Appendix A3: Northeast Power Coordinating Council (NPCC) 2018 CMEP Implementation Plan

This Appendix contains the CMEP Implementation Plan (IP) for NPCC as required by the NERC Rules of Procedure (ROP).

Compliance Monitoring and Enforcement

CMEP IP Highlights and Material Changes

- NPCC will continue to offer formal Operations and Planning (O&P) ICEs to all entities on the 2018 audit schedule.
- NPCC will also offer to perform CIP ICEs on entities that have already their initial CIP Version 5 audit.
- NPCC will refresh existing IRAs and use the 2018 ERO and NPCC IPs to scope 2018 monitoring engagements.

Other Regional Key Initiatives & Activities

- In 2018, NPCC will continue with a cyber security and physical security outreach program for volunteering entities.

Regional Risk Assessment Process and Results

NPCC considers the Risk Elements identified in the ERO Enterprise CMEP IP and the Risk Factors identified in the ERO Guide for Compliance Monitoring to identify important reliability risks within NPCC's footprint. If NPCC concludes that any of the ERO Risk Elements are not relevant reliability risks within NPCC's footprint, NPCC will provide documented rationale.

NPCC determines whether any additional regional risks specific to the NPCC footprint, but sufficiently different from the risks identified in the ERO Enterprise CMEP IP, should be added as Regional Risk Elements into the NPCC Implementation Plan. Input into Regional Risk Element determination can take the form of Enforcement trends, audit team observances, ERO or Regional events, issues raised by NERC or stakeholder groups, etc. Often, additional regional risks specific to the NPCC footprint may be categorized within a NERC-identified Risk Element and would not likely require an additional Regional Risk Element.

In the event NPCC identifies an additional Regional Risk Element that is not included in the ERO Enterprise CMEP IP, NPCC will provide justification and documentation regarding the additional Regional Risk Element.

In the development of the standards and requirements that appear in this Regional plan, NPCC considered the 2018 ERO Risk Factors and other tangible BES attributes such as entity functional registration, transmission assets, Remedial Action Schemes, Blackstart plans and facilities, generation assets, role of Underfrequency Load Shedding (UFLS) , Enforcement trends, historical events, etc.

NPCC expanded the requirements with explanation under several ERO Risk Elements.

NPCC did not identify any Regional Risk Elements for 2018.

Regional Risk Elements and Areas of Focus

Table A3.1 contains expanded ERO Risk Elements based on NPCC's Regional Risk Assessment process. The table also contains Areas of Focus to identified risks that may be considered in the development of a registered entity's COP.

Table A3.1: Additional Areas of Focus for ERO Risk Elements

Expanded ERO Risk Element	Justification	Associated Standard and Requirement(s)
Maintenance and Management of BPS Assets	NPCC will focus on coordination of relays and controls under several standards because inadequate/improper settings in these areas do not serve BES reliability. 1) Relay maintenance practices are imperative to continued BES reliability and there are frequent violations related to the PRC-005-6 implementation plan. 2) Although rarely used, UFLS schemes owned by the TO and DP are an extremely important aspect in limiting the extent of major disturbances. This is especially true in NPCC which has transmission corridors that are of the radial nature. As such, NPCC has a regional UFLS standard and will focus on the design and implementation of UFLS programs which are key in order to prevent a total system blackout like those that occurred in 1965, 1977, and 2003. In addition, the proper underfrequency settings at the GO directly correlate to the success of the UFLS program. 3) In 2017, NPCC documented an increase in not only non-compliance associated with generator voltage controls under PRC-019-2 and generator frequency/voltage relay settings under PRC-024-2, but also a steady flow of questions from entities. 4) NPCC will continue in the spirit of the 2010 Facility Rating Alert to audit and assess controls associated with FAC-008-3.	PRC-005-1.1b R1 (GO, TO, DP) PRC-005-6 R1 (GO, TO, DP) PRC-006-2 R3 (PC) R4 (PC) PRC-006-NPCC-1 R4 (TO, DP) R7 (TO, DP) R13 (GO) PRC-019-2 R1 (GO, TO) FAC-008-3 R3 (GO, TO)
Event Response/ Recovery	NPCC has identified differences in the implementation of manual load shed plans while conducting on-site audit interviews. NPCC will continue to monitor and discuss the entity's preparedness to shed load. Historical events in the Northeast (1965, 1977, 2003) have proven the need for thoroughly coordinated system restoration plans and activities, which include training and simulation. The success of any system restoration cannot be accomplished without dependable Blackstart Resources that should be tested as per the TOP's process and have a procedure for energizing a bus.	EOP-005-2 R1 (TOP) R9 (TOP) R10 (TOP) R13 (GOP) R14 (GOP) EOP-006-2 R1 (RC) R9 (RC) R10 (RC) EOP-008-1

Table A3.1: Additional Areas of Focus for ERO Risk Elements		
Expanded ERO Risk Element	**Justification**	**Associated Standard and Requirement(s)**
	RC backup control centers with the functionality of the primary control center further ensure interconnection reliability and a more secure recovery from the loss of the primary.	R3 (RC)
Extreme Physical Events	The ability to mitigate the effects of GMD events is an expanded Risk Element within NPCC because Northern U.S. and Canadian terrain and latitudes offer more potential for a severe GMD event. In addition, past history also deems this to be an expanded Risk Element. A significant GMD event occurred on March 13, 1989 and resulted in a blackout of the power system in Quebec due to the tripping of shunt reactive devices. The dissemination of space weather information in R2 as per the GMD operating plan is vital to ensuring reliability.	EOP-010-1 R2 (RC)
Monitoring and Situational Awareness	Historical events in the Northeast (1965, 1977, 2003) have proven the need for the highest level of RC/BA/TOP real-time operator monitoring capability, decision making, and situational awareness of current and near-term system status. To that end, the requirements listed will allow NPCC to confirm, educate, and discuss with the RC/BA/TOP as necessary on how the entity accomplishes the following: ensuring proper reserves; taking action to alleviate BES risks; the degree that entities identify and operate to the most limiting parameter; issuing alerts and communicating without delay when experiencing/foreseeing a transmission problem; performing next day analyses; performing 30-minute assessments; implementing real-time time actions to both prevent in advance and mitigate in real-time all SOL and IROL exceedences; and having documented data exchange policies that will ensure that it can perform real-time monitoring and assessments.	BAL-002-1 R1 (BA) R3 (BA) IRO-002-4 R1 (RC) R2 (RC) IRO-008-2 R1 (RC) R2 (RC) R5 (RC) IRO-009-2 R2 (RC) TOP-001-3 (until 6/30/18) TOP-001-4 (effective 7/1/18) R7 (TOP) R15 (TOP) R16 (TOP) R18 (TOP) R19 (TOP) TOP-002-4 R1 (TOP) R6 (TOP)

Table A3.1: Additional Areas of Focus for ERO Risk Elements		
Expanded ERO Risk Element	**Justification**	**Associated Standard and Requirement(s)**
Human Performance	Thoroughness of operator training in task performance and communication techniques will alleviate the risks of BES reliability events occurring in NPCC similar to those of 1965, 1977, and 2003. As such, NPCC wants to assure that entities verify/validate, at the highest levels, that entity personnel understand their role and the importance of following documented communication protocols during normal and emergency situations. NPCC also wants to ensure that entities' training approach/methodology is in fact systematic, wants to gain an understanding of how entities are determining their list of specific BES reliability tasks, and wants to ensure that system restoration activity training is provided to field operators who may perform unique tasks.	COM-002-4 R1, R2, R6, R7 (RC, BA, TOP) R3, R6 (GOP, DP) PER-005-2 R1 (RC, BA, TOP) R2 (TO) R3 (TO)

Regional Compliance Monitoring Plan

The ERO Enterprise follows a Risk-Based Compliance Monitoring Framework that considers Risk Elements, both ERO-wide and Regional, entity-specific risks and other registered entity performance considerations, as well as internal controls, to determine how a RE will monitor a registered entity's compliance with the NERC Reliability Standards. This section includes regional risk-based CMEP activities occurring during the 2018 implementation year.

Compliance Audits

The Regional Compliance Monitoring Plan includes the 2018 Compliance Audit Plan that lists all planned Audits for registered entities during the 2018 implementation year. The 2018 Compliance Audit Plan, located on the RE's website, details the registered entity's NCR, registered entity's name, and scope of monitoring for the NERC Reliability Standards (i.e., Operations and Planning and/or Critical Infrastructure Protection).

The 2018 Compliance Audit Plan for NPCC is located here: NPCC Compliance Audit Plan. Throughout the implementation year, the RE will may make updates to the 2018 Compliance Audit Plan based on risk-based compliance monitoring activities.

Spot Checks

The RE conducts Spot Checks based on a registered entity's COP, or at RE discretion at any time. The RE may conduct a Spot Check in response to events, to support a registered entity's Self-Certification, Self-Report, and Periodic Data Submittals, or to assess compliance with NERC Reliability Standards. The RE will follow the process outlined in Appendix 4C of the ROP to initiate and conduct a Spot Check. On a case-by-case basis, NPCC may use a Spot Check that will be guided by the results of the IRAs in lieu of performing an Audit.

Self-Certifications

The RE determines Self-Certifications based on a registered entity's COP or based on regional risks and other considerations. The RE will follow the ROP for notifying registered entities of any Self-Certifications, ensuring advanced noticed according to the ROP.

As shown in Table A3.2, NPCC will perform guided Self-Certifications on a quarterly basis in 2018, with a 45-day advance notice given to the entity. The entity will receive the notice of the requirement covered by the guided Self-Certification and will be instructed to submit their compliance documentation into the NPCC compliance portal. There are specific requirements that will undergo a guided Self-Certification for each quarter. Only a subset of the entities registered for the function that applies to the chosen requirement will receive the guided Self-Certification notification in the particular quarter.

Table A3.2: Guided Self-Certification Schedule

Quarter 1				
Standard	**Requirement**	**Function**	**Notification Date**	**Due Date**
PER-005-2	R6	GOP	January 9	February 23
PRC-024-2	R2	GO	January 9	February 23
Quarter 2				
Standard	**Requirement**	**Function**	**Notification Date**	**Due Date**
PRC-006-NPCC-1	R4, R7	DPUF	March 27	May 11
PRC-005-6	R1, R2, R3	DPUF	March 27	May 11
Quarter 3				
Standard	**Requirement**	**Function**	**Notification Date**	**Due Date**
VAR-002-4	R1	GOP	June 26	August 10
PRC-019-2	R1	GO	June 26	August 10
Quarter 4				
Standard	**Requirement**	**Function**	**Notification Date**	**Due Date**
PRC-006-NPCC-1	R4, R7	DPUF	September 25	November 9
PRC-005-6	R1, R2, R3	DPUF	September 25	November 9

Periodic Data Submittals

Some NERC Reliability Standards require data submittals on a monthly, quarterly, or annual basis. The RE follows the 2018 ERO Enterprise Periodic Data Submittals Schedule posted on the NERC website. NERC and the REs may also request data or information under Sections 800 or 1600 of the NERC ROP; these data requests are not included on this schedule.

Compliance Outreach

Table A3.3: Compliance Outreach Activities	
Outreach Activity	**Anticipated Date**
Spring and Fall Workshops – NPCC holds semi-annual workshops as a primary mechanism for outreach to registered entities.	May 2018 November 2018
Introduction to NPCC for Beginners – NPCC provides an introductory class for those new to CMEP activities prior to the May and November workshops.	May 2018 November 2018
Physical Security Information Exchange Sessions - The sessions take place at the May and November workshops and address NPCC Awareness Programs, Security Strategies, and subjects such CIP-014 implementation, and evolving physical threats to the electric industry.	May 2018 November 2018
CIP and O&P Internal Controls Evaluation (ICE) Outreach Session – The sessions will take place at the May and November workshops to provide awareness and promote participation in the program. It will provide NPCC's purpose, approach and implementation of the voluntary ICE process, including expectations, tools, education/examples, best practices, deliverables, and feedback into Risk-Based CMEP.	May 2018 November 2018
Cyber Security Outreach for Non-Nuclear Generators – This will provide guidance to non-nuclear sites on all facets of their on-site cyber security.	Throughout 2018
Physical Security Outreach for Non-Nuclear Generators – This will provide guidance to non-nuclear sites on all facets of their on-site physical security.	Throughout 2018
Individual Meetings with Registered Entities – NPCC will meet with registered entities for specific CMEP related issues if requested and warranted.	
CDAA – NPCC will issue announcements via CDAA (the NPCC Compliance Portal) informing registered entities of CMEP aspects.	
Compliance Wiki - NPCC's compliance wiki provides outreach specific to CDAA and other related issues and questions.	
Webinars – NPCC will conduct CMEP related webinars as needed. NPCC conducts pre-ICE webinars for all participants.	
FAQs – NPCC will post FAQs on an as needed basis.	
Compliance Guidance Statements – NPCC may issue Compliance Guidance Statements to offer clarification on the compliance approach associated with the NERC Rules of Procedure, NERC Reliability Standards, or NPCC Regional Reliability Standards.	

Table A3.3: Compliance Outreach Activities	
Outreach Activity	**Anticipated Date**
Registered Entity Surveys – NPCC will issue surveys to registered entities on an as needed basis. Such surveys have included acquiring registration data, BES element data, workshop content preferences, etc.	
Website – The NPCC website provides information in the areas of Standards, Registration, Compliance Monitoring, and Compliance Enforcement.	