>System Restoration from Blackstart Resources</i>, and EOP-006, <i>System Restoration Coordination</i>. The CO-11 Working Group provides comments to the NPCC Task Force on Coordination of Operation and the NPCC Regional Standards Committee as revisions to these Standards are posted for consideration, and weighed for implementation.</p>
	<b>Status/ Comments:</b>	<p>The Restoration Working Group completed reviews of all NPCC Reliability Coordinator (RC) Area Restoration Plans at CO-11 Working Group and Task Force on Coordination of Operation (TFCO) meetings in 2020. The reviews included descriptions of the elements of coordination of the Restoration plans with neighboring Reliability Coordinators. The Working Group will meet next on March 4, 2021 via WebEx.</p> <p>The Working Group and the TFCO recently developed a clarification on the applicability of the NPCC Criteria in Regional Reliability Directory No. 8 to certain Key Facilities. The clarification was approved at the September 2020 RCC meeting, and Implementation Plan was approved at the December 1, 2020 RCC meeting.</p> <p>The Working Group developed a scope of work for the 2021 triennial review of Directory No. 8 in November and December 2020. The draft scope of work was approved by the TFCO at its January 13-14, 2021 meeting. The triennial review will address non-substantive and deferred NPCC member comments from the previous triennial review in 2018, Criteria Clarification requests, reviews of recently updated, relevant NERC mandatory reliability standards, and relevant industry trends and topics.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### TASK FORCE ON COORDINATION OF OPERATION

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
CO-12	<b>Operations Planning Working Group</b>	Review the overall reliability of the generation and transmission system in the NPCC Region for the Summer and Winter Seasonal conditions.
	<b>Status/ Comments:</b>	<p>The CO-12 Working Group held a kickoff call for the NPCC 2021 Summer Reliability Assessment effort on January 29, 2021 to review the upcoming effort scope, schedule and potential assessment enhancements. Working Group efforts will be made to develop the NPCC assessment in conjunction with the NPCC CP-8 Working Group and coordinate alignment with the 2021 NERC Summer Reliability Assessment (SRA).</p> <p>Preliminary results will be presented to the RCC at their February 24, 2021 meeting. The final report will be issued to the Task Force on Coordination of Operation and the Task Force on Coordination of Planning by April 9, 2021 for their approvals. Following approval, the results of the <i>NPCC 2021 Summer Reliability Assessment</i> will be presented to the NPCC Board on May 5, 2021. The NPCC 2021 Summer Media release follows on May 6, 2021.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### TASK FORCE ON COORDINATION OF PLANNING

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
CP- 8	<b>Working Group on Review of Resource and Transmission Adequacy</b>	Review the overall reliability of the NPCC Areas and perform pre-seasonal resource adequacy assessments.
	<b>Status/ Comments:</b>	The RCC approved the <i>NPCC 2020 Long Range Adequacy Overview</i> and the <i>NERC ProBA – NPCC Region</i> at its December 1, 2020 meeting.
<b>Item</b>	<b>Name</b>	<b>Assignment</b>
CP- 2021S	<b>Summer 2021 Multi-Area Probabilistic Reliability Assessment</b>	Assess NPCC Area reliability by estimating the projected use of Area Operating Procedures designed to mitigate resource shortages for the summer (May through September) period.
	<b>Status/ Comments:</b>	The Scope of Work and associated assumptions for the <i>NPCC 2021 Summer Multi-Area Probabilistic Reliability Assessment</i> was approved by the Task Force on Coordination of Planning on January 1, 2021; preliminary results will be presented at the February 24, 2021 RCC meeting. Following the Task Force on Coordination of Operation and the Task Force on Coordination of Planning approvals, the results of the <i>NPCC 2021 Summer Reliability Assessment</i> will be presented to the NPCC Board on May 5, 2021. The NPCC 2021 Summer Media release follows on May 6, 2021.
<b>Item</b>	<b>Name</b>	<b>Assignment</b>
CP- 2020-21W	<b>Winter 2020-2021 Multi-Area Probabilistic Reliability Assessment</b>	Assess NPCC Area reliability by estimating projected use of Area Operating Procedures designed to mitigate resource shortages for the winter (November through March) period.
	<b>Status/ Comments:</b>	The RCC approved the assessment at their December 1, 2020 meeting; it is available on the NPCC website.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### TASK FORCE ON COORDINATION OF PLANNING

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>TIE</b>	<b>NPCC 2021 Tie Benefits Report</b>	Estimate NPCC Area Annual Tie Benefits for a five-year period, assuming a hypothetically “At Criteria” and “As Is” system representation, applying consistent methodology and assumptions to all NPCC Areas, using the same multi-area reliability model.
	<b>Status/ Comments:</b>	The <i>NPCC 2019 Tie Benefits Report</i> was approved by the Task Force on Coordination of Planning (TCFP) at their December 16, 2019 meeting, and was approved at the February 27, 2020 RCC meeting. The TFCP has approved the Scope of Work for the <i>NPCC 2021 Tie Benefits Report</i> at its February 10, 2021 meeting.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### TASK FORCE ON SYSTEM STUDIES

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
SS-38	<b>Inter-Area Dynamic Analysis Working Group</b>	Assigned to analyze dynamic phenomena, which may affect interconnected system reliability, especially in the area of low frequency oscillations.
	<b>Status/ Comments:</b>	The SS-38 Working Group members is evaluating other transient stability software tools using the 2019 Series MMWG base case with user written models removed in an effort to compare dynamic system responses and to have an alternative backup software.



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Assessment and Performance Analysis Program

### TASK FORCE ON SYSTEM STUDIES

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
SS-37	<b>Base Case Development Working Group</b>	<p>On an annual basis, develop a library of solved power flow cases and associated dynamic data.</p>
	<b>Status/ Comments:</b>	<p><b>2020 Series Base Case Development - Ongoing</b> The NPCC SS-37 Working Group on Base Case Development is currently working with the MMWG Coordinator to address issues with NPCC dynamics data that arose after merging with Eastern Interconnection dynamics data as part of the 2020 Series dynamics case development effort. The final dynamics cases are expected to be complete during February 2021.</p> <p><b>Preparation for 2021 Series Base Case Development</b> The NPCC SS-37 Working Group on Base Case Development is currently preparing for development of twelve (12) 2021 Series power flow and dynamics base cases. In January, the SS-37 Working Group held its annual kick-off meeting to discuss the activities of 2020, provide updates on MMWG activities and to establish a 2021 work plan. The 2021 Series Case list provided by MMWG includes a 2026 Spring Minimum Load Case. To prepare for a new type of case build the SS-37 Working Group has prepared a survey for NPCC PC's to initiate conversation within their respective organizations and obtain answers that will better prepare the Working Group to tackle the Minimum Load Case.</p> <p>The automation activities initiated in 2020 have continued into 2021 and the SS-37 Working Group has developed a Sub-Group within SS-37 to handle automation related tasks. The SS-37 Automation Sub-Group is comprised of SS-37 members and volunteers from SS-37 member organizations with a programming aptitude. Meetings were held in January and February, 2020 to develop a structure for the group and decide on specific deliverables to build.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### TASK FORCE ON SYSTEM STUDIES

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
SS-39	<b>Geomagnetic Disturbance Working Group</b>	Develop a White Paper recommending voluntary guidelines to address R3, R4, and R8 of NERC Standard TPL-007-4.
	<b>Status/ Comments:</b>	<p>The SS-39 Working Group has divided its scope of work into the following tasks; 1) develop criteria for acceptable system steady state voltage performance; 2) define “events” to use for vulnerability assessments; 3) develop common practices for GMD related case set-up and conditioning; and 4) develop common practices on methodology for applying and studying the effects of the “events” defined in 3).</p> <p>Information has been compiled and notes have been developed for Tasks 1, 3, and 4. Task 1 recently requested clarification on several criteria-related questions from TFSS and is refining its approach based on the guidance received. Initial drafting for Task 3 is in progress. Task 4 has been merged with Task 2. Task 2, regarding which events to apply for the vulnerability assessment is both complex and critical to the overall recommendations.</p>





## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### TASK FORCE ON SYSTEM PROTECTION

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
SP-7	<b>Working Group on Review Of Protection System Misoperations</b>	Review and analyze misoperations of transmission and generation protection systems and special protection systems on the bulk electric system and report on the statistics of misoperations as they occur in the NPCC region including lessons learned and implementation of corrective action plans by registered entities.
	<b>Status/ Comments:</b>	<p>The Task Force on System Protection reviewed the status of SP-7 Working Group on Protection System Misoperation Review as completed through Q3 of 2020. The total number of misoperations for Q3 is 32 compared to the NPCC Q3 quarterly average of 41 misoperations. This is the second lowest misoperation reported for the Q3 in the past four years.</p> <p>The misoperation rate for Q3 2020 is 4.8%. This is the lowest misoperation rate reported for the Q3 in the past four years. Note that during this quarter, 667 operations were reported compared to the Q3 quarterly average of 631 operations. Also, Tropical Storm Isaias occurred in Q3 2020.</p>



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Reliability Assessment and Performance Analysis Program

### Eastern Interconnection Reliability Assessment Group

Item	Name	Assignment
ERAG	<b>Eastern Interconnection Reliability Assessment Group</b>	The Eastern Interconnection Reliability Assessment Group (ERAG) oversees the Multi-Regional Modeling Group (MMWG) steady state and dynamics base case development, Eastern Interconnection interregional assessment activities and other interregional matters of interest.
	<b>Status/ Comments:</b>	<p><b>Eastern Interconnection (EI) MOD-032 Designee</b>            A new MOD-032 designee agreement is currently being developed for execution by NERC and the Eastern Interconnection Regional Executives to codify ERAG as the permanent MOD 032 designee. Until such time as the permanent designee agreement is executed, ERAG continues to operate under the interim designee agreement.</p> <p><b>MMWG Update</b></p> <ul style="list-style-type: none"> <li>• 2020 Series Power Flow Cases have been completed for SS-37 members to distribute to appropriate staff within their organizations.</li> <li>• 2020 Series Dynamics Cases are still under development and are expected to be complete in late February or early March 2021.</li> <li>• The next MMWG meeting is scheduled for March 17-18, 2021.</li> </ul> <p><b>MOD-032 Case Developer Request for Proposal (RFP)</b></p> <ul style="list-style-type: none"> <li>• A draft RFP was reviewed by ERAG during its previous meeting and will be issued during the first Quarter of 2021.</li> <li>• Bids will be evaluated during Q2 2021 and a winning bidder will be determined during Q3 2021. The winning bidder will begin development of the 2023 Series MMWG cases.</li> </ul>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

Eastern Interconnection Reliability Assessment Group

ERAG Seasonal Working Group

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
<b>ERAGWG</b>	<b>ERAG Seasonal Working Group</b>	The ERAG Seasonal Working Group conducts appraisals of the Eastern Interconnection. Appraisals are conducted for weather scenarios, including drought and polar vortex type conditions, to determine the impacts on power flows across the Eastern Interconnection.
	<b>Status / Comments:</b>	The ERAG Working Group remains inactive until an ERAG-conducted system study is initiated.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
RAS	<b>Reliability Assessment Subcommittee</b>	<p>Conduct an annual review of the overall reliability of the existing and planned generation and transmission system of the six Regional Reliability Entities for the ten-year horizon. Conduct semiannual seasonal assessments of the overall reliability of the existing generation and transmission systems of the six Regional Reliability Entities.</p> <p><b>Status/ Comments:</b></p> <p>The 2020-2021 NERC Winter Reliability Assessment was released on November 18, 2020. The 2020 NERC Long-Term Reliability Assessment (LTRA) was released on December 15, 2020.</p> <p>NERC has requested each Region’s assistance in assessing the 2021 Long-Term (10-year) reliability of their Region. Each NERC Region was asked to submit their respective data on an Assessment Areas-basis. Narratives will be completed based on responses to questions in the 2021 Long-Term Reliability Assessment (LTRA) Narrative Guide. The narrative guide for the 2021 LTRA includes questions pertaining to the projections for each Assessment Area. The NPCC response, coordinated by the NPCC CP-8 Working Group will be submitted to NERC and finalized at the end of July, 2021.</p> <p>The RAS met on February 3-4, 2021 to review the draft 2021 LTRA template documents. The 2021 LTRA is scheduled to be reviewed by the NERC Reliability and Security Technical Committee, and released December 15, 2021, following NERC Board of Trustees approval.</p> <p>NERC requested the initial Narratives and Operational Risk Scenario submissions for the 2021 NERC Summer Reliability Assessment (SRA) by April 7, 2021. The NPCC CO-12 Working Group is coordinating the submittal for the NPCC Areas, with assistance from the NPCC CP-8 Working Group. The NERC 2021 SRA is scheduled to be released on May 27, 2021.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>PAWG</b>	<b>NERC Probabilistic Assessment Working Group</b>	Advance the work initiated by the NERC Generation & Transmission Reliability Planning Models Task Force (GTRPMTF) and the Probabilistic Assessment Improvement Task Force (PAITF) in the conduct of NERC's Core probabilistic assessments. Coordinate and promote the alignment of probabilistic resource adequacy assessments conducted by the ERO and industry.
	<b>Status/ Comments:</b>	The NERC Probabilistic Assessment Working Group met on February 3-4, 2021 to review the NERC Area 2020 ProbA Sensitivity Case results of the draft Regional Risk Scenario Case report, scheduled to be released in Q2-2021. The 2020 ProbA Base Case was released with the 2020 NERC Long-Term Reliability Assessment in December 2020. The group is also planning efforts for the 2021 Probabilistic Analysis Forum, scheduled for Fall 2021.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
TADS	<b>Transmission Availability Data System</b>	<p>Serve as the Regional Entity Coordinator in support of the NERC TADS outage data collection and the analysis of the NPCC Transmission Owners (TO) outage information. Oversee the use of and the data entry of automatic outage information by the TO in the NERC Internet based data management tool - webTADS.</p> <p><b>Status/ Comments:</b></p> <p>In December 2020, the TADS Working Group became the TADS User Group (TADSUG). The TADSUG performs the same functions as the TADSWG; however, it no longer reports into the NERC Committee structure. Instead, it reports to the NERC Performance Analysis Department. The User Group holds monthly calls; the last one was conducted on January 19, 2021.</p> <p>The User Group was informed about the portions of the State of Reliability as they appeared in the final publication, focusing on the Transmission Outage Severity (TOS) calculation. The calculation attempts to demonstrate the unexpected loss of transmission elements on any given day throughout the year. The User Group suggested that it might be beneficial to perform the analysis on an interconnection basis for a more accurate representation and to identify any potential localized events and/or common causes.</p> <p>The User Group worked on the Data Reporting Instructions (DRI) for TADS, available on the NERC TADS website. The User Group also revised the TADS reporting workbook; the OATI portal will contain a news item when the updated workbook is available. TADS training materials are also available on the NERC TADS website.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>DADS</b>	<b>Demand Availability Database System</b>	Serve as the Regional Entity Coordinator in support of the DADS data collection and analysis for NPCC. Oversee the collection of the data in the NERC Internet based data management tool – web DADS.
	<b>Status/ Comments:</b>	<p>In December 2020, the DADS Working Group became the DADS User Group (DADSUG). The DADSUG performs the same functions as the DADSWG; however, it no longer reports into the NERC Committee structure. Instead, it reports to the NERC Performance Analysis Department. In response to the recent coronavirus (COVID -19) developments, NERC extended the Q1 reporting deadline for all Section 1600 applications to June 29, 2020.</p> <p>The DADS User Group worked on its Scope to develop a process for soliciting and evaluating DADS changes and recommend selected improvements, such as changes to definitions, metrics, Demand Response Programs. The DADS User Group also discussed the Severity Risk Index correlation with Demand Response Event Days. The DADS User Group has started working on clarification of DADS reporting criteria.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>GADS</b>	<b>Generator Availability Data System</b>	<p>Serve as the Regional Entity Coordinator in support of the Generator Availability data collection and Data System analysis for NPCC. Oversee the collection of the data in the NERC Internet based data management tool – web E-GADS.</p> <p><b>Status/ Comments:</b></p> <p>In December 2020, the GADS Working Group became the GADS User Group (GADSUG). The GADSUG performs the same functions as the GADSWG, however, it no longer reports into the NERC Committee structure. Instead, it reports to the NERC Performance Analysis Department. A conference call held on January 26, 2021.</p> <p>NERC has added Cause Code 9015 – Pandemic in order to allow explicit reporting on events affected by COVID19, whether it’s direct (reduced staffing) or indirect (parts delayed). A code for “High Water Level in Tailrace (too much water)” has been added to the Hydro cause codes.</p> <p>The GADS Solar team continues to make progress on the Data Reporting Instructions (DRI). Site-level event reporting criteria and cause codes for events are in development. Solar reporting will be similar to the GADS Wind application. A phased in approach will be used. Configuration and performance reporting will be at the inverter sub-group level. Reporting data requirements for Solar have been initiated with a target goal of beginning data submittal by 2021.</p> <p>GADS Wind Turbine Generation Data Reporting Instructions have been developed to assist wind plant personnel in reporting information to NERC’s GADS Wind Reporting application. The instructions detail the procedures, schedule, and format to follow when reporting data. Wind plants with a Total Installed Capacity of 75 MW or more with a commissioning date of January 1, 2005 or later will be required to report on a quarterly basis. A GADS Wind Data Reporting Instructions (DRI) Addendum was added to the NERC site – to help guide users on how to identify data errors and references on how to correct them. The full year of the phased in reporting for GADS Wind will be completed at the end of March 2021. After the completion of phased in reporting, additional GADS wind Validations may be developed in the future as analysis and metrics on data developed.</p>





## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>MIDASUG</b>	<b>Misoperation Data Analysis System User Group</b>	<p>Serve as the Regional Entity Coordinator in support of the Misoperation data collection and Data System analysis for NPCC. Oversee the collection of the data in the NERC Internet based data management tool – MIDAS.</p> <p><b>Status/ Comments:</b></p> <p>In December 2020, the MIDAS Working Group became the MIDAS User Group (MIDASUG). The MIDASUG performs the same functions as the MIDASWG; however, it no longer reports into the NERC Committee structure. Instead, it reports to the NERC Performance Analysis Department. The User Group holds monthly calls. A WebEx call was held on January 5, 2021.</p> <p>The 2021 MIDAS Data Reporting Instructions (DRI) have been posted to NERC’s website. The document is intended to provide guidance for MIDAS reporting as detailed in the Section 1600 Data Request, and is not intended as guidance for any NERC Standards Compliance. The document is used for identifying Composite Protection Systems that should be reported in MIDAS, determining the number of Composite Protection System Operations to report quarterly, and identifying and coding Misoperations.</p> <p>The User Group made several changes to the 2021 MIDAS DRI and has added new examples to the document. The User Group discussed conducting MIDAS Virtual Training in 2021 and reviewed proposed FAQs &amp; training videos.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Reliability Assessment and Performance Analysis Program

#### OTHER

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>IPSAC</b>	<b>Interregional Planning Stakeholder Advisory Committee</b>	<p>The Interregional Planning Stakeholder Advisory Committee (IPSAC) is an open stakeholder group that provides input for the development of the Northeast Coordinated System Plan (NCSP). The NCSP outlines activities conducted jointly by ISO New England, New York ISO, and PJM.</p>
	<b>Status/ Comments:</b>	<p>The IPSAC held a WebEx meeting on December 12, 2020. Agenda items included stakeholder discussion of PJM/ISO-New England/New York ISO Regional Planning Needs and Solutions, and coordination of New York ISO/ISO-New England/PJM Interconnection Queue and Long-Term Firm Transmission Requests. The next stakeholder meeting is scheduled for June 4, 2021.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Situation Awareness and Infrastructure Security Program

#### TASK FORCE ON COORDINATION OF OPERATION

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
CO-10	<b>Operational Tools Working Group</b>	<p>The Operational Tools Working Group (CO-10) is responsible for taking a lead role in the development of NPCC and NERC operational tools (e.g., electronic tagging, the NERC Interchange Distribution Calculator and electronic scheduling), including hardware, software and integrated systems. The Operational Tools Working Group will define the need for operational tools, evaluate the cost benefits of operational tools, coordinate their implementation within NPCC and coordinate common training in the use of operational tools.</p> <p><b>Status/ Comments:</b></p> <p>The CO-10 Working Group continues to review of tool failures and associated lessons learned as generated from the NERC Event Analysis Program and also develops regional insights templates from the review of NERC EMS/SCADA lessons learned to further aid NPCC entities in utilizing these valuable lessons.</p> <p>Along with working on the review and analysis of tool failures within the NPCC and the review and comment of NERC published ‘Lessons Learned’ regarding EMS outages, the Working Group has reviewed the results of the Critical Operating Tools Survey and has prepared a report to be presented to the Task Force of Coordination of Operation (TFCO) at their March 2021 meeting. The Working Group developed and distributed the Critical Operating Tools Survey, following their every two-year schedule, to the BAs, RCs TOs, and TOPs on May 19, 2020 to obtain the data to be analyzed and presented. Upon receipt of approval of the report from TFCO, the report will be distributed to all 23 of the survey participants as information indicating where they and their peers stand on the surveyed topics, as well as informing them of the trends observed.</p>



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Situation Awareness and Infrastructure Security Program

#### TASK FORCE ON INFRASTRUCTURE SECURITY AND TECHNOLOGY (TFIST)

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>IST-1</b>	<b>Infrastructure Security and Technology (TFIST) Workshop</b>	Periodic workshops presentations to address timely issues and update member system personnel associated with the provision of on-line computer systems for operation of the power system. <b>Last Workshop:</b> November 2019

**Status/ Comments:** The TFIST presented at NPCC’s Fall 2019 Standards & Compliance Workshop. TFIST expected to present at the NPCC’s 2020 Standards & Compliance Workshops; however, the virtual workshop format did not allow time for a TFIST update. The TFIST expects to present at NPCC’s Spring 2021 Standards and Compliance Workshop.

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>IST-2</b>	<b>Telecommunications Working Group</b>	Provide a forum to identify, discuss and advance the technology of Telecommunications Infrastructure for the reliable operations of the NPCC Bulk Power System. The Telecommunications Working Group (IST-2) will also support the TFIST in their work on issues related to Telecommunications

**Status/ Comments:** The Working Group expects to provide their 2020 annual report at the May 26, 2021 meeting. The IST-2 Working Group continues to support this testing.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Situation Awareness and Infrastructure Security Program

#### TASK FORCE ON INFRASTRUCTURE SECURITY AND TECHNOLOGY (TFIST)

**Item**  
**IST-4**

**Name**  
**Cyber Security**

**Assignment**

The purpose of the Cyber Security Working Group is to address specific cyber security issues that are assigned by the TFIST. Although these cyber security topics are assigned by the TFIST, they may be developed by any Task Force or Working Group that require a response or a coordinated effort between Task Forces regarding a cyber security matter.

**Status/ Comments:**

At its August 14-15, 2019 meeting, the Task Force on Coordination of Operation (TFCO) discussed the recently filed for regulatory approval CIP-012-1 standard and its implementation plan. TFCO members agreed that the impacted NPCC RCs, BAs and TOPs would benefit from a coordinated approach to meeting the requirements of the CIP-012-1 standard. On November 10, 2019, the TFCO requested TFIST consider standing-up ad-hoc Working Group IST-4.

The IST-4 Working Group was stood up and populated with subject matter experts from each of the NPCC RCs following the TFCO May 2020 Meeting. The Working Group members conducted their first meeting in a virtual format via WebEx on Wednesday, August 19, 2020 with subsequent meetings to be held on a bi-weekly basis. IST-4 will develop a whitepaper that recommends a risk management approach and a series of functional specifications. The CIP-012-1 NERC Standard becomes effective on July 1, 2022 and the Working Group intends to have a revised draft to present to the TFIST and the TFCO for comments and feedback by June 2021.



## RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

### Situation Awareness and Infrastructure Security Program

#### TASK FORCE ON INFRASTRUCTURE SECURITY AND TECHNOLOGY (TFIST)

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
IST-5	<b>Physical Security Working Group</b>	<p>The Physical Security Working Group exchanges information regarding approaches to physical security to enhance the reliability and resiliency of the BPS. The Physical Security Working Group (IST-5) also supports TFIST in their work on issues related to Physical Security.</p> <p><b>Status/ Comments:</b></p> <p>The Working Group continues to develop confidential guidance by industry physical security experts and its members regarding better practices and technologies, that also includes lessons learned as a result of the current COVID-19 pandemic. Member entities continue to contribute changes and adaptations that are needed to their plans as new issues and situations arise. This will continue to be an ongoing exercise until the COVID-19 pandemic is over. A physical security pandemic survey was developed by the work group with entities sharing physical security approaches and mitigations to unique situations posed by the COVID-19 pandemic. The Working Group will hold their 2021 Q1 meeting in a virtual setting on March 5, 2021. Meetings will continue to be held in virtual settings until the end of the COVID-19 pandemic.</p> <p>Members of the Working Group and NPCC staff continue to work closely with the NERC E-ISAC and Pacific Northwest National Labs to develop a virtual version of the Design Basis Threat program. To date, three virtual programs have been presented with lessons learned from each being incorporated into the development process as the program matures.</p>



# RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

## Administrative Services

### MEMBERS' FORUMS

<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>General</b>	<b>NPCC General Meeting</b>	To promote the reliable and efficient operation of the interconnected bulk power systems in Northeastern North America, NPCC invites high level policy makers from Federal, Provincial, and State regulatory and/or Governmental authorities and senior executives within NPCC to identify and discuss emerging issues related to the reliability of the NPCC Region.
	<b>Status/ Comments:</b>	Due to the current COVID-19 pandemic, the date of next NPCC General meeting will be reviewed later in 2021.
<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>Gov/Reg</b>	<b>NPCC Governmental Regulatory Affairs Advisory Group</b>	To provide a forum where industry and governmental and/or regulatory representatives can exchange views and strive to develop consensus policy recommendations on reliability issues specific to the NPCC Region and share actionable information related to regional energy and reliability matters.
	<b>Status/ Comments:</b>	Due to the current COVID-19 pandemic, the date of the next NPCC Governmental/Regulatory Affairs Advisory Group meeting will be reviewed later in 2021.
<b>Item</b>	<b>Name</b>	<b>Assignment</b>
<b>PIC</b>	<b>Public Information Committee</b>	To highlight and summarize NPCC activities and accomplishments and disseminate appropriate information to the media, as well as respond to related requests for information.
	<b>Status/ Comments:</b>	NPCC continues to participate in communications coordination with NERC and the Regions. The <i>NPCC 2021 Summer Reliability Assessment</i> Media release is scheduled for May 6, 2021.