



**RCC Meeting
February 27, 2020
Agenda Item 8.12**

**Reliability Assessment Program
(NRAP)
HIGHLIGHT REPORT**
*Prepared for the
Reliability Coordinating Committee
February 27, 2020*

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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 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 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.</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, 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.



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 has been posted onto the NPCC website. The RSC hosted three DER forums in 2019. The forums are open to the public. The plan is to have three more DER forums in 2020. The DER Forums are hosted on the second day of RSC meetings. 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 NPCC Standards staff is working on a 2nd version of the DER Guidance Document. 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 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.</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. The TFCP and TFCO have jointly accepted an errata change to Directory No. 1 Table No. 3 which will be included as an information item on the February 27 2020 RCC agenda.



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 | | TFCO | June 29, 2018 |

Appendix A – Definition of Terms
 Appendix B - Guideline and Procedure for Emergency Operation

TFCO
 TFCO

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 | | TFSP | Retired April 1, 2015 |

Appendix A – Definition of Terms
 Appendix B – Guidelines and Procedures for Maintenance of Bulk Power System Protection

TFSP
 TFSP

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> | January 30, 2020 |
| | 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. The NPCC Full Member Committee approved the TFSP proposed revisions to Directory No. 4 on January 30, 2020.</p> | | |



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Directories, Appendices & Criteria

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

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 schedule 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

| <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 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.

| <u>Item</u> | <u>Name</u> | <u>Appendices</u> | <u>Lead TF</u> | <u>Current Version</u> |
|-------------|---------------------------|---|----------------|------------------------|
| 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

| <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>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> | | |

| <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 of Generator Gross and Net Real Power Capability</p> | <p>TFCO/TFCP ¹</p> <p>TFCO/TFCP ¹</p> | Retired July 1, 2019 |
| | 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 | Retired July 1, 2019 |
| | Status/ Comments: | <p>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.</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-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 | Retired Sept. 25, 2018 |
| | 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

| Item | Name | Criteria | Lead TF | Current Version |
|-------------|--|--|----------------|------------------------|
| A-10 | Classification of Bulk Power System Elements | | TFCP | December 1, 2009 |
| | Status/ Comments: | <p>The Task Force on Coordination of Planning (TFCP) and its CP-11 Working Group are conducting a review of the A-10 methodology.</p> <p>The CP-11 Working Group effort focused on three objectives as highlighted by the TFCP in the project scope:</p> <p>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.</p> <p>The RCC approved testing of three proposed methodologies developed by CP-11 during Phase I of the review in 2017.</p> <p>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 has responded to all comments. On January 24, 2020 the RCC conducted a Webinar to consider the proposed changes to the methodology in advance of the February 27, 2020 RCC meeting where the revised A-10 document will be considered for approval.</p> | | |



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.</p> <p>The Glossary is organized in sections containing those terms found in Directories (including Appendices) which support the NPCC criteria and another Section for definitions found within remaining NPCC B and C documents.</p> <p>The Glossary is located in the Directory section of the NPCC website.</p> | 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

| Item | Name | Assignment | Current Version | |
|---------------------------|--------------------------------------|---|------------------------------|----------------------|
| 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-daya 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 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.



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. 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. It is currently posted for a ballot period from January 17, 2020 to February 15, 2020. The ballot period has been extended until quorum is achieved. | | |



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Compliance Enforcement and Organization Registration and Certification Program

Compliance Committee

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

Status/ Comments: At the December 2019 CC meeting, NPCC Staff shared its plan for the following risk-based monitoring topics: explanation of the development of Compliance Oversight Plans, presentations on O&P/CIP root cause analysis, the development of the 2020 monitoring schedule, the forthcoming CIP-013 effective date, assessment of internal controls, and discussions on Criteria Services department updates. participating in the NERC Real Time Analysis team, and recently posted O&P/CIP self-report guidance. The recently completed Fall workshop was also reviewed and areas of enhancement were discussed. Also, the development of process flow diagrams associated with cyber vulnerabilities in the 2018 RISC report was presented.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Compliance Enforcement and Organization Registration and Certification Program

NPCC Compliance Committee

Documents

| <u>Item</u> | <u>Name</u> | <u>Assignment</u> |
|-------------|--|--|
| 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 provided it to the RCC at their December 3, 2019 meeting where it was approved. The plan was posted on the NPCC website</p> <p>At the December 3, 2019 meeting the 2020 CC Scope and CC Work Plan were discussed and approved. Both documents were approved by the NPCC BOD on January 29, 2020. In January 2020, the CCEP WG will begin reviewing the CCEP process document for needed clarifications. CP-02 Procedure for Onsite Audits and CP-03 Procedure for Offsite Audits were both reviewed and approved.</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 2020 Spring 85 th NPCC System Operator Seminar will be held on May 5-7, 2020 in Portland, Maine. The CO-2 planning meeting for this seminar will occur on April 8-9, 2020 at the ISO-NE BCC in Windsor Locks, CT. Suggested seminar topics will include focus 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 February 12-13, 2020 in Montreal, Quebec. 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 ongoing 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 will commence a triennial review of the C-15 – “Procedures for Geomagnetic Disturbances Which Affect Electric Power System” and the NPCC Regional Reliability Plan document at its February 19-20, 2020 meeting. |



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

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

| Item | Name | Assignment |
|-------|---------------------------|--|
| CO-11 | Restoration Working Group | <p>The CO-11 Restoration Working Group facilitates effective and coordinated power system restoration among the NPCC Reliability Coordinator areas, and with adjacent Regions. It annually reviews the restoration plans of the NPCC Reliability Coordinator areas to identify in each individual plan the physical points requiring coordination, the general elements of the restoration plan, the Key Facilities associated with the restoration plan, the communication protocols employed, and the roles and responsibilities of the restoration participants. It identifies opportunities for mutual assistance during restoration and the extent to which each system can rely on its neighbors for assistance. Coordinates Reliability Coordinator restoration exercises and develops and supervises annual wide-area restoration drills. CO-11 monitors the NERC Reliability Standards EOP-005, <i>System Restoration from Blackstart Resources</i>, and EOP-006, <i>System Restoration Coordination</i>. The CO-11 Working Group provides comments to the NPCC Task Force on Coordination of Operation and the NPCC Regional Standards Committee as revisions to these Standards are posted for consideration, and weighed for implementation.</p> |
| | Status/ Comments: | <p>The CO-11 Restoration Working Group completed reviews of all NPCC Reliability Coordinator Area Restoration Plans in 2019 at the December 10-11, 2019 meeting. The reviews 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 March 4-5, 2020 at the IESO Control Center in Clarkson, Ontario. The 2019 NPCC RC-to-RC Restoration Exercise was held on October 23-24, 2019 at the Ontario IESO Control Center in Clarkson, Ontario and a follow-up lessons learned report has been developed for TFCO and the CO-8 WG. The 2020 NPCC RC-to-RC Restoration Exercise has been tentatively planned for October 2020 in Montreal, Quebec.</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 2020 Summer Reliability Assessment effort on January 31, 2020. Preliminary results will be presented at the February 27, 2020 RCC meeting and at the March 18-19, 2020 Task Force on Coordination of Operation meeting. The CO-12 Working Group will hold a joint meeting with the CP-8 Working Group on Wednesday, April 1, 2020 to coordinate forecast numbers and draft report. The <i>NPCC 2020 Summer Reliability Assessment</i> will be submitted to the RCC for review and the TFCO, TFCP for approval on April 3, 2020. |



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 were approved at the December 3, 2019 RCC meeting. |
| Item | Name | Assignment |
| CP- 2020S | Summer 2020 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 2020 NPCC Summer Multi-Area Probabilistic Reliability Assessment assumptions at their January 13, 2020 meeting. Presentation of the preliminary results is planned at the February 27, 2020 RCC meeting. The CO-12 Working Group will hold a joint meeting with the CP-8 Working Group on Wednesday, April 1, 2020 to coordinate forecast numbers and draft report. The NPCC 2020 Summer Reliability Assessment will be submitted to the RCC for review and the TFCO, TFCP for approval on April 3, 2020. |
| 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 <i>NPCC 2019-2020 Winter Reliability Assessment</i> was approved 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 |
|-------------|-------------------------------|---|
| TIE | NPCC 2019 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 <i>NPCC 2019 Tie Benefits Report</i> was approved by the Task Force on Coordination of Planning at their December 16, 2019 meeting, and will be presented to the RCC for approval at their February 27, 2020 meeting. |



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 has initiated the effort to conduct a new study of the NPCC transmission system in 2020. The SS-38 working Group will review the terms of reference for the study with Task Force on System Studies at its March meeting. An acceptable DER_A model default data for NPCC has been tested through the 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: 2019 Series Base Case Development - Ongoing

The NPCC SS-37 Working Group is working with the MMWG Coordinator to address dynamics data issues with the 2019 Series MMWG dynamics cases currently under development. The dynamics cases are expected to be complete in March 2020.

The NPCC SS-37 Working Group held its annual Kickoff meeting on January 9, 2020. The purpose of the meeting was to develop the 2020 work schedule and list of deliverables to the ERAG Multi-Regional Modeling Working Group (MMWG). The SS-37 deliverables include tie line and interchange schedules, power flow cases, dynamics cases, and contingency files. They will be submitted to the designated coordinator of MMWG on or before the established due dates to support the development of the Eastern Interconnection wide power flow and dynamics cases. Additional items covered included NERC model advisories, revisions to the SS-37 Procedure Manual, and new methods to increase case accuracy.



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 3rd Quarter (Q3) of 2019. The total number of misoperations for Q3 is 30 compared to the NPCC Q3 quarterly average of 42 misoperations. This is the lowest number of misoperations reported for the Q3 in the past four years.</p> <p>The misoperation rate for Q3 2019 is 5.78%. Note that during this quarter, 519 operations were reported compared to the Q3 quarterly average of 640 operations. There were eight reported SPS/RAS operations in Q3 2019 and no reported SPS/RAS 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 (EI) MOD-032 Designee – Transition</u> On March 18, 2016, NERC and the EI Regional Executives executed an interim MOD-032 designee agreement making ERAG the MOD-032 designee for the Eastern Interconnection. The transition from ERAG, as the interim MOD-032 designee, to another entity as the [permanent] MOD-032 designee was explored. Although the most recent proposal was for ERAG to transition the MOD-032 designee to the Eastern Interconnection Planning Collaborative, NERC and the EI Regional Executives have agreed in principal that ERAG will continue as the [permanent] MOD-032 designee. A new MOD-032 designee agreement is currently being developed for execution by NERC and the EI Regional Executives.</p> <p><u>MMWG Update</u> The MMWG Chair provided an update to the ERAG on the MMWG activities. The 2019 Series dynamics cases are currently behind schedule and are now expected to be released in March 2020. The MMWG continues to develop a streamlined process to create low inertia cases. The MMWG will be working with the FRWG to acquire the data and build a pilot set. The goal is to incorporate the low inertia cases into the 2021 series case build.</p> <p><u>ERAG March 26, 2020 workshop</u> ERAG is hosting a workshop to discuss the risks associated with the protection and control systems on the reliability and security of the bulk power system. The workshop is an opportunity for utilities to participate and collaborate. In addition, ERAG has an opportunity to assess the risk associated with the protection and control systems, and whether transmission owners and generator owners have a sufficient understanding of the risk. The workshop will include discussions led by utilities, regional entities, manufacturers, consultants, and other industry groups.</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) | <p>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.</p> <p>Status/ Comments:</p> <p>The 2019 NERC Summer Reliability Assessment was released on June 4, 2019; the 2019-2020 NERC Winter Reliability Assessment was released on November 21, 2019. The 2019 NERC Long-Term Reliability Assessment was released on December 19, 2019.</p> <p>The NERC has requested each Region’s assistance in assessing the long-term(10-year) reliability of their Region. Each NERC Region was asked to submit their respective data on an Assessment Areas-basis. Narratives will be completed based on responses to questions in the 2020 Long-Term Reliability Assessment (LTRA) Narrative Guide. The narrative guide for the 2020 LTRA includes questions pertaining to the projections for each Assessment Area. The NPCC response, coordinated by the NPCC CP-8 Working Group is due to NERC by June 22, 2020.</p> <p>The NERC has requested each Region’s assistance in assessing the summer reliability of their Region. The NPCC response, coordinated by the NPCC CO-12 Working Group, is due to NERC by April 8, 2020.</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 February 4, 2020 at FRCC offices in Tampa, FL. The PAWG is currently developing the schedule 2020 ProbA and is developing pilot probabilistic enhancements to the NERC Long-Term Reliability Assessment. The Working Group has developed Regional Risk Scenarios for use in the 2020 ProbA sensitivity case. The working group will meet next June 9-10, 2020 at NPCC offices in New York City. The data and narrative request are expected to be released in early May 2020. |



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>The NERC TADS Working Group (TADSWG) met on October 1-2, 2019 at WECC's office in Salt Lake City, UT. 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>The next face-to-face meeting will be held on March 17-19, 2020 at NERC's office in Atlanta, GA.</p> <p>TADSWG also worked on the training material for 2020. NERC will conduct one in-person training session on October 28-29, 2020 in Ameren, St. Louis, MO.</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>The DADS Working Group had a conference call on January 11, 2018.</p> <p>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.</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: | NERC has completed three GADS-Wind training sessions in 2019. A WebEx is scheduled for February 25, 2020. There are two scheduled trainings for 2020. |
| | | The GADS Solar team continues to make progress on the Data Reporting Instructions (DRI). Site-level event reporting criteria and cause codes for events are in development. Solar reporting will be similar to the GADS Wind application. A phased in approach will be used. Configuration and performance reporting will be at the inverter sub-group level. |
| | | Reporting data requirements for Solar have been initiated with a target goal of beginning data submittal by 2021. |
| | | The GADS Wind Turbine Generation Data Reporting Instructions have been developed to assist wind plant personnel in reporting information to NERC’s GADS Wind Reporting application. The instructions detail the procedures, schedule, and format to follow when reporting data. Wind plants with a Total Installed Capacity of 75 MW or more with a commissioning date of January 1, 2005 or later will be required to report on a quarterly basis. |
| | | NPCC has suggested to create a guidance document for new companies that will be reporting to GADS. In addition, NPCC has worked to revise the Appendix A – Change in Unit Status Report Form. The revised form was published on NERC GADS website in 2019. |



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 | 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>The NERC MIDAS Working Group (MIDASWG) had its kickoff conference call on January 30, 2020 at Schweitzer’s office in Phoenix, AZ. The Working Group has held monthly calls. The next call is scheduled on March 3, 2020.</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 better alignment of how the system protection Operation/Misoperation data is being reported.</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 held 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, an update regarding the status of queue Interconnection Studies and review of the NCSP19 Scope of Work.</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>Along with working on the review and analysis of tool failures within the NPCC and the review and comment of NERC published ‘Lessons Learned’ regarding EMS outages, the CO-10 Working Group has worked towards completing the Critical Operating Tool Failure Summary Report which began its preparation in November 2019 and was completed at the February 6-7, 2020 meeting. A presentation on the report will be given to the Task Force of Coordination of Operation 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 | <p>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</p> <p>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.</p> |
| IST-2 | TFIST Telecommunications Working Group | <p>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</p> <p>Status/ Comments: The 2018 annual report was part of the RCC’s May 2019 meeting material. The IST-2 Working Group continues to support this testing.</p> |



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 The Physical Security Working Group (IST-5) also supports TFIST in their work on issues related to Physical Security. |
| | Status/ Comments: | The IST-5 Working group is developing confidential guidance by industry 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 has been provided through the NYPD Counter Terrorism Unit on Terrorism Awareness. Follow up training was held on December 13, 2019 entitled “Surveillance Detection”. Additional training modules entitled “Suspicious Mail Handling” and “Active Shooter” will be presented by the NYPD at the Work Group’s 1 st Quarter meeting to be held on March 9, 2020. Attendance at the training sessions is open to all registered members of NPCC. |



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 was “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 was held in conjunction with the NPCC 2019 General Meeting. The meeting focused 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. |