



**RCC Meeting
May 24, 2021
Agenda Item 9.10**

**Reliability Assessment Program
(NRAP)
HIGHLIGHT REPORT**
*Prepared for the
Reliability Coordinating Committee
May 26, 2021*

Distributed to:

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Members, Task Force on System Protection
Members, Task Force on Coordination of Planning
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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

Item	Name	Assignment
RSC	Regional Standards Committee	<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. Version 3 of the NPCC DER Guidance Document is under review. The goal is to post the draft document in the fourth quarter of 2021.</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 TFCP TFCP 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 has approved a Scope of Work, and a Joint CP-11 and CO-7 Working Group Roster has been submitted to the RCC for approval and an initial meeting of the Working Group is anticipated in mid- May 2021.



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:	<p>The Task Force on Coordination of Operation (TFCO) and its CO-8 Working Group posted a revised version of Directory No. 2 <i>Emergency Operations</i> to the Open Process on December 30, 2017.</p> <p>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.</p> <p>The NPCC Full Member Committee approved the revised version of Directory No. 2 on June 29, 2018.</p>		

<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:	<p>The Task Force on System Protection (TFSP) completed a technical comparison of the criteria in Directory No. 3 with PRC-005-2 <i>Protection System Maintenance</i> and recommended that the criteria in Directory No. 3 be retired.</p> <p>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 <i>Protection System Maintenance</i>.</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-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	
	Status/ Comments:	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.7 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
	Status/ Comments:	<p>The CO-11 Working Group conducted their first focused review session of Directory No. 8 on March 26, 2021. These focused review sessions are currently scheduled to occur every three weeks throughout the triennial review process. The working group members began reviewing Directory No. 8 using the TFCO approved scope of work and addressing non-substantive and deferred NPCC member comments from the previous triennial review in 2018. In accordance with the NPCC Directory Development and Revision Manual, CO-11 will also develop a Cost Effectiveness Analysis review on the Directory No. 8 criteria to identify potential alternatives that achieve the same reliability outcome. The CO-11 Working Group has also requested additional NPCC Transmission Operator representatives to support the group’s efforts to address accurately and efficiently some of the comments and questions surrounding the Test Procedures for Critical Components in Directory No. 8.</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>	TFCO	Retired July 1, 2019
	Status/ Comments:	<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 ¹ TFCO/TFCP ¹ TFCO/TFCP ¹	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 in November 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-12	UFLS Load Shedding Program Requirements	Appendix A – Definition of Terms	TFSS TFSS	July 9, 2013
	Status/ Comments:	<p>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.</p> <p>The TFSS posted a retirement recommendation for Directory No. 12 on April 28, 2021 for a 45- day comment period.</p>		
<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
	Status/ Comments:	<p>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.</p>		



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

Item	Name	Assignment	Current Version
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>Status/ Comments:</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 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 2020



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

NPCC Glossary of Terms

Item	Name	Assignment	Current Version
Glossary	NPCC Glossary of Terms	<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 in the Directory section of the NPCC website.</p>	October 26, 2011



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Regional Standards

Item	Name	Assignment	Current Version	
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.	Latest Version:	Retired
			Date:	August 16, 2016

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

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

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

Item	Name	Assignment	Current Version	
BAL-002- NPCC-01	Regional Reserve Sharing Groups	The Standard provides the measures for implementing Reserve Sharing Groups within NPCC to meet their reserve obligations.	Latest Version:	New
			Frequency of Reviews:	3 years
			Next Review Date:	
	Status/ Comments:	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	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>Latest Version: Nov. 2020</p> <p>Frequency of Reviews: 3 years</p> <p>Next Review Date: Nov. 2023</p>
	Status/ Comments:	<p>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>	



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Compliance Enforcement and Organization Registration and Certification Program Compliance Committee

Item	Name	Assignment
CC	NPCC Compliance Committee	<p>The NPCC Compliance Committee is charged with providing objective stakeholder input for Staff consideration in the implementation of the NPCC Compliance Monitoring and Enforcement Program (CMEP). The NPCC CMEP covers compliance assessment and enforcement of NERC Reliability Standards and NPCC Regional Reliability Standards. 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 reviewing Directory certification forms and providing non-monetary sanction recommendations to the RCC for incidents of non-compliance with monitored Reliability Criteria.</p> <p>Status/ Comments: At the January 13, 2021 meeting, the 2021 CC Scope and CC Work Plan were discussed and approved. Both documents were approved by the NPCC Board on January 27, 2021. On the January through May 2021 CC calls, NPCC Staff shared with the CC updates and explanations on the transition from the CDAA compliance reporting tool to the new ERO compliance tool, which will occur through 3 Releases in 2021. The new tools are Align and the Secure Evidence Locker. A prioritized Align/SEL training plan for stakeholder users was developed by NPCC Staff and accepted by the CC on March 17. The CC was presented with the draft NPCC criteria for incorporating entity performance considerations in the development of Compliance Oversight Plans (COPs). Due to CC questions, a small working group was set-up to review the criteria in an objective fashion to propose updates at the next meeting on May 26, 2021.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Compliance Enforcement and Organization Registration and Certification Program

NPCC Compliance Committee

Documents

Item	Name	Assignment
CCEP	Criteria Compliance and Enforcement Program	<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>Status/ Comments: 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, 2020 CC meeting. The 2021 CCEP IP was accepted at the December 1, 2020 RCC meeting. The last of the CCEP certification forms for the 2020 CCEP year are due on May 20, 2021. The CC will develop the 2021 CCEP Assessment Report in time for discussion at the July meeting.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Training, Education, and Operator Certification Program

TASK FORCE ON COORDINATION OF OPERATION

Item	Name	Assignment
CO-2	System Operator Training Seminar	<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>
	Status/ Comments:	<p>The 2021 Spring 86th NPCC System Operator Seminar was held on Wednesday, May 5, 2021 in virtual format via WebEx due to ongoing COVID-19 pandemic related travel restrictions. The seminar program focused on topics related to Human Performance, NPCC Simultaneous Activation of 10-Minute Reserve, ERCOT 2021 Winter Event and recent operating events. The Working Group met on May 19, 2021, to discuss participant evaluation results from the seminar 2021 Spring Seminar Planning Meeting. The Working Group members continues to discuss and make enhancements to their training programs, monitor System Operator Credential Maintenance under pandemic related restrictions, and share lessons learned to provide system operators with the necessary CEHs and safe training opportunities for reliable system operations during the COVID-19 pandemic. The 2021 Fall 87th NPCC System Operator Seminar will be held on November 3-5, 2021.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF OPERATION

Item	Name	Assignment
CO-1	Control Performance Working Group	<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>Status/ Comments:</p> <p>The Working Group most recently met via WebEx on April 27-28, 2021 due to COVID-19 pandemic related travel restrictions. In addition to the regular periodic Control Performance monitoring activities, the Working Group held a focused session on April 7, 2021 to review and provide comments to the latest version of the BAL-003.1 Phase II Standards Drafting Team Whitepaper, which had been released for an informal comment period on March 29, 2021 through April 27, 2021. The CO-1 Working Group solicited the CO-8 Working Group and the TFCO for additional feedback prior to submitting comments to NERC.</p> <p>The Working Group continues to 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 August 4-5, 2021.</p>
CO-7	Operational Planning Working Group	<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>Status/ Comments:</p> <p>The CO-7 Working Group has been populated in preparation for the 2021-22 TFCO/Task Force on Coordination of Planning coordinated comprehensive triennial review of Directory No. 1. A new roster will be presented for approval at the May 26, 2021, RCC meeting.</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	<p>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.</p>
	Status/ Comments:	<p>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 was endorsed by the RTOS at its February 9, 2021. New RRP was made available to the RCC as an informational item at its February 24, 2021, meeting. At its May 3-4, 2021, meeting CO-8 WG members, including representative from PJM reviewed Areas’ Winter 2020-21 operations and Summer 2021 outlook.</p> <p>CO-8 WG continues to hold weekly Emergency Preparedness calls to discuss pandemic operations.</p>



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>
	Status/ Comments:	<p>CO-11 most recently met on March 4, 2021 and will meet next on June 22, 2021. In response to 2021 NPCC Corporate Reliability Objective IA-3, the group has begun to assess telecommunication infrastructure interdependency risks, inviting IST-2 Working Group members to participate at its March 2021 meeting.</p> <p>The Working Group has been regularly meeting to complete the 2021 triennial review of Directory No. 8. The draft scope of work was approved by the TFCO at its January 13-14, 2021 meeting and addresses 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. In accordance with the NPCC Directory Development and Revision Manual, CO-11 will also develop a Cost Effectiveness Analysis review on the Directory No. 8 criteria to identify potential alternatives that achieve the same reliability outcome.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF OPERATION

Item	Name	Assignment
CO-12	Operations Planning Working Group	Review the overall reliability of the generation and transmission system in the NPCC Region for the Summer and Winter Seasonal conditions.
	Status/ Comments:	<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. The NPCC assessment was developed in conjunction with the NPCC CP-8 Working Group and coordinated to align with the 2021 NERC Summer Reliability Assessment. As requested by the Task Force on Coordination of Operation (TFCO), the CO-12 Working Group will meet in June and July 2021 to discuss enhancements to the 2021-2022 NPCC Winter Reliability Assessment to account for abnormal weather conditions. The CO-12 Working Group will propose preliminary enhancements at the August 12-13, 2021 TFCO meeting.</p> <p>Preliminary results were presented to the RCC at their February 24, 2021 meeting. The final draft report was issued to the Task Force on Coordination of Operation and the Task Force on Coordination of Planning (TFCP) on April 9, 2021 for their review and consideration for approval. Following the Task Force approvals on Friday 23, 2021, the results of the <i>NPCC 2021 Summer Reliability Assessment</i> were presented to the NPCC Board on May 5, 2021. The NPCC 2021 Summer Media Release and Summary Overview were issued on May 6, 2021.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF PLANNING

Item	Name	Assignment
CP- 8	Working Group on Review of Resource and Transmission Adequacy	Review the overall reliability of the NPCC Areas and perform pre-seasonal resource adequacy assessments.
	Status/ Comments:	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.
Item	Name	Assignment
CP- 2021S	Summer 2021 Multi-Area Probabilistic Reliability Assessment	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.
	Status/ Comments:	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 were 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> were presented to the NPCC Board on May 5, 2021. The NPCC 2021 Summer Media release followed on May 6, 2021.
Item	Name	Assignment
CP- 2021-22W	Winter 2021-2022 Multi-Area Probabilistic Reliability Assessment	Assess NPCC Area reliability by estimating projected use of Area Operating Procedures designed to mitigate resource shortages for the winter (November through March) period.
	Status/ Comments:	The CP-8 Working Group will begin development of the NPCC Winter 2021-2022 Multi-Area Probabilistic Assessment in June 2021.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF PLANNING

Item	Name	Assignment
TIE	NPCC 2021 Tie Benefits Report	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.
	Status/ Comments:	The Task Force on Coordination of Planning approved the Scope of Work for the <i>NPCC 2021 Tie Benefits Report</i> at its February 10, 2021 meeting. The CP-8 Working Group will begin the analysis following the finalization of the NERC Long Term Reliability Assessment data by the NERC Reliability Assessment Subcommittee in July 2021.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON SYSTEM STUDIES

Item	Name	Assignment
SS-38	Inter-Area Dynamic Analysis Working Group	Assigned to analyze dynamic phenomena, which may affect interconnected system reliability, especially in the area of low frequency oscillations.
	Status/ Comments:	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 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

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
SS-37	Base Case Development Working Group	<p>On an annual basis, develop a library of solved power flow cases and associated dynamic data.</p>
	Status/ Comments:	<p>MMWG 2020 Dynamics Cases 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. Trial 4 of revisions were just completed and all NPCC areas submitted fixes and adjustments in a timely fashion. The pre-final cases are being developed by the MMWG Coordinator and the final dynamics cases are expected to be completed as soon as possible.</p> <p>MMWG 2021 Power Flow Cases 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. On April 1, 2021, the SS-37 Working Group held a meeting to initiate the development of the area interchange schedule, master tie line file and power flow contingency list. The power flow contingency list and area interchange schedule has been agreed upon by the NPCC areas. The master tie line file is still in development and will be submitted on time to meet the MMWG deadline.</p> <p>Automation Sub-Group The SS-37 Automation Sub-Group continues to meet monthly to develop a formal structure (objective, scope, testing procedures, script hosting, tool deployment and work plan) and brainstorm tools and scripts for development. The May 2021 meeting will consist of Sub-Group members presenting tools used within their organizations that can be modified to benefit the SS-37 Working Group. The SS-37 power flow meeting in June will be attended by members of the Automation Sub-Group to take note of the power flow case building process and gather insight as to how tools and scripts can be developed to aid the process.</p> <p>Short Circuit Sub-Group The SS-37 Short Circuit Sub-Group has been formed to address short circuit coordination issues at boundary buses between Areas. The Sub-Group held its first meeting on April 21, 2021. The SS-37 Short Circuit Sub-Group is comprised of a combination of SS-37 members and protection and control engineers elected by those members. There is interest in addressing short circuit modeling discrepancies between neighbors, especially because equivalent representations that will be shared must be developed with consistent software parameters for modeling accuracy. The Sub-Group will meet again during Q4 of 2021 to discuss methods for achieving software parameter consistency.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON SYSTEM STUDIES

Item	Name	Assignment
SS-39	Geomagnetic Disturbance Working Group	Develop a White Paper recommending voluntary guidelines to address R3, R4, and R8 of NERC Standard TPL-007-4.
	Status/ Comments:	<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>Task 3 sections describing practices for case set-up and conditioning as well as approaches to sensitivity analysis, have been drafted. Task 1 sections describing system performance criteria, have largely been completed with editorial revisions in progress. Task 2, regarding which “events” to apply in the vulnerability assessment, continues to be an interesting and challenging topic, particularly around approaches to evaluate harmonic impacts on protection systems. There are multiple possible approaches with varying complexity and accuracy; at present the team intends to present alternatives to inform judicious selection of the best approach for each entity.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON SYSTEM PROTECTION

Item	Name	Assignment
SP-7	Working Group on Review Of Protection System Misoperations	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.
	Status/ Comments:	<p>The Task Force on System Protection reviewed the status of SP-7 Working Group on Protection System Misoperation Review as completed through Q4 of 2020. The total number of misoperations for Q4 2020 is 33 compared to the NPCC Q4 quarterly average of 37 misoperations. This is the second lowest misoperation reported for the Q4 in the past four years.</p> <p>The misoperation rate for Q4 2020 is 8.99%. This is the second lowest misoperation rate reported for the Q4 in the past four years. Note that during this quarter, 367 operations were reported compared to the Q4 quarterly average of 351 operations. The cumulative misoperation rate as of 2017 is 8.06%.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

Eastern Interconnection Reliability Assessment Group

Item	Name	Assignment
ERAG	Eastern Interconnection Reliability Assessment Group	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.
	Status/ Comments:	<p>Eastern Interconnection (EI) MOD-032 Designee 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. A combined agreement covering the creation of the Eastern Interconnection Base Cases and as required, the Eastern Interconnection Events Analysis case was discussed. NERC staff will determine if a combined agreement can be developed and provide an update by the end of June 2021. Upon receipt of the draft updated agreement(s) from NERC, ERAG and NPCC Legal will review and comment on the draft agreement(s).</p> <p>MMWG Update</p> <ul style="list-style-type: none"> • 2020 Series Dynamics Cases are still under development and are expected to be complete in late May 2021. • The next MMWG meeting is scheduled for July 21-22, 2021. <p>MOD-032 Case Developer Request for Proposal (RFP)</p> <ul style="list-style-type: none"> • On March 9, 2021, a RFP was issued to five firms with a requested due date of May 31, 2021. Bids will be evaluated during Q2 2021 and a winning bidder will be selected during Q3 2021. The winning bidder will begin development of the 2023 Series MMWG cases.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

Eastern Interconnection Reliability Assessment Group

ERAG Seasonal Working Group

Item	Name	Assignment
ERAGWG	ERAG Seasonal Working Group	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.
	Status / Comments:	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)

Item	Name	Assignment
RAS	Reliability Assessment Subcommittee	<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>Status/ Comments:</p> <p>The NERC Reliability Assessment Subcommittee (RAS) met on April 13-14, 2021, to discuss the 2021 Summer Reliability Assessment (SRA), the 2021 Long-Term Reliability Assessment (LTRA), and the 2021-22 Winter Reliability Assessment (WRA). The RAS will meet next on July 13-15, 2021, to review the draft 2021 LTRA. The RAS also endorsed the NERC Probabilistic Assessment Working Group developed 2020 ProbA Regional Risk Scenarios and Data Collections Technical Reference Reports for NERC Reliability and Security Technical Committee (RSTC) approval at their June 2021 meeting.</p> <p>NERC 2021 Summer Reliability Assessment</p> <p>Preliminary data and narrative submissions, coordinated by the NPCC CO-12 and CP-8 Working Groups, were submitted by the April 7, 2021 deadline. At the April RAS meeting, the 2021 SRA draft dashboards and initial findings were reviewed and discussed. In addition, the RAS also enhanced the assessment to include a probabilistic risk component. The SRA is consistent with the NPCC 2021 Summer Reliability Assessment. The draft SRA was reviewed by the RAS and endorsed by the RSTC. A webinar has been scheduled for May 26, 2021; the SRA has a scheduled release date of May 27, 2021.</p> <p>NERC 2021 Long-Term Reliability Assessment</p> <p>The RAS requested each Region’s assistance in assessing the long-term (10-year) reliability of their Region (as outlined in the ERO Reliability Assessment Process Document) on February 12, 2021. Initial narrative and data responses, coordinated by the NPCC CP-8 Working Group, are due to NERC by June 18, 2021. Upon receipt of the initial narrative and data responses, the LTRA will go through a RAS peer review and NERC approval process. NERC is targeting a release of the public report by December 14, 2021.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

Item	Name	Assignment
PAWG	NERC Probabilistic Assessment Working Group	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.
	Status/ Comments:	The NERC Probabilistic Assessment Working Group (PAWG) met on April 3 and May 11, 2021 to finalize the 2020 NERC ProbA Sensitivity Case results in the draft Regional Risk Scenario Report. The group also finalized the Data Collections Technical Reference Report. The PAWG had met extensively in March and April 2021 to address comments from the NERC RAS and RSTC review periods. At its April 2021 meeting, the NERC RAS endorsed both documents for consideration to be approved by the NERC RSTC at their June 2021 meeting. 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 2 nd biennial 2021 Probabilistic Analysis Forum, scheduled for October 4-7, 2021.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

Item	Name	Assignment
TADS	Transmission Availability Data System	<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>Status/ Comments:</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 April 20, 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. The user group reviewed the latest State of Reliability Report (SOR) and discussed Reliability Indicators in the Chapter 3 and a new section in Chapter 5, TADS Restoration Analysis under Extreme Weather.</p> <p>The User Group worked on the Data Reporting Instructions 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)

Item	Name	Assignment
DADS	Demand Availability Database System	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.
	Status/ Comments:	<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)

Item	Name	Assignment
GADS	Generator Availability Data System	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.
	Status/ Comments:	<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 March 23, 2021.</p> <p>In February 2021, the central United States experienced extended periods of record low temperatures creating conditions which resulted in power outages across multiple states. In the interest of being able to identify generator events that were a direct result of the low temperatures, NERC and the GADS User Group are requesting that entities use the following reporting guidelines.</p> <p>For events that occurred from February 8, 2021 through February 20, 2021 and that were a result of the cold weather event.</p> <ol style="list-style-type: none"> 1. Create and code the event as is normally done. <ol style="list-style-type: none"> a. Identify any equipment that failed using the Primary Cause Code. b. If additional cause codes are necessary, include them as the secondary, tertiary, etc., causes. 2. Add an additional cause code, 9036 – Storms (Ice, snow, etc.), after adding all Cause Codes that would normally be included. 3. Ensure that the Description of the event is filled out. <ol style="list-style-type: none"> a. Describe what happened to cause the outage. b. If possible, include information on whether the equipment was considered winterized at the time of the event. <p>Events which are not attributable to the cold weather event during this period will be reported as usual.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

Item	Name	Assignment
MIDASUG	Misoperation Data Analysis System User Group	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.
	Status/ Comments:	<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 & training videos.</p> <p>The MIDASUG is in the process of requesting an interpretation by the PRC-004 Standard Drafting Team for the definition of Misoperation. The group also discussed compliance requirement DP-UFLS entities. The entities registered under this function are subject to a subset of Reliability Standards that are specifically called out in the NERC Rules of Procedures under Appendices 5A and 5B. The subset of Reliability Standards specifically applies PRC-005 and PRC-006, but not PRC-003 and PRC-004, which are the ones referenced in the MIDAS Section 1600 Data Request. MIDASUG believes if DP-UFLS trips BES elements, then they should be the one to report the Misoperation(s), therefore, they should be required to report.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

OTHER

Item	Name	Assignment
IPSAC	Interregional Planning Stakeholder Advisory Committee	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.
	Status/ Comments:	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.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Situation Awareness and Infrastructure Security Program

TASK FORCE ON COORDINATION OF OPERATION

Item	Name	Assignment
CO-10	Operational Tools Working Group	<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>Status/ Comments:</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 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 on NERC published ‘Lessons Learned’ regarding EMS outages, via the regional Insight template. The Working Group completed the Critical Operating Tools Survey report (COTSR) and presented it to the Task Force of Coordination of Operation (TFCO) at their March 2021 meeting. The Working Group having obtained the approval of the report from TFCO will discuss at its May 6-7,2021 meeting how best to distribute to all 23 of the survey participants (BAs, RCs TOs, and TOPs in NPCC) the report as information indicating where they and their peers stand on the surveyed topics, as well as informing them of the trends observed.</p> <p>Additionally, in keeping with the TFCO’s request to engage more NPCC Transmission owners/transmission operators (TO/TOP), the CO-10 Working Group hosted representatives from Avangrid to participate. It is the intent to continue to invite a TO/ TOP to each meeting when possible. With meeting being held virtually at this time, it is more convenient and far less expensive for entities to participate.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Situation Awareness and Infrastructure Security Program

TASK FORCE ON INFRASTRUCTURE SECURITY AND TECHNOLOGY (TFIST)

Item	Name	Assignment
IST-1	Infrastructure Security and Technology (TFIST) Workshop	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. Last Workshop: 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 Fall 2021 Standards and Compliance Workshop.

Item	Name	Assignment
IST-2	Telecommunications Working Group	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)

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
IST-4	Cyber Security	<p>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.</p>
	Status/ Comments:	<p>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.</p> <p>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. IST-4 developed 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. On May 11, 2021 TFIST approved this whitepaper for TFCO's review. On May 13, 2021 TFCO reviewed this whitepaper. The whitepaper is expected to be posted by July 1, 2021</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Situation Awareness and Infrastructure Security Program

TASK FORCE ON INFRASTRUCTURE SECURITY AND TECHNOLOGY (TFIST)

Item	Name	Assignment
IST-5	Physical Security Working Group	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.
	Status/ Comments:	<p>The Working Group continues to develop an “Emerging Trends” guidance document through collaboration with industry physical security experts and Physical Security Working Group (PSWG) members regarding reemerging threat vectors, suggested mitigation practices, technologies and continued lessons learned as a result of the current COVID-19 pandemic. Member entities continue to contribute changes and adaptations that are needed to their Security plans as new issues and situations arise. This will continue to be an ongoing exercise to address both emerging threat trends and new issues regarding the COVID-19 pandemic. Members of the PSWG continue to share physical security approaches and mitigations to unique situations posed by the COVID-19 pandemic. The Working Group held their 2021 Q1 meeting in a virtual setting on March 5, 2021 with 53 attendees. Meetings will continue to be held in virtual settings until the end of the COVID-19 pandemic. 2021 Q2 meeting has been scheduled for June 9, 2021, in a virtual setting. One item on the agenda for discussion will be back to work plans.</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. An NPCC Registered Entity has volunteered their site to be used for development of a generic site with attributable characteristics removed so the site cannot be identified. To date, three virtual programs have been presented for volunteer entities in other regions using their specific sites with lessons learned from each being incorporated into the development process as the program matures. To date, three NPCC Registered Entities have expressed an interest in conducting a DBT at their sites but would like to wait until Pandemic restrictions are lifted to do the exercises face to face.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Administrative Services

MEMBERS' FORUMS

Item	Name	Assignment
General	NPCC General Meeting	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.
	Status/ Comments:	Due to the current COVID-19 pandemic, the timing of next the NPCC General meeting will be reviewed later in 2021.
Item	Name	Assignment
Gov/Reg	NPCC Governmental Regulatory Affairs Advisory Group	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.
	Status/ Comments:	Due to the current COVID-19 pandemic, the timing of the next NPCC Governmental/Regulatory Affairs Advisory Group meeting will be reviewed later in 2021.
Item	Name	Assignment
PIC	Public Information Committee	To highlight and summarize NPCC activities and accomplishments and disseminate appropriate information to the media, as well as respond to related requests for information.
	Status/ Comments:	NPCC continues to participate in communications coordination with NERC and the Regions. On May 6, 2021, the <i>NPCC 2021 Summer Reliability Assessment</i> Media statement was released.