



**RCC Meeting
December 3, 2019
Agenda Item 7.11**

**Reliability Assessment Program
(NRAP)
HIGHLIGHT REPORT**
*Prepared for the
Reliability Coordinating Committee
December 3, 2019*

Distributed to:

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Members, Task Force on System Protection
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NPCC, Inc.

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 primarily charged with management and maintenance of the NPCC Regional Standard Processes Manual (approved by FERC Dec. 23, 2014 superseding the NPCC Reliability Standards Development Procedure). The RSC considers requests for new or revised 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 associated with distribution level Distributed Energy Resources (DER). In addition, the RSC coordinates work with the 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.</p>
	Status/ Comments:	<p>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, which was approved by FERC December 23, 2014 and will be posting it for open process comments in the third quarter of 2019. 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.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Regional Standards Committee

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
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 has been posted onto the NPCC website. The RSC hosted an DER forum on May 16th, 2019. The forum was open to the public. The third DER forum was hosted on October 17, 2019 on the second day of RSC meeting. The NPCC Standards staff developed an DER Guidance Document and is endorsed by the members of RSC. All comments from the DER Guidance Document comment period are reviewed and responded by the NPCC Standards staff and members of RSC. The RSC completed overview of the revision of PRC-006-NPCC-1 <i>Automatic Underfrequency Load Shedding</i> with its corresponding continent-wide NERC standard. The PRC-006-NPCC-01 Automatic Underfrequency Load Shedding drafting team has conducted a number of in-person meetings and conference calls and performed the necessary revisions. The draft standard was posted for three open process comment periods and a pre-ballot review. A ballot was then conducted which closed on February 10, 2019. The ballot achieved quorum and approval of 76%. Due to an ERRATA the standard was re-approved by the NPCC BOD at their September 5, 2019 meeting and was sent to NERC for approval at the November 5, 2019 BOT meeting. The petition documentation is being finalized for FERC approval.</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 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 jointly concluded to reconsider the scope of a Directory No.1 review at the August 2020 joint TFCP /TFCO meeting.



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 26, 2009

Status/ Comments:

The Task Force on Coordination of Operation (TFCO) and its CO-8 Working Group have 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

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	<p>Appendix A – Guideline for Bulk Power System Protection</p> <p>Appendix B - Procedure for Reporting to TFSP New and Modified Protection Systems</p>	<p>TFSP</p> <p>TFSP</p>	September 30, 2015
	Status/ Comments :	<p>The Task Force on System Protection (TFSP) is currently reviewing Directory No. 4 in accordance with the scheduled review cycle for the document. The TFSP has proposed revisions to the criteria and a draft revised version of Directory No. 4 has been posted for two Open Process comment periods. The TFSP is currently reviewing the comments received during the most recent Open Process posting. Additionally, and in accordance with the recommendations contained in the Strategic Review of the NPCC Criteria the Directory No. 4 posting was accompanied by a survey designed to solicit Member feedback on the cost effectiveness and contribution to resilience of the criteria requirements within Directory No. 4. The TFSP assessment of the survey results will be contained in the permanent record of the Directory No. 4 review. An updated version of Directory No. 4 will be presented to the RCC for approval at their December 3, 2019 meeting.</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-5	Reserve	Appendix 1 – Monitoring Procedure for Interconnected System Frequency Response Appendix 2 – Monitoring Procedures for Reserve Criteria Appendix 3 – Procedures during Abnormal Operating Conditions Appendix 4 – Guidelines for SAR Allocation Following Radial Source Contingencies Appendix 5 – NPCC Control Performance Reporting Process Appendix 6 – Light Load Conditions Appendix 7 – Participation Request Form - Simultaneous Activation of Reserve and Ace Diversity Interchange	TFCO	October 11, 2012

Status/ Comments:

The Task Force on Coordination of Operation (TFCO) posted a revised version of Directory No. 5 to the NPCC Open Process, which closed on May 17, 2019. The TFCO and the CO-1 Working Group are currently reviewing and providing responses to comments received during the Open Process Comment Period, with the next review of draft responses scheduled for the August 14-15, 2019 TFCO meeting. The revised version of the document was the result of a comprehensive review to ensure that the criteria is consistent with recently approved ERO standards. The TFCO had also posted proposed revisions to a number of Glossary terms contained within Directory No.5 along with a mapping document to facilitate document review. Also, and in accordance with the recommendations contained in the Strategic Review of the NPCC Criteria the Directory No.5 posting was accompanied by a survey designed to solicit Member feedback on the cost effectiveness and contribution to resilience of the criteria requirements within Directory No. 5. The TFCO assessment of the survey results will be contained in the permanent record of the Directory No. 5 review. An updated version of Directory No. 5 will be presented to the RCC for approval at their September 4, 2019 meeting. The NPCC Full Membership approved the revised version of Directory No.5 on September 27, 2019.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Directories, Appendices & Criteria

Item	Name	Appendices	Lead TF	Current Version
DIR-6	Regional Reserve Sharing		TFCO	April 6, 2012

Status/Comments:

The TFCO and its CO-8 Working Group recently 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 will be presented to the RCC for approval at their September 4, 2019 meeting. The NPCC Full Membership approved the revised version of Directory No.6 on September 27, 2019.

Item	Name	Appendices	Lead TF	Current Version
DIR-7	Special Protection System		TFSP	July 9, 2013
		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 System Protection (TFSP) is currently reviewing Directory No. 7 in advance of an anticipated NPCC Open Process posting during 2020. In parallel with the TFSP review of the Directory No. 7 criteria, the Task Force on Coordination of Planning (TFCP) is coordinating a review of Directory No. 7 Appendix B to consider revisions to the Appendix to ensure the review and approval process for a Special Protection System (SPS) is consistent with PRC -012-2 *Remedial Action Schemes* and the revised definition of Remedial Action Schemes (RAS). The TFCP will also provide a recommendation on revisions to the NPCC Glossary definition for SPS.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Directories, Appendices & Criteria

Item	Name	Appendices	Lead TF	Current Version
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>On October 6, 2017 the NPCC Full Membership approved revisions to Directory No. 8, which included reformatting the criteria into NERC style requirements, elimination of certain duplicative battery testing requirements contained in PRC -005 and revisions to three restoration Glossary terms. During 2018, the TFCO collaborated with the Task Force on System Protection (TFSP) and recommended further revisions to the Directory No. 8 criteria in order better align the criteria with the requirements of PRC -005-6. The RCC approved the revised version of Directory No. 8 and on September 25, 2018 the NPCC Full Membership approved the revisions.</p>		

Item	Name	Appendices	Lead TF	Current Version
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 of Generator Gross and Net Real Power Capability</p>	<p>TFCO</p> <p>TFCO/TFCP ¹</p> <p>TFCO/TFCP ¹</p>	December 29, 2011
	Status/ Comments:	<p>The Task Force on Coordination of Operation (TFCO) has completed a technical comparison of the Directory No. 9 criteria with the requirements of MOD-25-2 and concluded that Directory No. 9 can be retired without creating a reliability gap. The RCC approved TFCO’s recommendation to retire Directory No. 9 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 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	December 29, 2011

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 Equip. 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 will augment PRC-002-2 *Disturbance Monitoring and Reporting Requirements* and guide the effective application of equipment necessary to capture the data required by the NERC standard.



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:	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	April 21, 2017
	Status/ Comments:	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	December 1, 2009

Status/ Comments:

The Task Force on Coordination of Planning (TFCP) and its CP-11 Working Group are conducting 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. 3) simplify the methodology to make it less resource intensive.

The RCC approved testing of three proposed methodologies developed by CP-11 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. The TFCP posted a revised version of the A-10 to the Open Process for two Open Process comment periods and the TFCP anticipates review of a final version of the revised A-10 at its November 2019 meeting.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Directory Development and Revision Manual

Item	Name	Assignment	Current Version
Directory	Directory Development and Revision Manual	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.	October 3, 2014
	Status/ Comments:	<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. The RSC has also proposed further revisions to the Directory Manual to incorporate a cost-effective evaluation into the periodic Task Force review of each Directory and posted these revisions to the Open Process. Pending completion of the cost-effective surveys which have accompanied the current Directory No. 4 and No. 5 postings the RSC will consider further refinements in order to develop a repeatable and sustainable cost-effective analysis process into the Manual. A revised version of the Directory Manual was posted for two Open Process Comment periods and the RSC approved a final revised version of the Manual containing guidance for cost effective evaluation of the criteria at its October 2019 meeting.</p>	



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. 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. The Glossary is located in the Directory section of the NPCC website.</p>	October 26, 2011



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.	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 in order to effectively respond to system under frequency events.	Latest Version:	New
			Frequency of Reviews:	3 years
			Next Review Date:	February 2016

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 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 BOD at their September 5, 2019 meeting. It was approved at the November 5, 2019 BOT meeting. The petition documentation is being finalized for FERC approval.



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 in order to meet their reserve obligations.	Latest Version:	New
			Frequency of Reviews:	3 years
			Next Review Date:	
	Status/ Comments:	The RSAR has been developed and approved by the RSC. The RCC has assigned the 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

Item	Name	Assignment	Current Version	
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.	Latest Version:	Dec, 23 2014
			Frequency of Reviews:	3 years
			Next Review Date:	Dec. 23, 2017
	Status/ Comments:	The Regional Standard Processes Manual (RSPM) is posted on the NPCC Website. The RSC is actively reviewing 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. The RSPM was posted for a 45-day comment period December. 7, 2011. It was reposted June 6, 2013 through July 22, 2013 for comments. The Regional Standard Processes Manual passed the ballot that was posted November 12, 2013 through January 17, 2014. The document was approved by the NPCC Board of Directors and NERC Board at its August 14, 2014 meeting. The RSPM was approved by FERC on December. 23, 2014. During the June 20, 2018 RSC meeting, a small team is formed to review the current RSPM for any potential updates. The RSC is in the process of reviewing and updating the existing RSPM. The revised RSPM is approved by the RSC for comment posting on August 7, 2019. The RSPM is posted for a 45-day comment period from September 11, 2019 to October 26, 2019. The goal is to post the RSPM for ballot at the end of the year.		



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	<p>The NPCC Compliance Committee is charged with providing independent policy 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 an oversight role to the NPCC Compliance Staff's implementation of the CMEP. In this oversight 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.</p> <p>Status/ Comments : At the September 2019 CC meeting, NPCC Staff shared its plan for the following risk-based monitoring topics: development of Compliance Oversight Plans, O&P/CIP root cause analysis, the development of the 2020 monitoring schedule, participating in the NERC Real Time Analysis team, and recently posted O&P/CIP self-report guidance.. Also, the development of process flow diagrams associated with cyber vulnerabilities in the 2018 RISC report was presented.</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 Compliance Committee approved the 2020 CCEP Implementation Plan in September and will provide it to the RCC at their December 3, 2019 meeting.</p> <p>The assessment report for the 2018 CCEP forms that were received was completed in August and was presented at the September 4, 2019 RCC meeting. The development of the 2020 CCEP forms for the 2020 Implementation Plan was completed in June.</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	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.
	Status/ Comments:	The 2019 Fall 84 th NPCC System Operator Seminar was held on November 5-7, 2019 in Montréal, Québec. Operators from all NPCC Areas attended and the Working Group is coordinating continuing education hours for Operator attendees with NERC. The seminar focused on Human Performance factors, NPCC Physical System Characteristics, Critical limits and constraining phenomenon (including IROLs and SOLs), Power System Restoration and Loss of Critical tool functionality.



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	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.
	Status/ Comments:	The CO-1 Working Group most recently met on November 20-21, 2019 in at NPCC offices in New York. In addition to the regular periodic Control Performance monitoring activities, the CO-1 Working Group has worked with the TFCO and the CO-8 Working Group to complete the Directory No. 5 revision and reformat. The review effort reformatted the document into NERC style requirements, revised and clarified criteria surrounding synchronized reserve level adjustments, eliminated procedures in Appendices and made revisions to the NPCC Glossary of Terms. The NPCC Full Member Committee approved the revised version of Directory No.5 on September 27, 2019. The CO-1 Working Group continues to generate the NERC Disturbance Control Standard Report and conducts periodic monitoring as required and in coordination with the CO-8 Working Group and the TFCO. The CO-1 Working Group continues to closely monitor developments to their relevant BAL and FAC standards, including the activities of the BAL-003-1.1 SDT.

Item	Name	Assignment
CO-7	Operational Planning Working Group	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 TFCO. It has been renamed the “Operational Planning Working Group.”
	Status/ Comments:	There are currently no active CO-7 Working Group assignments.



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.
	Status/ Comments:	The CO-8 Working Group coordinated with the CO-1 Working Group on the comprehensive review of the triennial review effort of the Directory No. 5, which concluded on September 27, 2019, with NPCC Full Member approval of a revised Directory 5. At its February 20-21, 2019 meeting, the CO-8 Working Group concluded a periodic comprehensive review of Directory No. 6 and of the C-01 document - <i>NPCC Emergency Preparedness Communications Procedures</i> , as assigned by the TFCO. Directory No. 6 and pertinent Glossary Terms documents were approved by the NPCC Full Members on September 27, 2019. The C-01 Procedure document was presented to approved by the TFCO at their August 14-15, 2019 meeting. The Revised C-01 document was made available to the RCC as an informational item at its September 4, 2019 meeting. The CO-8 Working Group reviewed the IST-2 WG “Ring Down” whitepaper and its findings during its August 28-29, 2019 meeting and have made a recommendation to the TFCO to consider requesting TFIST to discuss incorporating the key recommendations of the whitepaper into a more obligatory/official NPCC document.



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>The CO-11 Restoration Working Group conducted a review of the Maritimes Restoration Plan at its meeting on September 11-12, 2019. The review included descriptions of the elements of coordination of the restoration plans with neighboring Reliability Coordinators (desired points of interconnection and control parameters). The CO-11 Working Group will meet next on December 10-11, 2019 at NPCC offices in New York City. The 2019 NPCC RC-to-RC Restoration Exercise was held on October 23-24, 2019 at the Ontario IESO Control Center in Clarkson, Ontario. The 2020 NPCC RC-to-RC Restoration Exercise has been tentatively planned for October 2020 in Montreal, Quebec. By the end of 2019, all NPCC Reliability Coordinator Area Restoration Plans will have been reviewed by the CO-11 Working Group.</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:	The CO-12 Working Group held a kickoff call for the NPCC Winter Reliability Assessment effort on September 6, 2019. Preliminary results were presented at the October 16-17, 2019 TFCO meeting in Toronto, with a recommendation for RCC approval occurring on November 15, 2019. The CO-12 Working Group held a joint meeting with the CP-8 Working Group on Tuesday, October 22, 2019 to coordinate forecast numbers and assumptions. The <i>NPCC 2019-2020 Winter Reliability Assessment</i> will be presented for approval at the December 3, 2019 RCC meeting in Montreal.



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 New York, New England, Ontario and Quebec Interim Reviews of Resource Adequacy, and the Maritimes Comprehensive Review of Resource Adequacy will be presented for approval at the December 3, 2019 RCC meeting.
Item	Name	Assignment
CP- 2019S	Summer 2019 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 Task Force on Coordination of Planning approved the 2019 NPCC Summer Multi-Area Probabilistic Reliability Assessment at their April 15, 2019 meeting. A presentation of the results was given at the NPCC Board of Directors May 1, 2019 meeting; the NPCC Summer 2019 Media Event was held on Thursday, May 2, 2019. The final assessment was posted to the NPCC website on May 2, 2019.
Item	Name	Assignment
CP- 2019-20W	Winter 2019-2020 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 Task Force on Coordination of Planning (TFCP) approved the assumptions for the <i>NPCC Winter 2019 – 2020 Multi-Area Probabilistic Reliability Assessment</i> at their August 13 -14, 2019 meeting in Halifax, NS. The TFCP approved the <i>NPCC Winter 2019 – 2020 Multi-Area Probabilistic Reliability Assessment</i> at their November 13/14, 2019 meeting. The <i>NPCC 2019-2020 Winter Reliability Assessment</i> will be presented for approval at the December 3, 2019 RCC meeting in Montreal.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF PLANNING

Item	Name	Assignment
LRAO	NPCC 2019 Long Range Adequacy Overview (LRAO)	On a consistent basis, evaluate the near-term seasonal and long-range (five year) adequacy of NPCC Areas', reflecting neighboring regional plans proposed to meet their respective resource adequacy criteria through multi-area probabilistic assessments.
	Status/ Comments:	The <i>NPCC 2019 Long Range Adequacy Overview</i> will be performed in conjunction with the <i>NPCC Review of 2020 – 2024 NPCC Interconnection Assistance Reliability Benefits</i> . The Task Force on Coordination of Planning approved the Scope at their December 18, 2018 meeting. Work is underway by the CP-8 Working Group.

Item	Name	Assignment
CP-11	<i>NPCC Basic Criteria For Design and Operation of the Bulk Power System Review Working Group</i>	
	Status/ Comments:	See above A-10 Summary.



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 Status/ Comments:	Assigned to analyze dynamic phenomena, which may affect interconnected system reliability, especially in the area of low frequency oscillations. The SS-38 Working Group has developed acceptable DER_A model default data for NPCC and has tested the through UFLS sensitivity analysis; findings were presented the September 4, 2019 RCC meeting.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON SYSTEM STUDIES

Item	Name	Assignment
SS-37	Base Case Development Working Group	On an annual basis, develop a library of solved power flow cases and associated dynamic data.
	Status/ Comments :	<p>2019 Series Base Case Development - Ongoing</p> <p>The NPCC SS-37 Working Group on Base Case Development completed development of the 2019 Series MMWG power flow cases in October and submitted dynamics data to the MMWG Coordinator by the established deadline. Currently, SS-37 is working with the MMWG Coordinator to address any dynamics data issues during development of the 2019 Series MMWG dynamics cases. The dynamics cases are expected to be complete in January 2020.</p> <p>SS-37 members identified an issue with the 2018 Series dynamics cases. Contrary to MMWG criteria which states that no unit >20 MVA can be netted with load, a significant amount of generation in the NPCC region was found to be netted by the MMWG Coordinator without prior approval from the NPCC data submitter. The netted generation was in addition to what was already submitted to the MMWG Coordinator by the established due date. Although all cases were affected, the 2023 Spring Light Load (2023SLL) case had the most significant levels of netted generation. NPCC staff notified NERC, ERAG and MMWG of the issue. MMWG was provided details during their meeting and requested the MMWG Coordinator recreate the 2023SLL case. Based on the amount of work required to recreate the case, a decision will be made by MMWG whether to pursue recreating all cases. This issue continues to be jointly addressed with the cooperation of MMWG, ERAG, and NERC.</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 the 2nd Quarter (Q2) of 2019. The total number of misoperations for Q2 is 32 compared to the NPCC Q2 quarterly average of 42 misoperations. This is the lowest misoperation reported for the Q2 in the past four years.</p> <p>The misoperation rate for Q2 2019 is 7.53%. Note that during this quarter, 425 operations were reported compared to the Q2 quarterly average of 577 operations. There were three reported SPS operations in Q2 2019 and no reported misoperations.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

Eastern Interconnection Reliability Assessment Group

Item	Name	Assignment
ERAG	Eastern Interconnection Reliability Assessment	<p>The Eastern Interconnection Reliability Assessment Group (ERAG) oversees the Multi-Regional Modeling Group steady state and dynamics base case development, Eastern Interconnection interregional assessment activities and other interregional matters of interest.</p>
	Status/ Comments:	<p><u>Eastern Interconnection MOD-032 Designee – Transition Update</u> ERAG discussed the proposed MOD-032 designee transition plan between ERAG to EIPC. It was noted during the discussion that the ERAG will still be overseeing the 2020 MMWG modeling building effort. The current plan is for EIPC to take over that responsibility starting with the 2021 build.</p> <p><u>Eastern Interconnection Designee Transition Plan</u> NERC staff informed ERAG that NERC and EIPC are currently working through the details of the transition. The goal is to complete the contract by the end of the year (2019). ERAG discussed its future role in the model building process. It was discussed that ERAG should still be involved to ensure case quality and determine which models need to be built.</p> <p><u>ERAG Reliability Assessment</u> ERAG discussed and agreed that the proposal misoperations workshop will be placed on hold based on the current work being performed by NERC. The group discussed alternative topics for the workshop; a proposal was made to review the top misoperation codes to identify and focus on the top three causes. The top three misoperation codes will be tabulated and presented at the next ERAG meeting. An additional topic will be to look at an outside vendor with relay testing background to give the ERAG some insight, focusing on best practices and to track misoperation to help each other.</p> <p><u>Inter-oscillation Tool</u> An Inter-Regional Oscillation Report came out earlier in the year. ERAG discussed if there is an opportunity for ERAG involvement in the process. NERC staff noted that NERC will be developing a report based on the lessons learned from the January oscillation event from Florida. The ERAG Chair will follow up with NERC to determine ERAG involvement/usefulness in the inter-oscillation initiative going forward.</p>



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 is and will remain 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 (RAS)	Conduct an annual review of the overall reliability of the existing and planned generation and transmission system of the seven 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 seven Regional Reliability Entities.
	Status/ Comments:	<p>On February 12, 2019 the NERC RAS requested each NERC Region provide data and a narrative summary of their respective summer reliability issues for the 2019 NERC Summer Reliability Assessment (SRA) report. Responses were requested to be provided to NERC staff by April 5, 2019. Data and summaries will be reviewed with the RAS during the assessment review process. The final assessment was finalized on May 30, 2019. The 2019 NERC SRA was released on June 4, 2019.</p> <p>On February 22, 2019, the NERC RAS requested data and the supporting narrative request supporting the 2019 NERC Long-Term Reliability Assessment (LTRA), including questions pertaining to the projects to each Assessment Area. The RAS met on 27-28, 2019 in Pittsburgh PA to finalize the assessment; preliminary results will be presented to the NERC Planning Committee at their September 10-11, 2019 meeting in St. Paul, MN. The NERC Planning Committee e-mail vote to endorse the 2019 LTRA closes December 3, 2019.</p> <p>The NERC RAS issued a request to NERC Regions on August 9, 2019 to provide data and a narrative summary of winter reliability issues for each Assessment Area using the guide and forms posted to the RAS webpage. Initial responses were provided to NERC staff by September 18, 2019. The NERC Planning Committee endorsed the 2019-2020 Winter Reliability Assessment via e-mail ballot; was published on November 21, 2019.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

Item	Name	Assignment
ProbA	NERC Probabilistic Assessment	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 October 9, 2020 at ERCOT offices in Austin, TX. The PAWG is currently developing probabilistic enhancements to the NERC LTRA and planning for the December 2019 Probabilistic Analysis Forum (PAF) at the NERC Atlanta office. The Working Group is also developing Regional Risk Scenarios for use in the 2020 ProbA sensitivity case. The working group will meet next February 4-5, 2020 in Tampa, FL.



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>
	Status/ Comments:	<p>The NERC TADS Working Group (TADSWG) met on October 1-2, 2019 at WECC’s office in Salt Lake City, UT. The next face-to-face meeting will be on January 28-30, 2020 at FRCC’s office in Tampa, FL. NERC staff provided the working group with an update on the *ADS Quality Control document.</p> <p>The TADSWG 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 TADSWG 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>NERC staff informed the TADSWG that the group had been assigned the creation of a data collection system for reactive devices. The group felt that there was sufficient expertise within the current members and that adding new members specifically for this task was unnecessary at this time. It is expected that the data collection will be incorporated into the TADS 1600 data request and the group would like to use this opportunity to re-evaluate what information is currently being collected and whether said information needs changed. A methodology is being developed by the working group to address cascading outages. The methodology being employed to identify and study transmission element outages recorded in TADS from 2015 to 2018 that could lead to cascading outages.</p> <p>TADSWG worked on the Data Reporting Instructions (DRI) for TADS. The goal is to publish the document early in 2020. TADSWG also worked on the training material for 2019. NERC conducted an in-person training session on October 23-24, 2019 at NERC’s Atlanta office.</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:	The DADS Working Group had a conference call on January 11, 2018. The DADS Working 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 Working Group also discussed the Severity Risk Index (SRI) correlation with Demand Response Event Days. The DADS Working Group has started working on clarification of DADS reporting criteria.



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>The NERC GADS Working Group held a face-to-face meeting on October 10-11, 2019 at NERC’s office in Atlanta, GA. There was a conference call on November 12, 2019. NERC has completed three GADS/GADS-Wind trainings in 2019. The last training on GADS Conventional/GADS Wind was on June 11-13, 2019 at WECC, Salt Lake City.</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.</p> <p>NERC has posted the GADS Wind Data Reporting Instructions (DRI), GADS Wind DRI version 1.2. This update to the DRI reflects minor changes to instructions associated with an authorized request for data and was approved by the Planning Committee on September 13, 2016.</p> <p>Beginning January 1, 2018, quarterly reporting for all wind plants with a Total Installed Capacity of 200 MW or larger is mandatory. Additional phased-in mandatory reporting is as follows: 1) January 1, 2019: Mandatory reporting begins for plants with a Total Installed Capacity of 100 MW and greater; and 2) January 1, 2020: Mandatory reporting begins for plants with a Total Installed Capacity of 75 MW and greater. Reporting data requirements for Solar have been initiated with a target goal of beginning data submittal by 2021.</p> <p>GADSWG also discussed Section 1600 revisions and additions. The process for implementing conventional, wind and solar was reviewed.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

North American Electric Reliability Corporation (NERC)

Item	Name	Assignment
MIDASWG	Misoperation Data Analysis System Working Group	<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>Status/ Comments:</p> <p>The NERC MIDAS Working Group (MIDASWG) had its kickoff conference call on July 16, 2018. The group had its second face-to-face meeting on August 28-29, 2019 at MRO’s office in Saint Paul, MN. The Working Group has held monthly calls.</p> <p>The following items will be in the scope of MIDASWG:</p> <ul style="list-style-type: none"> ▪ Draft and maintain MIDAS Data Reporting Instructions (DRI); ▪ Assist with development of addition industry assisting content (i.e. training); ▪ Solicit and/or evaluate recommended changes and improvements to MIDAS data collection (1600 & Portal); ▪ Assist with development and production of public reports; and, ▪ Develop additional specialized analysis reports. <p>The MIDASWG will focus on a better alignment of how the system protection Operation/Misoperation data is being reported.</p> <p>The draft MIDAS DRI was reviewed by the industry. The MIDASWG has reviewed and responded to the comments at its August 28-29 meeting. The group is adding more examples in different sections of the DRI to clarify various type of events. The MIDASWG will be also discussing training development for the DRI in the year 2020.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

OTHER

Item	Name	Assignment
IPSAC	Interregional Planning Stakeholder Advisory Committee	<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).</p> <p>The NCSP outlines activities conducted jointly by ISO New England, New York ISO, and PJM.</p>
	Status/ Comments:	<p>The IPSAC will hold a WebEx meeting on December 9, 2019. Agenda items included presentation of PJM's Regional Transmission Planning Expansion Process, ISO-New England Regional Planning Needs and Solutions, the New York ISO's updates on their Comprehensive System Planning Process, and an update regarding the status of the queue Interconnection Studies.</p>



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>
	Status/ Comments:	<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 said lessons learned to further aid NPCC entities in utilizing these valuable lessons.</p> <p>As a result of the original presentation of the NPCC Operating Tools Failure Analysis survey, the Critical Operating Tool Failure Analysis Report (COTFA) was presented to the Task Force on Coordination of Operation (TFCO) at their March 2019 meeting. The CO-10 Working Group was tasked with and resending the survey to an additional list of contacts provided by TFCO. The CO-10 Working Group completed this task and analyzed the additional data and presented a revised report to TFCO at their October meeting. Upon receipt of endorsement from the TFCO of the revised report, the CO-10 Working Group will distribute the report to all the respondents of the survey. The objective of the report is to provide a means to benchmark their current practices against NPCC best practices for both RC/BA and TO/TOP sets of reliability entities.</p> <p>The Critical Operating Tool Failure Summary Report (COTFSR) will begin to be prepared in November 2019 and completed by February 2020, for presentation to the TFCO at their March 2020 meeting.</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.
	Status/ Comments:	The TFIST presented at NPCC's Fall 2019 Standards & Compliance Workshop. The TFIST will present at NPCC's Spring 2020 Standards & Compliance Workshop. The TFIST and the IST-4 Working Group arranged for an IEC 61850 presentation at the Fall Workshop. The TFIST assisted on a Supply Chain presentation at the Fall Workshop.
		Last Workshop: November 2019
Item	Name	Assignment
IST-2	TFIST 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 TFIST in their work on issues related to Telecommunications
	Status/ Comments:	This 2018 annual report was part of the RCC's May 2019 meeting material. 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	Name	Assignment
IST-5	TFIST Physical Security Working Group	The Physical Security Working Group shall exchange information regarding approaches to physical security that will enhance the reliability and resiliency of the BPS and further address any physical security threats that could challenge efficient operation of the BPS. The Physical Security Working Group (IST-5) will also support TFIST in their work on issues related to Physical Security.
	Status/ Comments:	The IST-5 Working group is developing confidential guidance to physical security experts on better practices and technologies, that will be available to entities. A successful Design Basis Threat training has held with 35 attendees including Federal, State and Law Enforcement plus entities. In addition, training will be provided through the NYPD Counter Terrorism Unit on Terrorism Awareness. The follow up training is scheduled to be held for December 13, 2019.



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:	The 2019 NPCC General Meeting was held on December 4, 2019 in Montreal, Quebec. The theme of the 2019 General Meeting is “Reliable Transformation of the Power Grid.”

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:	The 2019 NPCC Governmental/Regulatory Affairs Advisory Group meeting will be held in conjunction with the NPCC 2019 General Meeting. The meeting focuses on NPCC Distributed Energy Resources initiatives and activities.

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. The NPCC Media Event for the release of the 2019 NPCC Summer Reliability Assessment was held on May 2, 2019.