



**RCC Meeting
September 8, 2011
Agenda Item 6.12**

**Reliability Assessment Program
(NRAP)
HIGHLIGHT REPORT**
*Prepared for the
Reliability Coordinating Committee
September 8, 2011*

Distributed to:

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



Reliability Assessment Program

HIGHLIGHT REPORT

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RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Regional Standards Committee

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
RSC	Regional Standards Committee	The NPCC Regional Standards Committee (RSC), a committee of the NPCC Board, is charged with management and maintenance of the NPCC Regional Standards Development Procedure under a sector based voting structure as described in the NPCC, Inc. Bylaws. The NPCC RSC will consider requests for new or revised standards and be available for advisement to the NPCC Board on the standards. The NPCC RSC will work in coordination with the Regional Standards Process Manager (RSPM) who will be the administrator for the NPCC Regional Standards Development Procedure. In addition, the NPCC RSC will review, comment on and develop ballot recommendations for the NERC Reliability Standards under development.

Status/ Comments:

The Regional Standards Committee is focusing on the review of each of the NERC Reliability Standards (as they are developed or revised). 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 participates in the NERC Functional Model Working Group, NERC Standards Committee, NERC Standards Committee Process Subcommittee, and the NERC Regional Standards Group. The RSC is also producing a revision to the NPCC Regional Reliability Standards Development Procedure. The RSC is continually participating in the NERC Reliability Standards Manual revisions and the Results Based Standards Initiative through the Standards Committee Process Subcommittee and also soliciting members for the NERC drafting teams as necessary to ensure NPCC is sufficiently represented. The RSC also developed a process to coordinate commenting on adjacent Regions' criteria and their standards development, as well as promoting NPCC criteria in adjacent regions, and encouraging NPCC member involvement on their drafting teams. The RSC is actively supporting the Cyber Security Standards development and revision process. The RSC has developed and is maintaining a Regional Reliability Standards Development Process which has been approved by the NPCC BOD and filed with the FERC as part of the Regional Delegation Agreement. The RSC is overseeing and managing the development of the Regional Reliability Underfrequency Load Shedding Standard, and a Regional Reserve Sharing Standard. The Disturbance Monitoring Standard has been approved by the NPCC General Membership, approved by the NPCC Board of Directors, and NERC Board of Trustees and it currently is filed with the FERC and Provincial Governments. The RSC has initiated Phase II of the NPCC Directory project to convert the criteria in the Directories to specific "requirements" on which compliance may be assessed. The RSC is developing and will maintain a work plan for completion of this project. Also the RSC is developing enhancements to the NPCC Website to provide further uniformity and consistency with that of other Regions and participating in various drafting efforts of those regions.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Regional Standards Committee

Item	Name	Assignment
RSC	Regional Standards Committee	In addition, the RSC is developing a “triage process” to evaluate standards in an effective and efficient manner. The RSC is also developing a Cost Effectiveness Analysis Procedure to evaluate if developing standards provide a cost effective solution to achieving a standard’s reliability objective and considering the economics of the implementation.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Standards Program

Directories and Appendices

<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 – Definition of Terms 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 #1 - Design and Operation of the Bulk Power System Appendix F – Procedure for Operational Planning Coordination Appendix G – Procedure for Inter Reliability Coordinator Area Voltage Control	TFCP TFCO* TFCO*	December 1, 2009

Status/ Comments:

Directory No. 1 received Full Member approval on December 1, 2009 and NPCC Document A-2 was retired on the same date. Additionally, NPCC documents B4, B8, B10, C4, C13, C18, and C40 were incorporated within Directory No. 1 and retired.

TFCP has assigned the CP-11 Working Group to begin the triennial review of Directory No. 1 and the working group is presently drafting a new version of Directory No. 1 that will reformat existing NPCC criteria into NERC style requirements. The reformatted version of Directory No.1 will highlight the more stringent and specific criteria while also facilitating program compliance.

This reformatting of Directory No. 1 is consistent with the goals of Phase 2 of the NPCC Directory development project and will also allow the CP-11 Working Group to coordinate its review along with the progress of the NERC Drafting Team which is working to revise the TPL standards.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

<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	October 21, 2008
Status/ Comments:		Directory No. 2 was approved by the Full Members on October 21, 2008 and NPCC Document A-3 was retired on the same date. The Automatic UFLS language formerly contained within Directory No. 2 was transferred into Directory No. 12 (UFLS Program Requirements) effective with the Full Member approval of Directory No. 12 on June 26, 2009.		

<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	July 14, 2009
Status/ Comments:		Directory No. 3 was approved by the NPCC Full Membership on July 11, 2008 and NPCC Documents A-4 and B-23 were retired on the same date.		
		In 2009 TFSP conducted a review of Directory No. 3 to clarify specific intent on a number of requirements. Additional language was also incorporated into Appendix B of the document to provide guidance that credit can be obtained for normal breaker operations if the equipment design permits verification and documentation of breaker tripping by each individual trip coil. The above changes to Directory No. 3 were approved by the Full Members on July 14, 2009.		

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-4	BPS Protection Criteria	Appendix A – Guideline and Procedure for Bulk Power System Protection	TFSP TFSP	December 1, 2009
Status/ Comments:		Directory No. 4 received Full Member approval on December 1, 2009. The approval of Directory No. 4 resulted in the retirement of NPCC documents A5, B5, B7, B24, and C22.		
		The RCC has approved an implementation plan to achieve the recommended reduction in BPS risk pertaining to redundant protection systems and/or battery systems on BPS facilities.		



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

<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 TFCO TFCO TFCO TFCO TFCO TFCO	December 2, 2010
	Status/ Comments:	Directory No. 5 was approved by the NPCC Full Members on October 15, 2010 and became effective on December 2, 2010. The approval of Directory No. 5 resulted in the retirement of NPCC documents A6, B2, C8, C9, C11, C12, C20, C37, and C38. A new NPCC Regional Reliability Reference Directory 6, "Reserve Sharing Groups," is being posted to receive public comment. Following the meeting of the NPCC Task Force on Coordination of Operation meeting of October 6 and 7, a revised NPCC Regional Reliability Reference Directory 5, "Reserve," will be posted for public comment..		

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-6	Regional Reserve Sharing		TFCO	Draft (New)
	Status/Comments:	A new NPCC Regional Reliability Reference Directory 6, "Reserve Sharing Groups," is being posted to receive public comment.		



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-7	Special Protection System	Attachment 1 – Definition of Terms Appendix A – Guidance for Consideration in SPS Design Criteria Appendix B – Procedure for Review of Special Protection Systems	TFSP TFSP TFSP	December 27, 2007

Status/ Comments:

Directory No. 7 was approved by the NPCC Full Members on December 27, 2007. The Task Force on System Protection has initiated a review of Directory No.7, including a review of Appendix B which details the process for SPS approval, modification, or retirement. The TFCP, TFSS, and TFCO are coordinating their comments on Appendix B and the overall Directory review with TFSP which is the lead Task Force for Directory No. 7. Additionally, TFSP has been provided with an initial Phase 2 draft of Directory No. 7 and will incorporate the results of the above ongoing review into the phase 2 Directory format.

<u>Item</u>	<u>Name</u>	<u>Appendices</u>	<u>Lead TF</u>	<u>Current Version</u>
DIR-8	Black Start System Restoration	Appendix A – Definition of Terms	TFCO TFCO/TFSS ¹	October 22, 2010

Status/ Comments:

Directory No. 8 was approved by the NPCC Full Membership on Oct. 21, 2008. On October 22, 2010 the Full Members approved a revision to Directory No. 8 pertaining to language describing discharge testing of station batteries. The NPCC Restoration Working Group (CO-11) is currently reviewing Directory No. 8 and will incorporate further revisions; a revised draft will be posted following the CO-11 meeting of October 3, 4 and 5.

<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	Appendix A – Definition of Terms Appendix B – Basic Flow Chart for Verification of Generator Gross and Net Real Power Capability	TFCO TFCO/TFCP ¹ TFCO/TFCP ¹	December 22, 2008

Status/ Comments:

The TFCO conducted a conference call on September 2 to review its response to the comments received following its first posting of the revised draft; based on these comments, a second posting for public comment is now in progress.

¹ Indicates that the Task Force responsible for review of the Appendix is not the same as the lead Task Force for the respective Directory.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Item	Name	Appendices	Lead TF	Current Version
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 22, 2008
Status/ Comments:		<p>Directory No. 10 was approved by the NPCC Full Membership on December 22, 2008.</p> <p>The TFCO conducted a conference call on September 2 to review its response to the comments received following its first posting of the revised draft; based on these comments, a second posting for public comment is now in progress.</p>		

Item	Name	Appendices	Lead TF	Current Version
DIR-12	UFLS Load Shedding Program Requirements	Appendix A – Definition of Terms	TFSS TFSS	March 3, 2010
Status/ Comments:		<p>Directory No. 12 was developed from the Automatic Under frequency Load Shedding requirements contained within existing NPCC Directory No. 2 <i>Emergency Operations</i> and also from the recommendations and implementation plans provided in the 2006 Assessment of Under frequency Load Shedding Adequacy; and the 2008 Assessment of Under frequency Load Shedding Adequacy – Québec Area, both of which were approved by the Reliability Coordinating Committee on November 19, 2008.</p> <p>Directory No. 12 and a six year program implementation plan were approved by ballot of the NPCC Full Members on June 26, 2009. Directory No. 12 and its implementation plan were further revised to consider UFLS requirements for certain small entities and these revisions were approved by the NPCC Full Members on March 3, 2010.</p> <p>A revision to the RCC approved NPCC UFLS Implementation Plan was approved in June 2010 extending the implementation plan in Quebec for an additional year.</p> <p>In November 2010 the RCC approved an SS38 study report pertaining to UFLS program tolerances and applicability. The SS38 recommendations have been incorporated within a revised draft of Directory No. 12 and were posted to the Open Process for comments.</p>		



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Directory Development and Revision Manual

<u>Item</u>	<u>Name</u>	<u>Assignment</u>	<u>Current Version</u>
Directory	Directory Development and Revision Procedure	The NPCC Directory Development and Revision Manual is intended to provide guidance regarding the process of establishing a new or revised Directory and in particular will clarify the roles and responsibilities of the NPCC Task Forces which are responsible for Directory content.	Latest Version: New Frequency of Reviews: 3 years Next Review Date: N/A
	Status/ Comments:	The Directory Manual has been posted to the Open Process until September 12, 2011.	

Regional Standards

<u>Item</u>	<u>Name</u>	<u>Assignment</u>	<u>Current Version</u>
PRC-002-NPCC-01	Disturbance Monitoring	This Standard will establish 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: New Frequency of Reviews: 3 years Next Review Date:
	Status/ Comments:	The DME Regional Standard and its Implementation Plan were posted for ballot December 17, 2009, and approved by the NPCC Full Members on January 16, 2010. The NPCC BOD approved the Standard on February 9, 2010. The Standard was submitted to NERC for review. NERC accepted the technical content of the requirements and the Implementation Plan; however issues were identified with the construction of the VSLs. The VSLs were reworked, and only the VSL portion of the Standard was re-posted for a 30 day industry review and comment period. This was followed by submission to NPCC Members for approval. The VSLs were approved by ballot Oct. 31, 2010. The Standard and its Implementation Plan was submitted to the NERC BOT at its November 4, 2010 meeting and approved. Materials have been reviewed by NERC and filed with FERC on May 31, 2011. Filing was made with the appropriate Canadian authorities for their approvals on June 8, 2011.	



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Regional Standards

<u>Item</u>	<u>Name</u>	<u>Assignment</u>	<u>Current Version</u>	
PRC-006	Under Frequency Load shedding	This Standard will provide the measures 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:	
	Status/ Comments:	<p>The NPCC UFLS Regional Standards Drafting Team (RSDT) continues its effort to draft a regional standard while addressing a number of significant issues surrounding UFLS in the region. The UFLS RSDT has been supported in its work by the SS38 Working Group which has studied program tolerances, applicability and generator coordination on behalf of the drafting team. Other significant issues addressed by the DT include the standard’s implementation, and requirements for the program’s under voltage inhibit.</p> <p>The RSDT responded to all comments received during the second Open Process posting of the document which concluded on July 9, 2010. An approval ballot conducted between January 18, 2011 and January 28, 2011 did not achieve the required quorum from among NPCC voting sectors and the draft standard has been remanded to the Task Force acting as the Drafting Team for further development. The RSDT reviewed all comments received during the ballot and revised the draft standard accordingly. The standard was reposted (3rd posting) to the Open Process on May 6, 2011 for a 45 day comment through June 20, 2011.</p> <p>The RSDT has addressed all comments received during the Open Process and has requested TFSS and RCC endorsement of the revised standard in order to present the standard to the RSC in order to receive RSC approval of a 30 day pre ballot review and subsequent 10 day ballot.</p>		

<u>Item</u>	<u>Name</u>	<u>Assignment</u>	<u>Current Version</u>	
BAL-002	Regional Reserve Sharing	This Standard will provide 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:	<p>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 has been sent to the NPCC membership. At its meeting of April 14 and 15, 2011, the TFCO established the Working Group CO-01 augmented with additional membership to serve as the Drafting Team.</p>		



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Regional Standards Development Procedure

<u>Item</u>	<u>Name</u>	<u>Assignment</u>	<u>Current Version</u>
RRSDP	Regional Reliability Standards Development Procedure	The NPCC Regional Reliability Standards Development Procedure 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 Northeast North America.	<p>Latest Version: Sept. 19, 2007</p> <p>Frequency of Reviews: 3 years</p> <p>Next Review Date: Sept. 19, 2010</p>
	Status/ Comments:	The Regional Reliability Standards Development Procedure 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 and is working on revisions to the procedure.	



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 (CC) shall be 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). With regard to NERC Reliability Standards and Regional Reliability Standards, the CC shall provide 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. The CC shall be responsible for final approval of compliance assessments related to NPCC Reliability Criteria, which includes non-monetary sanction recommendations.</p> <p>Status/ Comments:</p> <p>The NPCC Compliance Committee, at its September 6-7, 2011 meeting, completed the assessment of all 2010 CCEP compliance submittals. A draft report to the RCC, summarizing the 2010 CCEP assessment results, will be developed by NPCC Staff and presented to the CC for review and approval on its October conference call. Once approved the report will be for approval at the November RCC meeting.</p> <p>Culture of Compliance Surveys have been distributed to all NPCC registered entities. The distribution utilized a four phase approach. All entities in Phase 1 (20% of NPCC registered entities) have submitted their surveys and have had them assessed by NPCC Staff. NPCC has begun to receive submittals from Phase 2 and Phase 3. Phase 4 Submittals are due by September 9, 2011. All surveys are to be evaluated and the all registered entities notified of their assessments by the end of 2011. In addition a listing of examples of excellence and best practices will developed based on the review of the surveys and distributed to all NPCC registered entities by the end of 2011.</p>



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 - 1, 2	Criteria Compliance and Enforcement Program	The process and requirements are defined , in these documents, for compliance monitoring, assessment and enforcement of NPCC reliability criteria.
	Status/ Comments:	The CCEP-1 (Compliance Criteria Enforcement Program Process Document) and CCEP-2 (2011 Implementation Plan) were approved by the NPCC Membership on April 5, 2011. In addition and effective that date Documents A-8, <i>NPCC Reliability Compliance and Enforcement Program</i> ; B-22, <i>Guidelines for Implementation of the NPCC Compliance Program</i> and C-32, <i>Review process for NPCC Reliability Compliance Enforcement Program</i> were all retired.



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 CO-2 Working Group met in early July and continued work on coordination and sharing among the NPCC RCs and BAs on Systematic approach to Training and changes being made to implement the PER-005 standard. The following has been achieved toward satisfying the requirements of the NPCC corporate goal on Training and Education:

- CO-2 collaboration and actions have resulted in completion of the threshold goal level.
- Presentations presented at the Spring and planned for the Fall System Operator Seminars fully review all aspects of the NERC-NPCC Event Analysis Process and include lessons learned from events. That will complete the target level goal.
- Reviewed, discussed and shared job task analysis approaches.
- Provided status of job task list development
- Shared approaches to identify job tasks and ways to classify as reliability-related. Went through examples of writing job tasks.
- Shared a project management approach that could be used by or modified for use by CO-2 members.
- Shared methods to track objectives.
- Reached common understanding of DIF analysis.
- Shared: 1) reference material, 2) training tools, 3) information on training courses, workshops and seminars, 4) web sites, etc.
- Placed common information and references on the common NPCC web site “Shared Training Material” location for the use of all.
- Shared use of a Task-to-Training Matrix.
- Shared approaches, references and tools regarding training program evaluation.
- Reviewed how all are addressing the systematic approach to training phases, analysis, design, development, implementation and evaluation.
- As a plan for satisfying the PER-005-1 requirement for a systematic approach to training CO-2 members have done extensive sharing of approaches, references, methodologies and tools.

At the September meeting that is held to prepare for the Fall System Operator Seminar, the CO-2 Working Group will continue their collaboration work aimed at helping all to satisfy the PER-005 standard requirements.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

BLACKOUT 2003 FOLLOW-UP

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
BSP	Blackout Study Plan	Building on the Event Replication Study, perform additional analysis to evaluate possible risks for other rerating conditions, planned system changes, and possible system design changes.
	Status/ Comments:	<p>The Blackout Study Recommendations Working Group's report and action plan was presented and approved at the March 2006 RCC meeting. Task 5 "Terms of Reference" was approved at the November 2006 RCC meeting. The NPCC Blackout Investigation Task 5 study was deferred last year due to re-prioritization of assignments in order to complete higher priority items; the RCC will be considering a revised updated scope of work at their September 2010 meeting.</p> <p>The SS-38 Working Group initiated work on the NPCC August 14, 2003 Northeast Blackout Study - Task 5 in November 2010, and completed the first milestone in December 2010 with the development of the base cases and dynamic files necessary for the study. The Blackout case was also reestablished and verified for use in Task 5 analysis.</p> <p>In the coming months, the SS-38 Working Group will be performing the analysis of step 5 of Task 5 to 'Simulate controlled island formation and assess performance' and will continue to review simulations and document the results completed in steps 2, 3, and 4 of Task 5.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF OPERATION

Item	Name	Assignment
CO-1	Control Performance	The Working Group insures coordination between adjacent control areas in establishing interchange schedules, Working Group 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 met on August 25-26, 2011. CO-1 work continued on: 1) the final changes to the draft Regional Reserve Sharing Directory to get it ready for Open Process posting 2) the quantitative analysis to estimate the effect of reserve sharing on system reliability, 3) analysis of past SAR events, 4) providing support and research regarding NERC frequency response initiative issues at NERC groups and in ERAG, 5) the remaining unresolved Directory No. 5 issues on “Simultaneous Activation of Reserve” (SAR) implementation (primarily Transactions Wheeled from Hydro-Québec TransÉnergie via the HVdc Ties to Entities Not Participating in SAR, 6) Time Error Correction status and , 7) meeting the routine reporting requirements on SAR-ATR reports and , CPS, inadvertent energy and ACE Diversity Interchange.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

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

Item	Name	Assignment
CO-7	Operational Review Working Group	To assess, coordinate and evaluate regional operational issues and reliability concerns as directed by the TFCO. Periodically review the NPCC Regional Reliability Plan and the Registration and Certification of entities to achieve conformance with NPCC criteria and NERC Standards.
	Status/ Comments:	The TFCO completed a revised scope of Working Group CO-07, identifying its new tasks and responsibilities. The Working Group is currently dormant.

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 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:	At its meeting of August 24 and 25, the CO-8 Working Group: <ul style="list-style-type: none"> accepted a proposal for SAR allocation following a radial source HVdc contingency in which part of the interrupted energy is wheeled; and finalized a revised draft for posting of C-15, "Procedures for Solar Magnetic Disturbances Which Affect Electric Power Systems."



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

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

Item	Name	Assignment
CO-11	Restoration Working Group	The Restoration Working Group addresses the issue of ensuring appropriate operation of key system restoration facilities and their critical components.
	Status/ Comments:	The NPCC Restoration Working Group (CO-11) is currently reviewing Directory No. 8 and will incorporate further revisions; a revised draft will be posted following the CO-11 meeting of October 3, 4 and 5.

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:	CO-12 work has been initiated for the 2011/2012 Winter NPCC Reliability Assessment.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF PLANNING

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
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 2010 New England Interim Review of Resource Adequacy, the 2010 Ontario Interim Review of Resource Adequacy, the 2010 Quebec Interim Review of Resource Adequacy, and the 2010 New York Interim Review of Resource Adequacy were approved by the RCC at their November 30, 2010 meeting.
<u>Item</u>	<u>Name</u>	<u>Assignment</u>
CP- 2011S	Summer 2011 Multi-Area Probabilistic Reliability Assessment	Assess NPCC Area reliability for the year 2011 by estimating the projected use of Area Operating Procedures designed to mitigate resource shortages for the summer (May through September) period.
	Status/ Comments:	The assessment was approved by the RCC completed at the end of April, 2011; a Media Event was held May 3, 2011 for public release of the results.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF PLANNING

Item	Name	Assignment
CP- 2011W	Winter 2011-2012 Multi-Area Probabilistic Reliability Assessment	Assess NPCC Inc. Area reliability by estimating projected use of Area Operating Procedures designed to mitigate resource shortages for the winter (November 2011 through March 2012) period.
	Status/ Comments:	The 2011-2012 Winter assessment was approved at the June 1, 2011 RCC meeting.

Item	Name	Assignment
CP - TIE	Review of Interconnection Assistance Reliability Benefits	On a consistent basis, estimate the amount of interconnection assistance available to the NPCC Inc. Areas and for the near term.
	Status/ Comments:	The report was approved at the June 1, 2011 RCC meeting.

Item	Name	Assignment
LRAO	NPCC Long Range Adequacy Overview	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 scope of work and schedule for the 2012 LRAO will be presented to the RCC for approval at their September, 8 2011 RCC; the analysis for the 2011 LRAO, based on NPCC's 2011 NERC LTRA data submittal, will be submitted for RCC approval at their November 29, 2011 meeting. Work is underway by the CP-8 Working Group.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

TASK FORCE ON COORDINATION OF PLANNING

Item	Name	Assignment
CP-11	<i>NPCC Basic Criteria For Design and Operation of the Bulk Power System Review Working Group</i>	This Working Group is charged with the revision of the NPCC Inc. Basic Design Criteria Directory No. 1 and the NPCC Glossary of Terms Document A-07. In addition, the Task Force on Coordination of Planning (TFCP) charged the CP-11 Working Group with the development of the A-10 Classification of BPS Elements document.
	Status/ Comments:	At the May 2010 meeting, TFCP re-charged the CP-11 Working Group to begin a comprehensive review of Directory No. 1 to assure that it is consistent with other NPCC Directories, Criteria, Guidelines and Procedures and with applicable NERC Reliability Standards. In conjunction with the development of Phase 2 of the Directory effort, the CP-11 Working Group review will also assist with the creation of criteria “Requirements” to provide sound foundation for the creation of the NPCC Criteria Compliance Enforcement Program. CP-11 will be holding a series of meetings and conference calls to work on Directory No. 1. Members are encouraged to participate in this important effort which is expected to take about 18 months to complete. At the August 18, 2010 meeting, TFCP approved the revised scope and schedule submitted by CP-11 for the Directory No. 1 review to be completed by November 2011. CP-11 completed the first milestone in the development of a draft D1 document that was forwarded to the Task Forces on January 27, 2011 for their review and input. In the next few months, CP-11 will work with the Task Forces to develop a consensus document. At this time the Open Process Review of draft D1 is expected in the October timeframe.

Item	Name	Assignment
SP-7	Working Group on Review of Protection System Mis-operations	Review and analyze mis-operations of transmission and generation protection systems and special protection systems on the bulk electric system and report on the statistics of mis-operations as they occur in the NPCC region including lessons learned and implementation of corrective action plans by registered entities.
	Status/ Comments:	A report for the First Quarter 2011 protection mis-operations reviewed by SP-7 was submitted to NERC on July 15, 2011. In September, SP-7 will review the Second Quarter 2011 mis-operation reports and updates to the First Quarter 2011 mis-operation reports including reports of additional mis-operations occurred during the First Quarter 2011. The Second Quarter Report and updates to the First Quarter Report are due to NERC by October 15, 2011.



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 load flow cases and associated dynamic data.

Status/ Comments: Year 2011 development effort has begun and is on schedule.

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: Work on NPCC Blackout Recommendation Task 5 is on-going as per the revised schedule and updated Terms of Reference approved at the September 2010 RCC meeting. A status report on Task 5 will be presented at the September 8, 2011 RCC meeting. SS-38 is also working on the Research Phase of the development of guideline for load modeling as detailed in the TFSS work plan for 2011-2012.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

Eastern Interconnection Reliability Assessment Group

Study Committees

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
ERAG	Eastern Interconnection Reliability Assessment Group	<p>The Eastern Interconnection Reliability Assessment Group (ERAG) Management Committee (MC) oversees the Multi-Regional Modeling Group steady state and dynamics base case development, all Eastern Interconnection interregional assessment activities and other interregional matters of interest. Eastern Interconnection assessment forums include: RFC-NPCC, RFC-SERC East and RFC-MRO-SPP-SERC West.</p> <p>Status/ Comments:</p> <p>The ERAG Management Committee met on May 18, July 12-13 and August 30-September 1. ERAG issues addressed included: 1) changes to assessment practices for seasonal and future assessments, 2) MMWG base case development activities and 3) collaboration with NERC to improve the modeling in MMWG steady state and dynamics models, especially the frequency response modeling in dynamics cases. The ERAG Management Committee developed a work plan for anticipated activities in the next year or two.</p> <p>The ERAG Steering Committees have started work on the 2020 Assessment using the Eastern Interconnection Planning Council (EIPC) 2020 base case as the starting point to leverage the already completed work.</p> <p>ERAG is working with NERC to improve the governor models used in MMWG models. ERAG Management Committee members participated in a June EPRI/NERC workshop to address this issue. John Undrill is assisting the effort as a consultant. A testing method has been developed to improve the governor models used in base cases.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program RFC - NPCC Working Group

Item	Name	Assignment
RNWG	RFC-NPCC Working Group	The RFC-NPCC Working Group (RNWG), under the direction of the RFC-NPCC Steering Committee (RNSC), conducts appraisals of the RFC-NPCC interconnected systems for the upcoming summer and winter capability periods.
	Status/ Comments:	At the April 2011, ERAG MC meeting it was decided that the winter 2011-2012 inter-regional emergency transfer study will instead be a future study of the summer 2020 period using the Eastern Interconnection Planning Collaborative (EIPC) 2020 base case and report. Currently, the base case has been updated and issued to the working groups. The RNWG has been issued its work schedule and assignments. The study is scheduled for completion by October 18, 2011 which coincides with the ERAG Steering Committee meeting, and the final publication of the report is scheduled for mid-November 2011.



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 systems of the eight 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 eight Regional Reliability Entities.
	Status/ Comments:	The NPCC input to the NERC RAS 2010-2011 Winter Post-Seasonal Assessment has been completed; review by the NERC Planning Committee is expected in September 2011. The RAS 2011 Summer Assessment was released in May 2011. The 2011 Long Term Reliability Assessment is in its final draft and will be released in the autumn. The draft of the 2011-2012 winter seasonal assessment will be finalized at the RAS meeting to be held on October 12 and 13.

Item	Name	Assignment
DCWG	Data Collection Working Group	Serve as the electric utility industry's coordinator with the Department of Energy (DOE) and the Energy Information Administration (EIA) in submitting yearly data and in negotiating the requirements for data submission to the EIA.
	Status/ Comments:	The next meeting of the NERC DCWG and DOE EIA representatives is scheduled for October 19-20, 2011 in Washington DC has been cancelled. At its June, 2011 meeting, the NERC Planning Committee approved its Strategic Plan, which calls for the activities of the DCWG to fall under the auspices of the ERO-RAPA group.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC)

Item	Name	Assignment
RIS	Reliability Issues Subcommittee	Trial to determine if probabilistic reliability metrics based on the NERC Long Term Reliability Assessment can be used to supplement NERC regional reliability outlooks.
	Status/ Comments:	<p>The NERC Reliability Issues Subcommittee is conducting a trial of the NERC Generation &Transmission Reliability Planning Model Task Force (G&TRPMTF) methodology in 2011. The G&TRPMTF report outline and requirements was approved by the NERC Planning Committee at their December 7-8, 2010 meeting. NPCC is participating in the trial, on behalf of New York, New England, Ontario, Quebec and the Maritimes, through its CP-8 Working Group. An initial draft report has been provided, based on the results of the 2010 NPCC Long Range Adequacy Overview. Project completion is expected by the end of the year.</p> <p>At its June, 2011 meeting, the NERC Planning Committee approved its Strategic Plan, which calls for the activities of the RIS to fall under the auspices of the Reliability Assessment Subcommittee.</p>

Item	Name	Assignment
TADS	Transmission Availability Data System	Serve as the Regional Entity Coordinator (REC) in support of the NERC TADS outage data collection and the analysis of the NPCC Transmission Owners (TO) outage information. As the REC, oversee the use of and the data entry of automatic outage information by the TO in the NERC Internet based data management tool - webTADS.
	Status/ Comments:	TADSWG is currently evaluating the impact of the NERC 100 kV bright line on the webTADS system. New “event codes” will be added to TADS commencing in 2012. Transmission Owners have been encouraged to update their 2011 contact data in webTADS to facilitate the distribution of information about upcoming training and news about system changes.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC)

Item	Name	Assignment
DADS	Demand Availability Data System	Serve as the Regional Entity Coordinator (REC) in support of the DADS data collection and analysis for NPCC. As the REC, oversee the collection of the data in the NERC Internet based data management tool - webDADS.
	Status/ Comments:	<p>The Demand Availability Data System Working Group (DADSWG) is being formed to implement a uniform approach to reporting and measuring Demand Response availability, performance and other related reliability data. To meet this purpose, the DADSWG works on five key subjects:</p> <ul style="list-style-type: none">✓ Definition of Demand Response data that BAs, LSEs, DPs, and PSEs report to NERC;✓ Single process for collecting such data that avoids duplication of effort;✓ Quality control process, data reviews and analysis to ensure metric numeric accuracy.✓ Demand Response availability and performance metrics that are calculated from the reported data; and✓ Entity analysis and expertise to support the Performance Analysis Subcommittee <p>A late October/early September DADS and webDADS webinar training session is planned.</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Reliability Assessment and Performance Analysis Program

OTHER

<u>Item</u>	<u>Name</u>	<u>Assignment</u>
Inter-ISO	Inter-ISO Working Group	<p>The Inter-ISO Working Group was formed to address Inter-Regional planning and Inter-Area issues of projects that have “cross border” impacts while providing an open stakeholder forum and committee structure to allow market input.</p> <p>Status/ Comments:</p> <p>A WebEx Meeting was held on June 27, 2011. Topics included:</p> <ul style="list-style-type: none">✓ Environmental Issues and Variable Resource Technologies✓ Natural Gas Issues and ISO/RTO Reliability Update✓ Results of the Interregional Production Cost Study✓ Update on the Interregional Production Cost Study✓ Update on Interregional Activities<ul style="list-style-type: none">○ The FERC Planning NOPR and Interregional Issues○ An EIPC Update <p>The next meeting is being scheduled for September 8, 2011, to receive public comment on the draft 2011 New England regional System Plan.</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> <p>Status/ Comments: The TFCO further modified a proposed revision to C-17, "Procedures for Monitoring and Reporting Critical Operating Tool Failures."</p>



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Situation Awareness and Infrastructure Security Program

TASK FORCE ON INFRASTRUCTURE SECURITY AND TECHNOLOGY

Item	Name	Assignment
IST-1	Infrastructure Security and Technology Workshop	Periodic workshops 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:	A successful Cyber Security Workshop was held on September 21-22, 2010 at Sheraton Boston Hotel. The Cyber Security Workshop provided insight and assistance on implementing CIP Standards, preparing for CIP Audits, information that should be provided when requesting a Technical Feasibility Exception, review and reminder on the NERC Alert system plus suggesting improvements for Entities and Regions.
		Last Workshop: Sept. 2010

Item	Name	Assignment
IST-3	TFIST EMS-SCADA Working Group	Provide a forum to identify, discuss and advance the technology of EMS-SCADA for the reliable operation of the NPCC Bulk Power System. The EMS-SCADA Working Group (IST-3) will also support TFIST in their work on issues related to EMS-SCADA.
	Status/ Comments:	The EMS-SCADA Working Group has been designed as an Ad-hoc Working Group by TFIST.



RELIABILITY ASSESSMENT PROGRAM HIGHLIGHTS

Situation Awareness and Infrastructure Security Program

TASK FORCE ON INFRASTRUCTURE SECURITY AND TECHNOLOGY

Item	Name	Assignment
IST-4	TFIST Cyber Security Working Group	Provide a forum to identify, discuss and advance the technology of Cyber Security for the reliable operation of the NPCC Bulk Power System. The Cyber Security Working Group (IST-4) will also support TFIST in their work on issues related to Cyber Security.
	Status/ Comments:	The Cyber Security Working Group has been designated as an Ad-hoc Working Group by TFIST.

Item	Name	Assignment
IST-5	TFIST Physical Security Working Group	Provide a forum to identify, discuss and advance the use of Physical Security for the reliable operation of the NPCC Bulk Power System. The Physical Security Working Group (IST-5) will also support TFIST in their work on issues related to Physical Security.
	Status/ Comments:	Since the previous update, the Physical Security Working Group held meetings in December 2009 and February 2010.



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 2011 NPCC General Meeting will be held the afternoon of November 30, 2011 in Toronto, Ontario.
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 next meeting of the NPCC Governmental/Regulatory Affairs Advisory Group is scheduled for the afternoon of November 29, 2011 in conjunction with the NPCC 2011 General Meeting in Toronto, Ontario.
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 the monthly communications coordination calls with NERC and the Regions. A meeting of the NERC Regional Communications Group was held May 11-12, 2011 in Arlington, Virginia. The next meeting is scheduled for November 2-3, 2011 in Atlanta, Georgia.