



NORTHEAST POWER COORDINATING COUNCIL, INC.  
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February 28, 2018

Members, Reliability Coordinating Committee  
and  
Members, Task Force on Coordination of Operation  
Members, Task Force on Coordination of Planning  
Members, Task Force on Infrastructure Security and Technology  
Members, Task Force on System Protection  
Members, Task Force on System Studies

Re: Minutes of the December 5, 2017 RCC Meeting

Sir / Madam:

Attached is the minutes of the December 5, 2017 meeting of the NPCC Reliability Coordinating Committee, as approved the February 28, 2018 RCC meeting.

Sincerely,

*Phil Fedora*

Philip A. Fedora  
Assistant Vice President-Reliability Services

cc: NPCC Staff



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

Mr. Evans-Mongeon called the meeting of the Reliability Coordinating Committee (RCC), held at the Colonnade Boston Hotel, Boston MA to order at 10:00 am.

**Attendance**

**Officers of the Reliability Coordinating Committee**

Brian Evans-Mongeon, Chair	Utility Services, Inc.
Randy Crissman, Co-Vice Chair	New York Power Authority
Dave Conroy, Co-Vice Chair	Central Maine Power Company

**Sector 1 - Transmission Owners**

Central Hudson Gas & Electric Corporation	Frank Pace - Alternate
Central Maine Power Company	David Conroy
Consolidated Edison Company of New York, Inc.	Martin Paszek - Alternate
Eversource Energy	George Wegh
Hydro-One, Inc.	Tom Irvine
Long Island Power Authority	Anie Philip - Alternate (via phone)
National Grid USA	Michael Schiavone
New Brunswick Power Corporation	Randy MacDonald - Alternate
New York Power Authority	proxy to Randy Crissman
New York State Electric & Gas Corp.	Ray Kinney (via phone)
The United Illuminating Company	Silvia Valerio - Alternate
Vermont Electric Power Company, Inc.	Hantz Presume (via phone)

**Sector 2 – Reliability Coordinators**

Hydro-Quebec TransEnergie	Francois Brassard
Ontario IESO	Gabriel Adam
ISO New England, Inc.	Michael Henderson
	Rich Kowalski - Alternate
New York ISO	Zach Smith
	Dana Walters - Alternate

**Sector 3 – Transmission Dependent Utilities, Distribution Companies and Load Serving Entities**

Consolidated Edison Company of New York, Inc.	(proxy to Martin Paszek)
Eversource Energy	Barry Bruun
Hydro Quebec Distribution	Abdelhakim Sennoun - Alternate (via phone)
Long Island Power Authority	(proxy to Anie Philip - via phone)



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

**Sector 4 Generation Owners**

Consolidated Edison Company of New York, Inc.	(proxy to Martin Paszek)
Dynegy Inc.	Ken Stell (via phone)
Long Island Power Authority	Lucyna Khazanovich (via phone)
New York Power Authority	Randy Crissman
Ontario Power Generation, Inc.	(proxy to David Kwan)

**Sector 5 – Marketers, Brokers, and Aggregators**

Consolidated Edison Company	Sofia Gadea Omelchenko
Long Island Power Authority	(proxy to Anie Philip – via phone)
New York Power Authority	(proxy to Randy Crissman)
Utility Services, Inc.	Brian Evans-Mongeon

**Sector 6 – State and Provincial Regulatory and/or Governmental Authorities**

Long Island Power Authority	(proxy to Anie Philip – via phone)
New York Power Authority	(proxy to Randy Crissman)

**Sector 7 – Sub-Regional Reliability Councils, Customers, other Regional Entities and Interested Entities**

New York State Reliability Council, LLC	Roger Clayton
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**NPCC Staff**

Sal Buffamante	Assistant Vice President Audits and Risk Assessment
Gerry Dunbar	Manager of Reliability Criteria Requirements
Phil Fedora	Assistant Vice President, Reliability Services
Damase Hebert	Senior Compliance Attorney
Brian Hogue	Information Systems & Security Management
Andreas Klaube	Engineer, Operations
Neeraj Lal	Senior Reliability Assessment and Performance Analysis Engineer
Quoc Le	Manager, System Planning and Protection
Michael Lombardi	Manager, System Studies
Scott Nied	Manager, Operations and Planning Compliance Audits
Andrey Oks	Director of Operations Coordination
Paul Roman	Director, Operations Planning
Ralph Rufrano	Manager, Events Analysis
Rafael Sahiholamal	Senior Reliability Engineer
Edward Schwerdt	President & CEO



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

Guy Zito

Assistant Vice President - Standards

**Guests**

Kyle Ardolino (via phone)	Chair, CO-12 Working group
John Borowitz	Toronto Hydro-Electric System, Ltd.
Zac Canders	DataCapable, Inc.
Alessia Dawes	Chair, CP-11 Working Group
Kevan DePugh (via phone)	Chair, Task Force on Coordination of System Studies
Patrick Doyle	Chair, Task Force on Coordination of Operation
Chris Fralick	Ontario Power Generation, Inc.
John Helme	Chair, Task Force on Infrastructure Security & Technology
Stephane Landry (via phone)	Hydro-Quebec TransEnergie
Jackie Lemmerhirt	DataCapable, Inc.
Dean Latulip	Chair, SS38 Working Group
Sheikh Nahyaan	Toronto Hydro-Electric System, Ltd.
Fred Plett	MA Attorney General
Ryan Ramcharan	Consolidated Edison Company of New York, Inc.
Dan Schwarting (via phone)	Vice Chair, CP-11 Working Group
Ron Tutty (via phone)	Chair, Task Force on System Protection
Ben Wu	Orange & Rockland Utilities
Peter Wong	ISO New England, Inc.
Fei Zeng	ISO New England, Inc.

**Quorum Statement**

Mr. Fedora indicated that a quorum had been achieved, by member attendance, proxy, or alternate designation. He also noted receiving no written proxies.

**Antitrust Guidelines for NPCC Meetings**

In the interest of time, Mr. Evans-Mongeon referred the RCC to the NPCC Antitrust Compliance Guidelines included in the Agenda package, and waived its reading at the meeting.

**President & CEO Report**

Mr. Schwerdt focused his report on the following three topics:



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

**ERO Enterprise Long-Term Strategy, Operating Plan and 2018 Metrics**

The NERC Board of Trustees latest meeting was held on November 9, 2017, which was coincidentally the 52<sup>nd</sup> anniversary of the 1965 Northeast Blackout that culminated in the January, 1966 in the creation of NPCC, and in ensuing years the creation of other Regional Entities. NERC had its beginning in reliability assurance by 1968, formed by all the Regional Councils at that time. At the November 9<sup>th</sup> NERC meeting, the NERC Board of Trustees approved the ERO Enterprise Long-Term Strategy, the Operating Plan and the 2018 Metrics. The Long-Term Strategy, which was previewed at the September 6, 2017 RCC meeting, focused on two things: 1) building on and preserving current reliability achievements; and 2) adapting to a changing industry. The approved NERC Operating Plan includes six tactical objectives for the ERO Enterprise for the coming three years, including: 1) risk-responsive standards; 2) risk-informed compliance; 3) a reduction in known risks; 4) identification and assessment of emerging reliability risks; 5) identification and reduction of cyber and physical security risks; and 6) effective and efficient enterprise-wide operations. The NERC Operating Plan contains a number of key contributing activities for the ERO Enterprise. Together, NERC and the Regional Entities through these activities will form the foundation for future business plans and budgets. Additionally, the 2018 NERC Metrics contain both industry and internally focused measures of the effectiveness of the ERO's reliability assurance activities. Targeted areas of risk across the ERO Enterprise in 2018 include reductions in: relay mis-operations; and AC transmission outages due to human error, substation equipment, and vegetation contacts.

**NPCC Reliability Risk Identification and Mitigation**

Both the NERC Long-Term Strategy and the NERC Operating Plan cite the identification and mitigation of risks to reliability as key objectives within the ERO Enterprise. The NPCC 2017 Corporate Goals specifically targeted risks to the reliability within Northeastern North America and many of these study efforts have been brought to the RCC for endorsement. Included in those activities were an analysis and reduction of relay mis-operations, the assessment of the potential impacts of Distributed Energy Resources (DER) on resource reserve requirements, and, during today's meeting, a review of the possible impacts of DERs on under-frequency load-shedding. Each of these efforts advance the reliability of a changing industry not only in Northeastern North America, but they set the bar for analytical efforts throughout the ERO Enterprise.

Less revolutionary, but evolving in their sophistication and complexity, are the more "routine" analyses that are conducted within NPCC and reviewed and approved by the RCC. These bedrock reliability studies include reviews of the resource adequacy of individual Areas, assessment of Area transmission reliability, as well as separate NPCC-wide assessments of resource adequacy and transmission reliability that augment and complement those studies. The significant effort and commitment of personnel resources by NPCC Member's is much appreciated and sets NPCC apart within the ERO Enterprise as a leader in



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

reliability assurance Mr. Schwerdt suggested that the RCC consider showing their appreciation for all the work and the individuals responsible for these studies, many of which are on today's RCC consent agenda; this is what provides the foundation for which NPCC is considered a leader in reliability assurance.

**NPCC Enhanced Cyber Security**

NPCC has always maintained the protection of registered entities' critical energy infrastructure information as a high priority. In order to achieve this, NPCC utilizes a layered approach to securing data and analyses resident on its computer servers, which include both physical and cyber safeguards. The introduction earlier this year of two-factor authentication requirements in order to be able to access the Member-side of the NPCC website is just one example of the ongoing security activities. Also, during 2017, NPCC retained a third-party vendor to conduct penetration testing on all of NPCC's externally facing portals, from which it received a very positive report. More recently, NPCC has begun participating in the Cyber Hygiene and Internet Risk Program (CHIRP), which is a public-private partnership with the U.S. Department of Homeland Security (DHS) that provides continuous network and vulnerability scanning of publicly accessible systems to identify vulnerabilities. NPCC has taken proactive steps to address any initially identified exploitable risks and the most recent scans have contained no actionable remediation recommendations. Lastly, in conjunction with NERC and the other Regional Entities' enhanced security efforts, NPCC in early 2018 will become a participant in the Cybersecurity Risk Information Sharing Program (CRISP) and will also avail itself of the U.S. DHS's illusive deception technology. He indicated more information on the last two activities will be provided to the RCC next year.

**Chair Report**

**Agenda**

Mr. Evans-Mongeon recognized the substantial amount of work that the NPCC Task Force and Working Group members, along with NPCC staff undertake each quarter in preparing and presenting materials for RCC review and approval. He noted that specific Informational Items in the Agenda package will not be covered in the meeting today, unless specially requested. No requests were made to discuss the Informational Items.

**The RCC approved the Agenda provided in the Agenda package.**

**ERO Enterprise Long-Term Strategy, Operating Plan, and 2018 Metrics**

Mr. Evans-Mongeon thanked Mr. Schwerdt for reviewing and summarizing the ERO Enterprise Long-Term Strategy, Operating Plan, and 2018 Metrics in his report.

**2018 -2019 RCC Work Plan**

Mr. Evans-Mongeon reminded the RCC that the review and approval of the proposed 2018 -  
December 5, 2017



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

2019 RCC Work Plan will take place following the RCC's approval of the proposed NPCC Task Force 2018 – 2019 Work Plans later in the meeting.

**November 17, 2017 A-10 Methodology WebEx**

Mr. Evans-Mongeon thanked the members of the CP-11 Working Group for preparing the materials for the November 17, 2017 A-10 Methodology WebEx, which will help inform the discussion at today's meeting. The WebEx was organized and conducted by Ms. Dawes and Mr. Schwarting, Chair and Vice Chair of the CP-11 Working Group. The presentation materials have been included in the Agenda package.

**RCC Scope**

Mr. Evans-Mongeon noted that consideration of the updated RCC Scope is part of the consent Agenda.

**RCC Roster**

Mr. Fedora referred to the 2018 RCC Roster provided in the Agenda package, and distributed a revision at the meeting that will be reflected in the minutes. The 2018 RCC Roster is scheduled to be approved at the 2017 NPCC Annual Meeting of the Members on December 6, 2017. Mr. Evans-Mongeon asked the RCC Members to coordinate any future changes to the RCC Roster with Mr. Fedora.

**2018 RCC Meeting Dates**

Mr. Evans-Mongeon noted the 2018 RCC meeting dates and locations included in the Agenda package:

Wednesday, February 28, 2018	New York Times Square Residence Inn by the Marriott, NYC
Wednesday, May 30, 2018	New York Times Square Residence Inn by the Marriott, NYC
Wednesday, September 5, 2018	Saratoga Courtyard Marriott, Saratoga Springs, NY
Tuesday, December 4, 2018	The Westin Prince Hotel, Toronto, ON (in conjunction with the NPCC Board/Annual/General Meetings)

**Consent Agenda**

Mr. Evans-Mongeon acknowledged, as Mr. Schwerdt noted in this report, that a number of the activities that are an integral part of the NPCC structure are on the consent Agenda. He thanked all the NPCC groups that have contributed in the development of the 2017 Interim Reviews of Resource Adequacy, the 2017 Long Range Adequacy Overview, the work on the



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

NPCC Document B-01 Guide for Application of Reclosing, the Scope & Schedules for the 2018 NPCC Tie Benefits Study and 2018 NPCC Long Range Adequacy Overview, the compliance group's effort on the CCEP Implementation Plan, as well as the work associated with the Directory No. 4 criteria clarification.

The Reliability Coordinating Committee then unanimously approved the following Consent Agenda items:

**September 6, 2017 Meeting Minutes**

The Draft-For-Approval Minutes of the September 6, 2017 Reliability Coordinating Committee were approved, as provided in the Agenda package.

**RCC Membership Changes**

The following changes to RCC Membership were approved:

**Sector 1 - Transmission Owners**

- ✓ Mr. Will Nichols succeeds Mr. John Allen as an alternate, both of Rochester Gas & Electric Corporation.
- ✓ Mr. David Stanford succeeds Mr. Paul Casey as a member, both of Nova Scotia Power, Inc.
- ✓ Mr. James Delorme succeeds Mr. David Stanford as an alternate, both of Nova Scotia Power, Inc.

**Sector 3 - Transmission Dependent Utilities, Distribution Companies and Load-Serving Entities**

- ✓ Mr. Randy MacDonald succeeds Mr. Tony O'Hara as a member, both of New Brunswick Power Corporation.
- ✓ Ms. Stéphanie Giaume succeeds Mr. Richard Lagrange as a member, both of Hydro-Québec Distribution.

**Sector 4 - Generator Owners**

- ✓ Mr. David Kwan of Ontario Power Generation, Inc. to serve as an alternate.
- ✓ Mr. Mark Thomas of Entergy Nuclear Northeast, Inc. to serve as an alternate.

**Sector 5 - Marketers, Brokers and Aggregators**

- ✓ Ms. Jenny Liu succeeds Ms. Jill Anderson as a member, both of New York Power Authority.
- ✓ Mr. Iram Iqbal replaces Steve Cantore as Alternate, Long Island Power Authority.

**Task Force Roster Changes**

The following changes to Task Force and Working Group memberships were approved:

**Task Force on System Studies**

- ✓ Mr. Alex Rost of ISO-New England succeeds Mr. David Conroy of the Central Maine Power Company as Vice Chairman.





**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

- ✓ Mr. David Conroy of the Central Maine Power Company to serve as a member.
- ✓ Mr. Christopher Malone will serve as a member replacing Mr. Hasan Matin, both of The United Illuminating Company.

**Task Force on Coordination of Operation**

- ✓ Mr. Dave Robitaille succeeds Mr. Nicholas Ingman as a member, both of the Ontario Independent Electricity System Operator.
- ✓ Mr. John Procyk succeeds Mr. Robert Reinmuller as a member, both of Hydro One, Inc.

**Task Force on System Protection**

- ✓ Mr. Paul DiFilippo of TRC Solutions to serve as a member.
- ✓ Mr. Robert Musial of New York Power Authority to serve as an alternate.
- ✓ Mr. Ryan Andrew Legault of the Rochester Gas and Electric Corp, to serve as a member.
- ✓ Mr. James McCabe of the Central Maine Power Company to serve as an alternate.
- ✓ Mr. William Sawyer of the Central Maine Power Company to serve as a second alternate.

**Task Force on Infrastructure Security and Technology**

- ✓ Mr. David Cadregari of New York State Electric & Gas Corp. succeeds Mr. John Helme of Utility Services, Inc. as Chair.
- ✓ Mr. Michael Bilheimer of The United Illuminating Company succeeds Mr. David Cadregari of the New York State Electric & Gas Corp. as Vice-Chair.

**CO-12 Working Group on Seasonal Assessment**

- ✓ Mr. Udayan Nair of the Ontario Independent Electricity System Operator to serve as a member.
- ✓ Mr. Frank Peng of the Ontario Independent Electricity System Operator to serve as an alternate.

**SS-37 Working Group on Case Base Development**

- ✓ Ms. Joy Brake to serve as an alternate replacing Mr. Jay Nair, both of Nova Scotia Power.

**SS-38 Working Group on Inter-Area Dynamic Analysis**

- ✓ Mr. Mohamed Ramadan Younis succeeds Mr. Daniel Sohm, both of the Ontario Independent Electricity System Operator.

**SS-38 LMWG Load Modeling Working Group**

- ✓ Mr. Peter Huynh of Nova Scotia Power, Inc. succeeds Mr. Jay Nir, who is no longer with Nova Scotia Power.

**SP-9 Working Group on Telecommunication Circuits Used for Teleprotection and Remedial Action Schemes**

- ✓ Mr. Stéfane Dion of Hydro-Quebec succeeds Mr. Jean-Luc Robichaud and Ms. Martine Lalancette as a member.
- ✓ Mr. Trushil Patel of the New York Power Authority succeeds Mr. Frank Parker as a member.
- ✓ Mr. Frank Parker of the New York Power Authority to serve as an alternate.



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

**2017 NPCC Interim Reviews of Resource Adequacy**

The *2017 Maritimes Area, the 2017 New York Area, and the Ontario Area 2017 Interim Reviews of Resource Adequacy*, provided in the Agenda package were approved.

**NPCC 2017 Long Range Adequacy Overview**

The *NPCC 2017 Long Range Adequacy Overview* was approved, as provided in the Agenda package.

**Revised NPCC Document B-01**

The revised NPCC Document B-10: *Guide for the Application of Autoreclosing to the Bulk Power System* was approved, as provided in the Agenda package.

**Scope and Schedule for the 2018 NPCC Tie Benefits Study**

The *Scope and Schedule for the 2018 NPCC Tie Benefits Study* was approved, as provided in the Agenda package.

**Scope and Schedule for the 2018 NPCC Long Range Adequacy Overview**

The *Scope and Schedule for the 2018 NPCC Long Range Adequacy Overview* was approved, as provided in the Agenda package.

**2018 NPCC Criteria Compliance Enforcement Program Implementation Plan**

The *2018 NPCC Criteria Compliance Enforcement Program Implementation Plan* was approved, as provided in the Agenda package.

**NPCC Directory No. 4 Criteria Clarification**

The RCC approved the NPCC Directory No. 4 - *System Protection Criteria* clarification provided in the Agenda package.

**RCC Scope**

The RCC recommended that the RCC Scope provided in the Agenda package, be submitted for NPCC Board approval.

**Reliability Coordinating Committee Actions**

**A-10 Methodology Recommendation**

Mr. Adam explained that the CP-11 Working Group on Review of NPCC Basic Criteria has prepared the Phase 1 Report on the Review (Review) of the *NPCC Document A-10 Classification of Bulk Power System Elements* included in the Agenda package as assigned by the Task Force on Coordination of Planning (TFCP).

The report summarizes CP-11 Working Group's efforts during 2017 and describes specific recommendations for improving the existing methodology, while also proposing two new methodologies for further testing in 2018. The TFCP has worked closely with CP-11



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

Working group providing guidance and specific recommendations for improvement on a number of topics contained in the report.

The TFCP approved recommending the following three proposed methodologies in the report to proceed into Phase 2 testing:

- 1) Revised Existing A-10 Methodology,
- 2) Performance-Based Methodology; and,
- 3) Connectivity-Based Methodology.

The TFCP also approved the Phase 2 Action Plan included in the Agenda package, which will govern the CP-11 Working Group's activities during Phase 2 of the Review.

Accordingly, he said that the TFCP is seeking RCC's approval to move the identified methodologies into Phase 2 testing, and proceed with the Phase 2 Action Plan.

Ms. Dawes then provided the presentation of the completion of the Phase 1A-10 Methodology Review, included in the Agenda package that explained the scope, the three proposed methodologies, and the next steps.

Mr. Paszek stated that Consolidated Edison notes that the proposed methodologies Nos. 1 & 2 were similar in nature to the existing performance-based A-10 methodology, but methodology No. 3 should not be considered due to fact that it was not a performance-based methodology, but was an accounting-based methodology.

Ms. Dawes acknowledged the observation regarding methodology No. 3 being an accounting-based methodology was correct, which supports the reason to test all three proposed methodologies to compare the resultant identification of A-10 facilities. Mr. Evans-Mongeon asked how the ultimate methodology would be chosen; Ms. Dawes responded that no current selection criteria exist. Mr. Adam opined it should be obvious from the testing.

The RCC then discussed the timeline associated with when the results of the testing would come back to the RCC; Ms. Dawes estimated completion around the end of 2018 – beginning of 2019. Mr. Adam suggested this could be a standing Agenda Item for the 2018 RCC meetings.

The RCC also discussed the amount of effort it would take to thoroughly test all of the proposed methodologies; Ms. Dawes estimated approximately six months of methodology No.1, three-four months for methodology No. 2, and two months for methodology No. 3.



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

The RCC also discussed the ambiguity associated with the term “Local Area” used in the report; Ms. Dawes indicated the testing should consider the impacts on neighboring Areas, but this was still a “work in progress.”

Mr. Kowalski recognized that while methodology No. 3 is different and that others may have concerns; each methodology will have its own “pros and cons”. He indicated that time will be needed to do a good job evaluating the three methodologies recognizing that methodology No. 3 is a proxy for performance-based tests, which can be inconsistent. All methodologies should be tested in order to come to an informed decision.

Mr. Henderson indicated that criteria should be developed for evaluating the three methodologies. He suggested that work hours to make BPS determinations, ability to replicate results, and NPCC auditability be considered.

Mr. Smith emphasized not sacrificing quality to meet timelines.

Mr. Schwerdt emphasized the need for a selection criteria to determine the outcome before the testing starts. He recommended that the testing start with the existing Bulk Electric System (BES) elements, then identify a subset of the BES elements from application of the proposed methodologies through the testing for comparison. He said it’s important to know the yardstick first before you begin to measure. He also suggested the December 2018 RCC meeting as the milestone for the completion of the testing.

Mr. Wegh recommended that the selection criteria is something that the RCC would want to discuss prior to the start of the testing. Mr. Schwerdt responded the desire to give the CP-11 Working Group sufficient time to develop a selection criteria, but didn’t want it to delay the actual testing; he suggested the associated work could be done in parallel.

Mr. Evans-Mongeon suggested that the leadership of the RCC, and CP-11 Working Group get together with the Joint Task Force Chairs to discuss and bring back their recommendation at the next (February 28, 2018) RCC meeting. Mr. Adam responded the next TFCP meeting is during the first week in February; resolution by mid-year may be more reasonable time frame.

Mr. Evans-Mongeon said that this approach would allow the CP-11 Working Group to do its testing but a preferred methodology would not be considered until a selection criteria is agreed upon. Mr. Schwerdt agreed that was a strategy.



**NORTHEAST POWER COORDINATING COUNCIL  
Reliability Coordinating Committee Minutes  
December 5, 2017**

In response to question raised by Mr. Dunbar, the RCC also discussed the need for an NPCC Open Process review and its associated timing. After discussion, the RCC agreed that this would occur following completion of the Phase 2 testing, in the first quarter of 2019.

A motion was duly made and seconded to approve the TFCP's recommendation to move the identified methodologies into Phase 2 testing, and proceed with the Phase 2 Action Plan included in the Agenda package.

A motion was then duly made and seconded to amend the main motion to remove methodology No. 3 from consideration. Following discussion, the RCC then considered and failed to approve, by a show of hands vote this motion.

A motion was then duly made and seconded to amend the main motion to specify completion of the study by the end of 2018. After discussion, a friendly amendment was made and accepted to approve a timeline for completion of the study at the February 28, 2018 RCC meeting. The friendly amendment to this motion was approved by a show of hands vote.

**The main motion, as amended was then approved by the RCC (Consolidated Edison – Sectors 1, 3, 4, 5 – opposed).**

Mr. Smith commended the TFCP and the CP-11 Working Group for all their hard work in bringing this to the RCC; Mr. Evans-Mongeon also added his appreciation for their efforts.

**2017 -2018 NPCC Winter Reliability Assessment**

Mr. Ardolino provided an overview of the *NPCC Winter Reliability Assessment for 2017-18* provided in the Agenda package. The Task Force on Coordination of Operation reviewed this report at its November 14, 2017 meeting and recommends RCC approval.

**The RCC unanimously approved the *NPCC Winter Reliability Assessment for 2017-18* provided in the Agenda package.**

**2017 New England Comprehensive Review of Resource Adequacy**

Mr. Zeng presented the *2017 New England Comprehensive Review of Resource Adequacy* provided in the Agenda package. The Review covers the period of 2018 through 2022. The Review demonstrates that the New England Area complies with the NPCC resource adequacy criterion that requires a loss of load expectation value of not more than 0.1 days/year for all years of the Review.

The Task Force on Coordination of Planning reviewed the findings at its November 7-8, 2017 meeting, and agreed with the Review's conclusion that the New England Area complies with the NPCC resource adequacy criterion and recommends RCC approval.



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

**The RCC then unanimously approved the *2017 New England Comprehensive Review of Resource Adequacy* provided in the Agenda package.**

**2017 Quebec Comprehensive Review of Resource Adequacy**

Mr. Sennoun presented the *2017 Quebec Comprehensive Review of Resource Adequacy* provided in the Agenda package. The Review covers the period from winter 2017-2018 through winter 2021-2022. The Review demonstrates that the Quebec Area complies with the NPCC resource adequacy criterion that requires a loss of load expectation value of not more than 0.1 days/year for all years of the Review.

The Task Force on Coordination of Planning reviewed the findings at its November 7-8, 2017 meeting, and agreed with the Review's conclusion that the Quebec Area complies with the NPCC resource adequacy criterion and recommends RCC approval.

**The RCC then unanimously approved the *2017 Quebec Comprehensive Review of Resource Adequacy* provided in the Agenda package.**

**Hydro-Quebec TransÉnergie CGLC new Type I Special Protection System (SPS)**

Mr. Landry described Hydro-Quebec TransÉnergie CGLC new Type I Special Protection System provided in the Agenda package. The new CGLC SPS will optimize the use of existing compensators to prevent a voltage collapse situation of the Québec main system following extreme contingencies. The CGLC could also be relied on to maintain the system voltage stability following operating criteria contingencies during some specific system conditions in order to prevent a reduction of transfer limits.

The Task Force on Coordination of Planning (TFCP) reviewed the findings (included in the Agenda package) of the Task Force on System Protection, the Task Force on Coordination of Operation, and the Task Force on System Studies at its November 7-8 2017 meeting. The TFCP has reviewed this new SPS for conformance with NPCC Regional Reliability Reference Directory No.1 "Design and Operation of the Bulk Power System" and recommends RCC approval of this Type I SPS.

Mr. Paszek asked what was assumed in the analysis for the local area; Mr. Landry replied it was the Hydro Quebec 735 kV system. He then asked about the impact on the New York system if the SPS fails to operate. Mr. Landry replied it could trigger load shedding in Quebec and cut transfers outside of Quebec. In answer to a question, he indicated that the SPS would be armed 100% of the time.



**NORTHEAST POWER COORDINATING COUNCIL  
Reliability Coordinating Committee Minutes  
December 5, 2017**

**The RCC then approved Hydro-Quebec TransÉnergie CGLC new Type I Special Protection System provided in the Agenda package – (Consolidated Edison – Sectors 1, 3, 4, 5 – opposed).**

**2018 -2019 Task Force Work Plans**

The Task Force chairs highlighted their respective 2018 - 2019 Task Force Work Plans provided in the Agenda Package. Mr. Evans-Mongeon noted that the Task Force on System Planning would be modifying their 2018 – 2019 Work plan as a result of the previous A-10 discussion earlier in the meeting. Mr. Schwerdt summarized that this would reflect the A-10 methodology selection criteria determination in parallel with the Phase 2 A-10 methodology testing.

**With that consideration, the RCC then unanimously approved the 2018 - 2019 Task Force Work Plans, as provided in the Agenda package.**

**2018-2019 RCC Work Plan**

Following the review and approval of the NPCC Task Forces' respective 2018 - 2019 Work Plans, the RCC reviewed its 2018 – 2019 Work Plan.

**The RCC then unanimously recommended the 2018 - 2019 RCC Work Plan as provided in the Agenda package be submitted for NPCC Board approval.**

**Items for Discussion**

**NPCC UFLS program assessment**

Mr. Fedora reported, at the September NERC Planning Committing (PC) meeting the Regional representatives were requested to present their current Underfrequency Load Shedding (UFLS) practices and approaches for considering Distributed Energy Resources (DER) within their Regions to the NERC PC meeting, in order to share their perspectives on addressing the impact that these resources may have on their respective UFLS effectiveness. He also noted that one of NPCC's 2017 Corporate Goals was to study the impact of DER on the NPCC UFLS Program, to inform the NPCC SS-38 WG's related effort in 2018.

Mr. Quoc then presented an overview of NPCC's study of UFLS program sensitivity to DER that will be presented at the December NERC PC meeting that is included in the Agenda package. He explained the background and study objective of the NPCC UFLS Program (PRC-006-NPCC-1). The study identified measurable impact to the UFLS program due to significant DER tripping during islanding condition.



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

The impact of DER depends on whether the DER can ride through the voltage and frequency excursions associated with islanding events that result in the operation of the UFLS program. The compensatory load shedding may need to be implemented to offset tripping by DER.

This study recommends the evaluation of the impact due to DER in future UFLS assessments including the ability of DER to remain connected during islanding conditions.

The RCC discussed the study and its findings. Mr. Henderson indicated he had comments regarding the assumptions used for the location of the DERs on distribution system that he would follow-up with Mr. Le after the RCC meeting. Mr. Le indicated that the details of the study will be shared with the SS-38 WG for consideration of their UFLS evaluation.

**NERC Agenda Items**

**Joint Session: Planning, Operating & Critical Infrastructure Protection Committee Meeting**

Mr. Oks reviewed the following items planned for presentation at Joint Session included in the Agenda package:

- ✓ Grid Assurance Overview;
- ✓ Inverter-based Resource Integration and Performance Efforts;
- ✓ Methods For Establishing IROLs Task Force Update;
- ✓ Report on the FERC-NERC-Regional Entity Joint Study of Planning Restoration Absent SCADA or EMS (PRASE);
- ✓ North American Transmission Forum Update;
- ✓ North American Generator Forum Update; and,
- ✓ Standards Efficiency Review.

**Operating Committee (OC) Meeting**

Mr. Rufrano then highlighted the following approval items from the December OC Agenda included in the Agenda package:

- ✓ Reliability Guidelines and Reference Documents
  - Reliability Guideline: Area Control Error Diversity Interchange (ADI) Process;
  - Reliability Guideline: Operating Reserve Management;
  - Reliability Guideline: Inadvertent Interchange;
  - Pseudo Tie Reference Document;
  - Dynamic Tag Exclusion Management Guidelines;
  - NERC ORS Gas and Electrical Operational Coordination Considerations Guideline Overview;
  - Energy Management Systems Reference Document;
  - Reliability Guideline: Methods for Establishing IROLs – *Authorize Posting*; and,
  - MEITF Proposed Glossary Definitions & IROL Framework – *Endorse*.





**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

Planning Committee Meeting

Mr. Fedora highlighted the following items for approval on the Draft December Planning Committee Agenda included in the Agenda package:

- ✓ Reliability Guidelines:
  - Integrating Inverter-based Resources into Low Short Circuit Strength Power Systems. Mr. Lombardi explained that the Guideline contains background and information for consideration when connecting inverter-based resources to a weak grid; and,
  - NERC Rules of Procedure Section 1600 Data Request for Geomagnetic Disturbance Data – *Authorize Posting*.
- ✓ Essential Reliability Services Working Group (ERSWG) Technical and Policy Briefs:
  - Brief for Regulators and Policymakers on ERS Measure 6 - Ramping/Balancing using a Historical Perspective;
  - Brief on ERS Measures 1, 2, and 4 - Frequency Response using a Historical Perspective; and,
  - Brief for Regulators and Policymakers on ERS Measures 1, 2, and 4 - Frequency Response using a Historical Perspective.
- ✓ Implementation Guidance:
  - PRC-023-4 – Transmission Relay Loadability – *Endorse*; and,
  - PRC-024-2 – Generation Frequency and Voltage Protective Relay Settings – *Endorse*.
- ✓ Discussion Topics:
  - Regional Representatives Overview of Distributed Energy Resource (DER) Impacts to UFLS/UVLS programs; and,
  - Scope Overview: Special Reliability Assessment on Accelerated Generation Retirements Impacts.

Critical Infrastructure Protection Committee (CIPC)

Mr. Evans-Mongeon reported on the status of areas of common NERC CIPC/PC proposed activities related to the NERC Reliability Issues Steering Committee recommendation regarding the identification of critical cyber security identified assets and guidance for applying CIP standards to synchrophasors.

Mr. Hogue then noted the following voting items from the December CIPC Agenda included in the Agenda package:

- ✓ 2018 Work Plan – *Approval*; and,
- ✓ Physical Security Guidelines WG charter – *Approval*.

In addition, he highlighted the following informational items:

- ✓ FERC Led Audit Observations (Report);
- ✓ CIP Standards update;
- ✓ CIP Modifications team update; and,
- ✓ CIP Supply Chain team update.



**NORTHEAST POWER COORDINATING COUNCIL**  
**Reliability Coordinating Committee Minutes**  
**December 5, 2017**

Mr. Evans-Mongeon asked the RCC members to provide their input and feedback regarding the changes made this year in the conduct of the RCC meetings, to help inform the structure and format of next year's RCC meetings. He thanked all the RCC, Task Force and Committee members, along with NPCC staff for all their efforts in supporting the RCC activities.

With no other matters to consider, the RCC meeting was adjourned.

**Next RCC Meeting Date**

Wednesday February 28, 2018

**Location**

The New York Times Square Residence  
Inn - New York, NY

**Distribution of Approved Minutes**

NPCC Full & General Member Representatives and Alternates

Members, NPCC Board of Directors

Members, NPCC Reliability Coordinating Committee

Members, NPCC Public Information Committee

Members, NPCC Compliance Committee

Members, NPCC Regional Standards Committee

Members, NPCC Task Force on Coordination of Operation

Members, NPCC Task Force on Coordination of Planning

Members, NPCC Task Force on Infrastructure Security and Technology

Members, NPCC Task Force on System Protection

Members, NPCC Task Force on System Studies

NPCC Officers

NPCC Staff

Ruta Skucas, Esq.

and

Federal Energy Regulatory Commission – Mike Bardee, David O'Connor, Juan Villar

La Régie de L'Énergie – Daniel Soulier

Ontario Energy Board – Veronica Mendes

United States Department of Energy – David Meyer

New Brunswick Department of Energy and Mines – David Sallows

Nova Scotia Utility & Review Board – S. Bruce Outhouse, Q.C.