

Rapport annuel 2019 sur l'application du Code de conduite du Coordonnateur de la fiabilité

Déposé à la Régie de l'énergie

26Juin 2020

**Rapport annuel de 2019 sur l'application du
*Code de conduite du Coordonnateur de la fiabilité du Québec***

Le 26 juin 2020

Le *Code de conduite du Coordonnateur de la fiabilité du Québec* (le « *Code de conduite* ») adopté par la Régie de l'énergie (la « Régie ») prévoit à son article 5.4 qu'un rapport annuel sur l'application du *Code de conduite* effectué auprès du président d'Hydro- Québec TransÉnergie doit être déposé auprès de la Régie et publié sur le site Internet du Coordonnateur de la fiabilité. Conformément à la décision D-2017-033 rendue par la Régie le 22 mars 2017, ce rapport annuel est signé par le directeur principal — Contrôle des mouvements d'énergie et exploitation du réseau. L'attestation de conformité accompagnant ce rapport fait suite à une vérification interne de l'application du *code de conduite* au sein des directions visées d'Hydro-Québec TransÉnergie.

Application du *Code de conduite du coordonnateur de la fiabilité du Québec* en 2019

Le directeur principal — Contrôle des mouvements d'énergie et exploitation du réseau, en sa qualité de responsable de l'application du *Code de conduite* a également la responsabilité du suivi de la réalisation des pistes d'amélioration relevées dans le cadre de la vérification du contrôleur.

La gestion a soutenu tout au cours de l'année les employés de la direction principale — Contrôle des mouvements d'énergie et exploitation du réseau ainsi que les autres unités visées d'Hydro-Québec relativement à l'interprétation et à l'application du *Code de conduite*.

Au cours de l'année 2019, la direction principale n'a apporté aucune modification au site du Coordonnateur de la fiabilité concernant le *Code de conduite*.

L'annexe A illustre les organigrammes de la division Hydro-Québec Trans Énergie, et de la vice-présidence - Technologies de l'information et des communications d'Hydro -Québec et identifie les unités dont le personnel est assujéti au *Code de conduite*. L'annexe B présente la liste des unités réalisant des tâches reliées au rôle de Coordonnateur de la fiabilité. L'annexe C est un résumé des représentations d'Hydro-Québec TransÉnergie aux réunions du NPCC pour une partie de l'année 2019.

Pour l'année 2019, les responsabilités, incombant à la Direction principale - Contrôle corporatif et expertise concernant l'évaluation de l'application du Code de conduite du Coordonnateur de la fiabilité (Code), afin de permettre au Contrôleur du Transporteur d'émettre une attestation de conformité qui est déposée à la Régie de l'énergie conformément à l'article 5.4 du Code, ont été transférées à la Direction – Conformité et développement durable.

L'attestation de conformité ci-jointe certifie que les règles du *Code de conduite* ont été appliquées telle que décrit à l'article 5.4.

Conclusion

À titre de directeur principal Contrôle des mouvements d'énergie et exploitation du réseau, je suis responsable de produire le présent rapport et d'en assurer le suivi. En 2019 le *Code de conduite* a été appliqué de façon conforme, aucune dérogation ni aucune plainte ou cas problématique n'ont été portés à l'attention du directeur principal.

A handwritten signature in blue ink, appearing to read 'Patrick Truong'.

2020.06.26
15:21:06 -04'00'

Patrick Truong

Directeur principal

Contrôle des mouvements d'énergie et exploitation du réseau

Application du *Code de conduite du Coordonnateur de la fiabilité* pour l'année 2019
Attestation de conformité à l'intention du
Président d'Hydro-Québec TransÉnergie

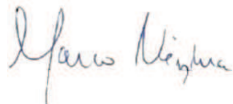
Le *Code de conduite du Coordonnateur de la fiabilité* (Code) a pour but de régir les décisions et les actions du personnel afin qu'en toute circonstance, la fiabilité du réseau de transport principal, qui est sous la responsabilité du Coordonnateur de la fiabilité, demeure la priorité. Il a aussi pour but de prévenir toute forme de traitement préférentiel par le personnel au profit des autres directions du Transporteur, des entités affiliées du Transporteur et des autres utilisateurs du réseau.

Pour 2019, l'attestation de conformité au Code est signée par le Directeur – Planification financière et partenariat d'affaires Hydro-Québec TransÉnergie et par le directeur – Conformité et développement durable. Ce dernier s'est récemment vu confier de nouvelles responsabilités relativement à l'attestation de conformité au Code.

La responsabilité de l'application des règles énoncées dans le Code incombe au directeur principal – Contrôle des mouvements d'énergie et exploitation du réseau qui vous soumettra un rapport annuel pour l'année 2019. Selon l'article 5.4 du Code, notre responsabilité consiste à attester de la conformité de l'application des règles.

Notre travail a été effectué de façon à fournir l'assurance raisonnable que les règles du Code sont appliquées par l'ensemble du personnel visé par son application. Les procédures mises en œuvre ont permis de recueillir des éléments probants appropriés afin de signer la présente attestation et de fournir une assurance raisonnable du respect de l'ensemble des règles du Code.

Un engagement écrit sur le respect du Code a été reçu de la part des responsables de toutes les structures visées par le Code. Compte tenu de ce qui précède, nous attestons que le Code de conduite du Coordonnateur de la fiabilité a été appliqué de façon satisfaisante tout au long de l'année 2019.



Marco Vézina

Directeur – Planification financière et partenariat d'affaires HQT
Groupe Direction financière



2020.06.26
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Guy Lefebvre

Directeur – Conformité et développement durable
Groupe Affaires corporatives, juridiques et gouvernance

Date	26 juin 2020	N°
		(Code de classement)
Destinataire	Marc Boucher Président HQ TransÉnergie	Expéditeur Patrick Truong Directeur principal Contrôle des mouvements d'énergie et exploitation du réseau

Objet **Rapport annuel 2019 sur l'application du Code de conduite du Coordonnateur de la fiabilité du Québec (le « Code de conduite »)**

Tel que prévu à l'article 5.4 du Code de conduite, vous trouverez ci-joint le rapport annuel 2019 sur l'application du Code de conduite accompagné de l'attestation de conformité signée par le contrôleur de HQT.

Ce rapport sera déposé à la Régie de l'énergie et affiché sur le site internet du Coordonnateur de la fiabilité au courant des prochains jours.

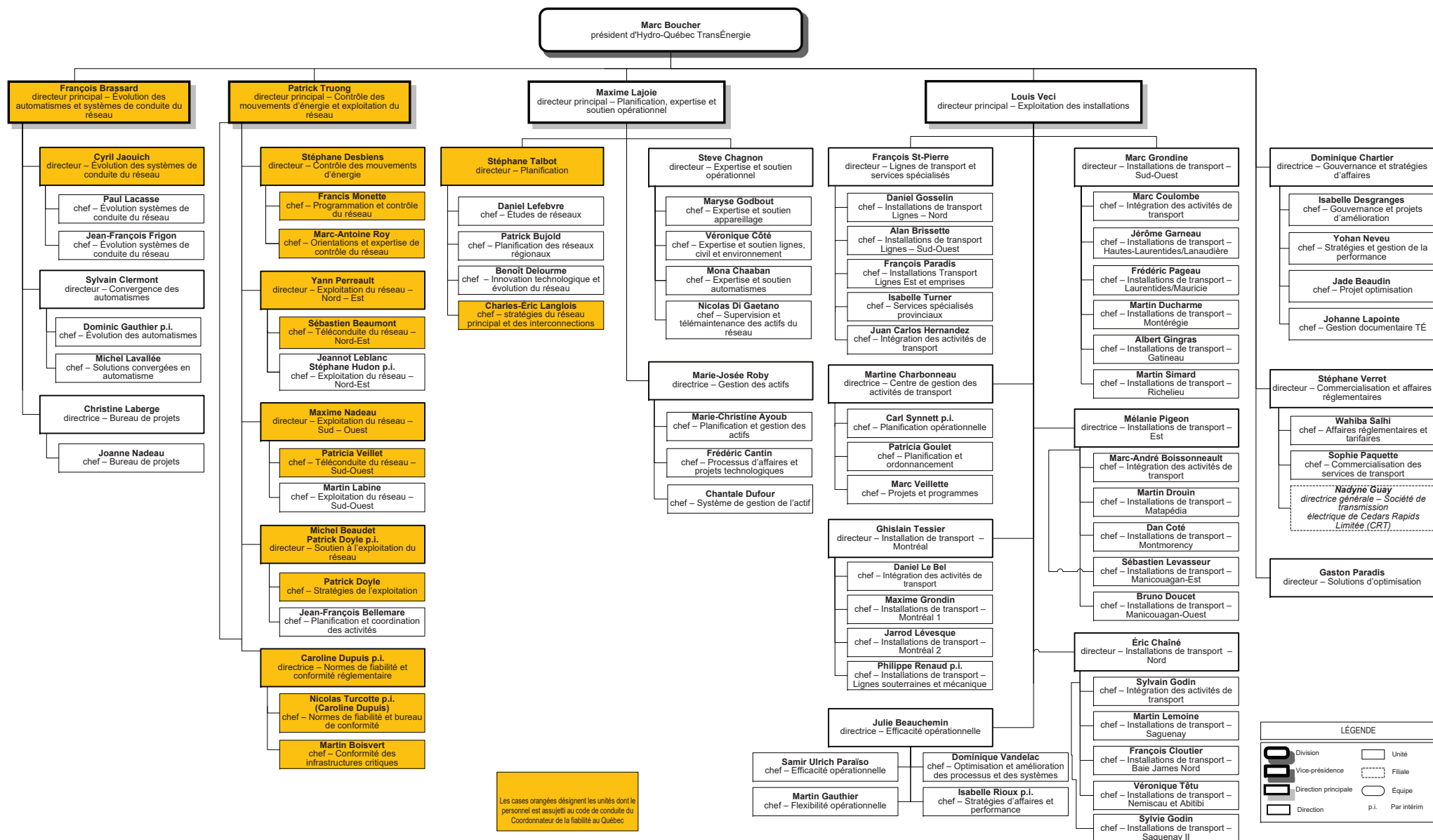
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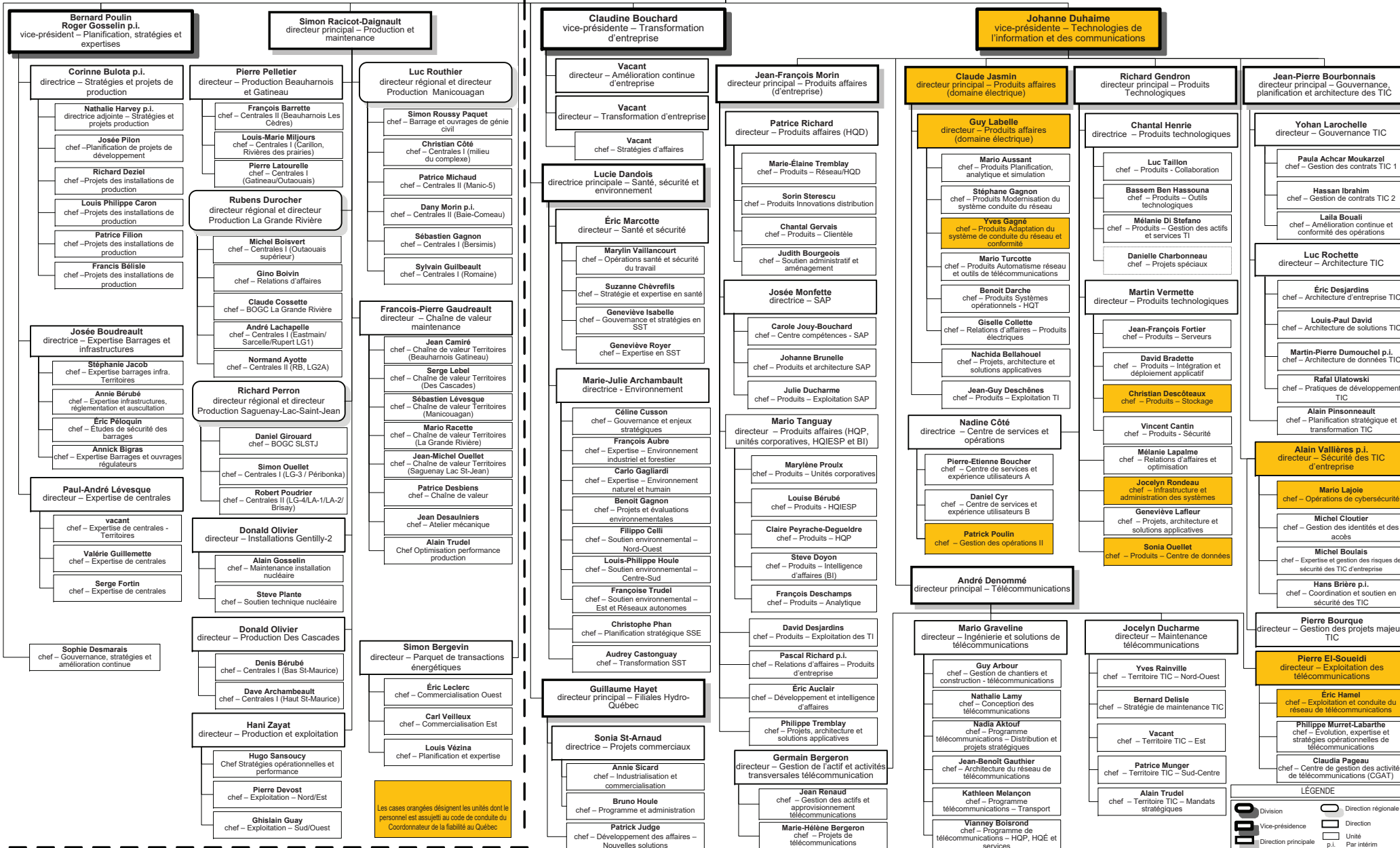
Patrick Truong
Directeur principal - Contrôle des mouvements
d'énergie et exploitation du réseau

c. c. Caroline Dupuis, directrice p.i – Normes de fiabilité et conformité réglementaire

Annexe A

Organigrammes identifiant les unités dont le personnel est assujettis au Code





Annexe B

Liste des unités réalisant des tâches reliées au rôle du Coordonnateur

Liste des unités réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité

Le tableau 1 suivant fournit la liste des unités et leur direction d'appartenance réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité, que ce soit sur une base continue, ponctuelle, exceptionnelle ou en cas d'urgence, suivant les organigrammes d'Hydro-Québec de l'annexe A du présent rapport annuel.

Tableau 1

Unités réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité

TransÉnergie						
Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence
<ul style="list-style-type: none"> Évolution des systèmes de conduite du réseau 	Évolution des systèmes de conduite du réseau	Évolution des automatismes et systèmes de conduite du réseau		X		
<ul style="list-style-type: none"> Normes de fiabilité et encadrements de contrôle du réseau Bureau de conformité 	Normes de fiabilité et bureau de conformité	Normes de fiabilité et conformité réglementaire	X			
<ul style="list-style-type: none"> Mise en conformité Maintien de la conformité 	Conformité des infrastructures critiques	Normes de fiabilité et conformité réglementaire	X			
<ul style="list-style-type: none"> Centre de contrôle du réseau Programmation et statistiques de contrôle du réseau 	Programmation et contrôle du réseau	Contrôle des mouvements d'énergie	X			
<ul style="list-style-type: none"> Prévisions de contrôle du réseau Expertise de contrôle du réseau 	Orientation et expertise de contrôle du réseau	Contrôle des mouvements d'énergie	X			

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence
<ul style="list-style-type: none"> • Stratégie du réseau principal et des interconnexions 	Planification et stratégies du réseau principal	Planification	X			
<ul style="list-style-type: none"> • CT – Rouyn-Noranda ¹ • CT – Chicoutimi ¹ • CT – Québec ¹ • CT – Baie-Comeau ¹ 	Téléconduite du réseau – Nord-Est	Exploitation du réseau			X	X
<ul style="list-style-type: none"> • CT – St-Jérôme ¹ • CT – Montréal ¹ • CT – Trois-Rivières ¹ 	Téléconduite du réseau – Sud-Ouest	Exploitation du réseau			X	X
<ul style="list-style-type: none"> • Planification des retraits Nord-Est • Planification des retraits Sud-Ouest • Développement et diffusion 	Planification et coordination des activités	Exploitation du réseau	X			
<ul style="list-style-type: none"> • Stratégies de l'exploitation 	Stratégies de l'exploitation	Exploitation du réseau	X			

Note 1 : Seuls les gestionnaires et les répartiteurs des ces unités sont assujettis au Code de conduite du Coordonnateur.

Vice-présidence- Technologies de l'Information et des communications						
Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence
• Opérations de Cyber-Sécurité	Sécurité des TIC d'entreprise	VP-Technologie de l'Information et des communications	X			
• Gestion des opérations II	Centre de service et opérations	DP-Produits technologiques	X			
• Centre de données	Produits technologiques II	DP-Produits technologiques	X			
• Infrastructure et administration des systèmes	Produits technologiques	VP-Technologies de l'information et des communications	X			
• Adaptation du système de conduite du réseau et conformité	Produits affaires (Domaine électrique)	DP-Produits affaires (Domaine électrique)	X			
• Produits-Stockage	Produits technologiques	DP-Produits technologiques	X			
• Exploitation et conduite du réseau de télécommunication ¹	Exploitation des télécommunications	DP-Télécommunication	X			

¹ Seuls six gestionnaires de l'unité sont assujettis au Code de conduite du Coordonnateur.

Annexe C

Représentation de TransÉnergie dans le cadre des rencontres 2019 du RCC du NPCC

Représentations de Hydro-Québec au RCC du NPCC

Dans le cadre de la phase 2 du dossier R-3996-2016, la Régie rendait sa décision D-2019-101 le 23 août 2019. La Régie ordonnait au Coordonnateur de la fiabilité de faire rapport une fois l'an de la teneur de ses demandes et de ses [représentations au RCC du NPCC](#). Le paragraphe [366](#) de cette décision stipule ce qui suit :

« La Régie ordonne au Coordonnateur de lui faire rapport une fois l'an de la teneur de ses demandes et de ses présentations au RCC du NPCC, en lien avec des éléments normatifs à caractère technique pour application spécifique au Québec ainsi que des réponses du NPCC à leur égard, dans le cadre de la demande d'approbation du Registre ».

Le 20 mars 2020, en suivi de de la décision D-2019-101, le Coordonnateur indique qu'il entend déposer, dans le cadre de son prochain rapport annuel, une nouvelle section contenant les dates des rencontres du RCC ainsi que la documentation du comité RCC du NPCC diffusé à ces membres ainsi qu'à la Régie, telle que les ordres du jour des rencontres et le compte rendu de ces rencontres.

Dans sa décision [D-2020-066](#) rendue le 3 juin 2020, donnant suite au paragraphe 366 de la Décision D-2019-101, la Régie se déclarait satisfaite de la proposition du Coordonnateur. Elle est d'avis que l'inclusion de ces informations au rapport annuel du Coordonnateur sera utile à ses activités régulières en 2020.

L'annexe C ci-après comprend les informations exigées par la Régie. Vous y retrouverez un résumé des représentations d'Hydro-Québec TransÉnergie aux réunions du NPCC pour une partie de l'année 2019, soit les rencontres du 4 septembre 2019 et du 3 décembre 2019.

**Rencontres du 4 septembre 2019 et du 3 décembre 2019 de TransÉnergie
au RCC du NPCC**

Rencontre du 4 septembre 2019 Ordre du jour	
<u>Dossiers approuvés RCC</u>	<u>Commentaires</u>
NPCC Directory No. 6 - <i>Reserve Sharing Groups</i>	<u>Soumettre pour vote</u>
	Le RCC approuve la révision de la définition dans le glossaire NPCC du terme groupe de partage de réserve et soumet le tout au vote des membres.
NPCC Directory No. 5 – <i>Reserve</i>	Recommandation pour passer au vote des membres pour approbation

Rencontre du 3 décembre 2019 Ordre du jour	
<u>Dossiers approuvés RCC</u>	<u>Commentaires</u>
Revised NPCC A-10 Criteria Document	Le NPCC reporte l'analyse du dossier en février 2020
<u>Items de discussions</u>	
NERC Technical Committee Restructuring	Consolider certains groupes de travail dans un but d'efficience.
	Les membres du RCC sont encouragés à s'inscrire comme membre du RSTC dans leurs régions respectives. Fait à noter le NPCC a réussi à obtenir une représentation canadienne sur le comité RSTC.
Directory-04-System Protection Criteria	Recommandation pour passer au vote des membres pour approbation

Minutes des réunions dans le cadre des rencontres 2019 du RCC du NPCC



NORTHEAST POWER COORDINATING COUNCIL, INC.
1040 AVE OF THE AMERICAS, NEW YORK, NY 10018 (212) 840-1070 FAX (212) 302-2782

December 16, 2019

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 September 4, 2019 RCC Meeting

Sir / Madam:

Attached are the Minutes of the September 4, 2019 meeting of the NPCC Reliability Coordinating Committee, as approved at the December 3, 2019 RCC meeting.

Sincerely,

Phil Fedora

Philip A. Fedora
Assistant Vice President - Reliability Services

cc: NPCC Staff



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
September 4, 2019

Mr. Crissman called the meeting of the Reliability Coordinating Committee (RCC), held at the New York Times Square Residence Inn by the Marriott, New York, New York to order at 10:00 am.

Attendance

Officers of the Reliability Coordinating Committee

Randy Crissman, Chair	New York Power Authority
David Conroy, Co-Vice Chair	Central Maine Power Company
Gabriel Adam, Co-Vice Chair	Ontario IESO

Sector 1 - Transmission Owners

Central Hudson Gas & Electric Corporation	Frank Pace
Central Maine Power Company	David Conroy
Consolidated Edison Company of New York, Inc.	(proxy to Aleksandra Gofman)
Eversource Energy	George Wegh
Hydro-One, Inc.	Ajay Garg - Alternate
Long Island Power Authority	Anie Philip (via phone)
National Grid USA	Brian Hayduk (via phone)
New York Power Authority	(proxy to Randy Crissman)
Nova Scotia Power, Inc.	Joy Brake – Alternate
The United Illuminating Company	David Bradt
	Silvia Valerio - Alternate
Vermont Electric Power Company, Inc.	Hantz Presume (via phone)

Sector 2 – Reliability Coordinators

Hydro-Quebec TransEnergie	Francois Brassard (via phone)
ISO New England, Inc.	Michael Henderson
	Rich Kowalski – Alternate (via phone)
New Brunswick Power Corporation	Alan MacNaughton (via phone)
New York ISO	Zach Smith
Ontario IESO	Gabriel Adam

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

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



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National Grid	Mike Jones (via phone)
New York Power Authority	(proxy to Randy Crissman)
New Brunswick Power Corporation	Randy MacDonald

Sector 4 Generation Owners

Consolidated Edison Company of New York, Inc.	(proxy to Aleksandra Gofman)
Dominion Energy, Inc.	Sean Bodkin (via phone)
Long Island Power Authority	(proxy to Anie Philip – via phone)
New York Power Authority	Randy Crissman
NextEra Energy Resources	Allen Schriver (via phone)
Ontario Power Generation	David Kwan - Alternate
Talen Energy Supply, LLC	(via written proxy)
Vistra Energy Corp.	Ken Stell (via phone)

Sector 5 – Marketers, Brokers, and Aggregators

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
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	Shivaz Chopra
New York State Department of Public Service	Humayun Kabir – Alternate (via phone)

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

New York State Reliability Council, LLC	Mayer Sasson - Alternate
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NPCC Staff

Gerard Dunbar	Manager, Reliability Criteria
Phil Fedora	Assistant Vice President, Reliability Services
Brian Hogue	Information Systems & Security Management
Andreas Klaube	Senior Engineer, Operations
Quoc Le (part-time)	Manager, System Planning and Protection
Michael Lombardi	Director, Reliability Assessments
Scott Nied	Acting Assistant Vice President - Compliance
Andrey Oks	Director of Operations Coordination



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Frantz Roc	Manager, Information Technologies
Ralph Rufrano	Manager, Events Analysis
Rafael Sahiholamal	Senior Reliability Assessment & Performance Analysis Engineer
Edward Schwerdt (part-time – via phone)	President & CEO

Guests

Alessia Dawes (via phone)	Chair, CP-11 Working Group
George Fatu	Chair, Task Force on System Studies
Dean Latulipe (part-time – via phone)	SS-38 Working Group Chair
Aaron Markham	Chair, Task Force on Coordination of Operation
Anthony Napikoski	Chair, Task Force on System Protection
Saul Rojas	New York Power Authority
Dan Schwarting (via phone)	Vice Chair, CP-11 Working Group
Dan Taft	Consolidated Edison Company of New York, Inc.
William Vesely	Vice Chair, Task Force on Infrastructure Security & Technology
Ben Wu	Orange & Rockland Utilities

Quorum Statement

Mr. Fedora indicated that a quorum had been achieved, by member attendance, proxy, or alternate designation. He also indicated he received the following written proxy:

Sector 4 – Generator Owners

Scott Etnoyer– Talen Energy Supply, LLC.

Antitrust Guidelines for NPCC Meetings

Mr. Fedora reviewed the NPCC Antitrust Guidelines in the Agenda package, and suggested contacting NPCC Inc.'s Secretary, Ruta Skucas at (202) 530-6428 for further information.

President & CEO Report

NERC's Proposal for Restructuring the Technical Committees

Mr. Schwerdt reported that as a part of the ERO Enterprise-wide effectiveness and efficiency initiative, a working group was formed in late 2018 to review the current avenues for stakeholder engagement and to recommend enhancements. After assessing various approaches and Regional committee experiences, that Stakeholder Engagement Team recommended to the NERC Member Representatives Committee at its August 2019 meeting the creation of a Reliability and Security Council (RSC). This new oversight committee would replace the Planning Committee, Operating Committee and the Critical Infrastructure



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Reliability Coordinating Committee Minutes

September 4, 2019

Protection Committee by combining the experience of those existing technical groups into one multi-disciplinary committee. The RSC would direct and oversee the output of the existing subcommittees, working groups, and task forces, while eliminating duplication and identifying gaps in the current subcommittee structure. The RSC would report to the NERC Board of Trustees. Regional staff representatives would continue participation and become non-voting participants at the RSC meetings.

While stakeholder support for the RSC was generally positive, there were several modifications to the proposal that were suggested. Included in those recommendations were: changes in the RSC membership to include more stakeholder sector-elected representatives; revisions to the RSC's governance structure; assurances that geographic diversity would be maintained and include Canadian representation; and assumption of something other than the RSC acronym which would create confusion with the Reliability Issues Steering Committee (RISC). The Stakeholder Engagement Team is scheduled to meet to address all comments received and to make their final recommendations to the NERC Board of Trustees at its November 2019 meeting. A copy of the presentation on the RSC proposal is included in the Agenda package for this RCC meeting.

NPCC Board Strategy Session

While the Board works strategically throughout the year, it will meet today for its focused annual strategy session to identify and assess emerging electricity reliability challenges within the NPCC Region and to inform the corporation's future direction and reliability initiatives. The pace of change within the electric utility industry continues to accelerate, thus strategic planning efforts must remain in the forefront to keep NPCC agile as the corporation appropriately focuses its staff and Member subject matter experts' resources. Such planning activities also contribute significantly to NPCC's policy leadership throughout the ERO Enterprise. The current working draft strategic plan identifies the major emerging challenges to Northeastern North American reliability as: enhancing system resilience and assuring energy sufficiency; reliably integrating distributed energy resources; and addressing cyber and physical threats. Mr. Schwerdt indicated he would summarize the output of the Board's deliberations and recommendations at the December RCC meeting.

Mr. Henderson asked Mr. Schwerdt about opportunities for the NPCC Board to consult with the RCC or other Stakeholders during development of its strategic initiatives. Mr. Schwerdt replied his outreach includes all input from NPCC Members representatives, including aligning the RCC Scope and Task Force Work Plans around the strategic plan. He indicated another draft of the strategic plan would be available in October and that it will be shared in the interest of a more efficient alignment of the NPCC Board's strategic initiatives and the Task Force Work Plans.



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Mr. Henderson noted that the ISO New England Board meets directly with its Stakeholders in December for input/feedback. Mr. Schwerdt responded that unlike the ISO New England Board, the NPCC Board consists of a balanced, hybrid sector representation that provides the opportunity for direct input/feedback.

Chair Report

Agenda

Mr. Crissman reviewed the Agenda provided in the Agenda package

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

August 8, 2019 - NPCC Distributed Energy Resources Forum

Mr. Crissman summarized the material provided in the Agenda package regarding the NPCC Regional Standards Committee on-going efforts to develop a coordinated Regional approach to reliability guidelines for Distributed Energy Resources (DERs) and create a forum for DERs integration challenges and expand coordination on DERs with the NAGF, FERC and NARUC.

Proposal for Restructuring NERC Technical Committees

Mr. Crissman reviewed the proposal provided in the Agenda package and as described by Mr. Schwerdt regarding replacing the NERC Operating Committee, Planning Committee, and Critical Infrastructure Protection Committee with a Reliability and Security Council; a final recommendation will be presented to the NERC Board of Trustees at their 4th quarter 2019 meeting for approval. Assuming approval of the recommendation, the transition would be implemented in early 2020.

November 13-14, 2019 - GridEx V

Mr. Crissman referred the RCC to the background information provided in the Agenda package. GridEx V is scheduled for November 13-14, 2019. The grid security exercise takes place every two years and provides an opportunity for utilities to demonstrate how they would respond to and recover from simulated coordinated cyber and physical security threats and incidents, strengthen their crisis communications relationships, and provide input for lessons learned.

Cybersecurity Risk Information Sharing Program (CRISP) Implementation at NPCC

Mr. Roc reported that NPCC joined the Cyber Risk Information Sharing Program (CRISP) as of August 1, 2019.



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NERC EMP Task Force Update

Mr. Crissman explained that the Electromagnetic Pulse Task Force (EMP Task Force) is an advisory team that collaborates with governmental authorities and applicable industry members to provide front-end, high-level leadership and guidance. He reported that the focus of the Task Force is to write a Strategic Recommendations report that will be posted for industry review and comment in the 3rd quarter of 2019. The Strategic Recommendations report will focus on five key topics:

- Policy;
- Research;
- Vulnerability Assessments;
- Mitigation Guidelines; and,
- Response and Recovery.

Standards Efficiency Review Update

Mr. Crissman summarized activities associated with the NERC Standards Efficiency Review provided in the Agenda package. The Phase 2 Standards Efficiency Review team last met on August 12, 2019. The team is focusing its effort at this time on 1) development of a Standards Authorization Request for modifications standard requirements that were identified in Phase 1; and 2) the development of two of the six efficiency concepts, based on the results of a recent industry survey.

NPCC 2019 General Meeting

Mr. Fedora referred the RCC to the notice included in the Agenda package – the 2019 NPCC General Meeting will be held at the Montréal Marriott Château Champlain, starting at 1:00 pm on Wednesday, December 4, 2019.

Proposed 2020 RCC Meeting Dates & Locations

Mr. Fedora reported that arrangements were being made for the following 2020 RCC meeting dates and locations:

- ✓ Wednesday February 26, 2020 – TBA (NYC)
- ✓ Wednesday May 27, 2020 – TBA (NYC)
- ✓ Wednesday September 2, 2020 - TBA (NYC)
- ✓ Tuesday December 1, 2020 - Albany Marriott, 189 Wolf Rd, Albany NY
(in conjunction with the NPCC 2020 Board/Annual/General Meetings)

Development of 2020-21 Task Force/RCC Work Plans

Mr. Crissman reminded the Task Force Chairs and the RCC that review and approval of their proposed 2020 - 2021 Task Force Work Plans will take place at the December 3, 2019 RCC meeting. The review and approval of the proposed 2020 RCC Work Plan will take place following the RCC's approval of the proposed NPCC Task Force's 2020 – 2021 Work Plans later in that meeting.



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Development of NPCC 2020 Corporate Goals

Mr. Fedora indicated that development of NPCC's 2020 Corporate Goals follows the development of the 2020 RCC Work Plan and RCC approval of the NPCC 2020-2021 Task Force Work Plans in December, based on NPCC Board direction. The NPCC Board approves the RCC Scope and the reviews the NPCC Corporate Goals at its January 2020 meeting.

RCC Scope Update

Mr. Crissman referred to the RCC Scope provided in the Agenda package, which was approved by the NPCC Board at its meeting on January 30, 2019. He asked the RCC to review and provide Mr. Fedora with any comments/changes prior to the December 3, 2019 RCC meeting; the NPCC Board will consider the RCC Scope at its January 2020 meeting.

Consent Agenda

The Reliability Coordinating Committee unanimously approved the following Consent Agenda items (written proxy in favor):

May 29, 2019 Meeting Minutes

Approved as provided in the Agenda package, with editorial changes noted.

RCC Membership Changes

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

Sector 1 - Transmission Owners

- ✓ Mike Forte of Con Edison is no longer a member.
- ✓ Brian Conroy of Central Maine Power Company is no longer a member.

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

- ✓ Ben Wu of Orange & Rockland as member.
- ✓ Ronald Clare of Long Island Power Company is no longer a member.

Task Force Roster Changes

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

Task Force on Coordination of Operation

- ✓ Akram Sohail as alternate for Hydro One.
- ✓ Charles-Eric Langlois as member for Hydro-Quebec TransÉnergie, replacing Patrick Doyle, who will become the alternate.
- ✓ Ron Arness succeeds Dave Zwergel as a participant for MISO.
- ✓ Josh Netherton succeeds Andy Witmeier as a participant for MISO.
- ✓ Chris Pilon succeeds Dave Souder as a participant for PJM.



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Task Force on Coordination of Planning

- ✓ Shaun Moran of Eversource succeeds Robert Russo as alternate.
- ✓ Maximus Rizk succeeds Ryan Ramcharan as member, both of Consolidated Edison.
- ✓ Ryan B Ramcharan is no longer a member.
- ✓ Mr. Edward Roedel succeeds Mr. David Bradt both of United Illuminating as member.
- ✓ Mr. Roedel also succeeds Mr. Bradt as the Vice-Chair.
- ✓ Mr. Paul Didsayabutra of Rochester Gas and Electric succeeds Mr. Edward Roedel as alternate.

Task Force on System Studies

- ✓ Maximus Rizk succeeds Ryan Ramcharan as member, both of Con Edison.
- ✓ Bob Russo will no longer serve as alternate for Eversource; a replacement has not been named.

Task Force on System Protection

- ✓ Xiankai Wang of NSPI will serve as alternate.
- ✓ David Mahlmann of the New York ISO is no longer a member.
- ✓ Robert Golen of the New York ISO as alternate.
- ✓ Zarin Schildhorn will replace Mr. Jack DiOdoardo of Central Hudson as alternate.

Task Force on Infrastructure Security & Technology

- ✓ Kelsey Settle succeeds Lee McDonald as alternate, both of Nova Scotia Power Inc.
- ✓ Larry Snow of Cogentrix Energy Power Management, LLC as member.
- ✓ Jason Hammerschmidt of the Ontario IESO as alternate.
- ✓ Brenda Driscoll of National Grid as alternate.
- ✓ Steve Brain of Dominion Resource Services no longer an alternate.
- ✓ Glen Dempster of Ontario Power Generation Inc. is no longer an alternate.

CP-11 Working Group on Review of NPCC Basic Criteria

- ✓ Dylan Dreisch of PSEG Long Island as member.
- ✓ Edward Roedel of United Illuminating Company as member.
- ✓ Vincent Fihey of Hydro-Quebec TransEnergie is no longer a member.
- ✓ Steve Blackburn of Hydro-Quebec TransEnergie is no longer a member.
- ✓ Bob Duan of Ontario Power Generation is no longer a member.
- ✓ Jalpa Patel of LIPA is no longer a member.
- ✓ Daniele D'Aquila of LIPA is no longer a member.
- ✓ Herb Schrayshuen of Power Advisors, LLC is no longer a member.
- ✓ Hai (Quoc) Le of NPCC is no longer a member.
- ✓ Maximus Rizk succeeds Ryan Ramcharan of Consolidated Edison as member.

CO-2 Operator Trainers Working Group

- ✓ Jason Tobin of Newfoundland and Labrador Hydro as member.
- ✓ Eduardo Sanchez of ISO-New England as alternate.
- ✓ Andrey Oks of NPCC as alternate.



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System Operations Managers Working Group (CO-8)

- ✓ Udayan Nair succeeds Kyle Russell as the Ontario IESO alternate.
- ✓ Ron Arness succeeds Andy Witmeier as an alternate representative for MISO.
- ✓ Chris Pilog succeeds Dave Souder as an alternate representative for PJM.

CO-10 System Operational Tools Working Group

- ✓ Pablo Gutierrez succeeds Nick Zourntos of the Ontario IESO as member.

Restoration Working Group (CO-11)

- ✓ Harsh Dinesh of the New York ISO is no longer alternate.
- ✓ Kevin Hatch of PJM is no longer alternate.
- ✓ Joseph Koltz succeeds Slawomir Szymanowski as an alternate for ISO-New England.
- ✓ Gerry Elliott of ISO New England is no longer alternate.
- ✓ Andrey Oks of NPCC as alternate member.
- ✓ Ryan Ramcharan is no longer a member.

SP-7 Working Group on Protection System Misoperation Review

- ✓ Xiankai Wang of NSPI will serve as member.
- ✓ Thomas Burns will replace Jack DiOdoardo of Central Hudson as member.

SS-38 Working Group on Inter-Area Dynamic Analysis

- ✓ Zeqiu Li succeeds Kofi Nimako of the New York ISO as alternate.

SS-38 LMWG Load Modeling Working Group

- ✓ Pramila Nirbhavane of the New York ISO as alternate.

IST-2 Telecommunications Working Group

- ✓ Javier Echevarria of NPCC is no longer an alternate.

IST-4 Working Group on Cyber Security

- ✓ Rafael Sahiholamal succeeds Michael Lombardi of NPCC as member.
- ✓ Robert Thompson of Central Maine Power is no longer a member.
- ✓ Nathan Cote of Eversource Energy is no longer a member.
- ✓ Sharon Paturzo of United Illuminating is no longer an alternate.
- ✓ Frederic St-Hilaire of Hydro-Quebec TransEnergie as member.
- ✓ Albert Marandola of Eversource Energy as member.

IST-4 Working Group White Paper - Information Protection Policy for System Protection

Approved as provided in the Agenda package.



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IST-2 Working Group White Paper - Ring Down (Voice Communications)

Approved as provided in the Agenda package.

2019 NPCC Major Projects List

Approved as provided in the Agenda package.

New England Directory No. 1 Implementation Plan

Approved as provided in the Agenda package.

Items for Approval

NPCC Directory No. 6 - Reserve Sharing Groups

Mr. Dunbar reviewed the changes to the revised Regional Reliability Directory No. 6 *Reserve Sharing Groups* provided in the Agenda package. He explained that the Task Force on Coordination of Operation (TFCO) and its CO-8 Working Group completed a comprehensive review of Directory No. 6, which considered the impact of the evolving Electric Reliability Organization (ERO) Standards on the Criteria, emerging industry technologies and recent recommendations contained in the Phase 2 Report on the A-10 Methodology.

The TFCO recommended revising the definition of the existing NPCC Glossary Term for Reserve Sharing Group to the definition used for this term in the NERC Glossary of Terms.

The RCC agreed to revise the definition of the existing NPCC Glossary Term for Reserve Sharing Group to the definition used for this term in the NERC Glossary of Terms, then unanimously recommended balloting the revised NPCC Regional Reliability Directory No. 6 – *Reserve Sharing Groups* for Full Member approval (written proxy in favor).

NPCC Directory No. 5 – Reserve

Mr. Dunbar reviewed the changes to the revised NPCC Directory No. 5 *Reserve*. He explained that the Task Force on Coordination of Operation (TFCO) and its CO-1 and CO-8 Working Groups completed a comprehensive review of Directory No. 5 and reformatted the document to produce NPCC Criteria requirements that are clear, measurable and consistent with the NERC Rules of Procedure. The TFCO also made changes to several NPCC Glossary terms contained within Directory No. 5.

Additionally, in accordance with the recommendations contained in the *Strategic Review of the NPCC Criteria*, the TFCO solicited NPCC Member feedback on the contribution to system resilience and the cost effectiveness of the individual criteria attributes within the Directory.



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The RCC then unanimously recommended balloting the revised NPCC Regional Reliability Directory No. 5 - *Reserve* provided in the Agenda package for Full Member approval (written proxy in favor).

2018 NPCC Criteria Compliance Enforcement Program (CCEP) Assessment Report

Mr. Nied summarized the 2018 NPCC CCEP Assessment Report provided in the Agenda package. The CCEP-1 Process Document directs the NPCC Compliance Committee (CC) to present an annual assessment report for approval at the 3rd quarter RCC meeting each year. The CC performed a compliance review of the submitted certification forms. The assessment report provided in the Agenda package summarizes the CC's review and findings associated with the certifications submitted as per the 2018 CCEP Implementation Plan.

The RCC discussed the two recommendations of non-compliance noted in the report:

New Brunswick Power (NBP) – Directory No. 4

In 2018, there was one new transmission element added and two protection systems upgraded. For these changes NBP did not request the Task Force on System Protection (TFSP) to review NBP's compliance as per Requirements 1 and 2 of Directory No. 4. However, NBP reports that redundant trenching was not utilized for the new element. NBP believes that, for the two protection system upgrades, TFSP would typically waive the redundant trenching requirement and permit an exclusion. Apart from the redundant trenching criterion, NBP meets all Directory No. 4 criteria.

NBP's decision not to have redundant trenching for the new BPS element was based on the increased risk that the construction activity presented to an operational substation and NBP's assessment that redundant trenching poses minimal incremental reliability benefit based on the compensating measures outlined in the report.

NBP, working with the TFSP, has initiated proposed revisions to Directory No. 4 allowing for exceptions to the double trenching requirement for the new elements added to operational substations where such exceptions are conditional on TFSP approval. NBP will be seeking a TFSP acceptance letter for those upgrades that were not formerly submitted in accordance with Directory No. 4.

New York Power Authority (NYPA) – Directory No. 4

In 2018, three breaker failure relays were replaced with similar relays (change to manufacturer and model number only, with no impact to functionality or settings) at one BPS station and NYPA did not submit documentation to the Task Force on System Protection (TFSP) in accordance with Appendix B and, thus, did not obtain a letter of acceptance by TFSP within 12 months of placing the relay replacements in service. The relay changes were intended to be placed on the TFSP agenda, but were inadvertently excluded. Therefore, NYPA did not meet the Compliance Requirements with R1 and



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R2. During this time, NYPA was undergoing staffing and administrative changes and it was not noticed that actual TFSP approval had not occurred.

To mitigate the issue, NYPA has submitted the changes to TFSP and the formal presentation to TFSP was made at the July 2019 meeting and the subsequent approval letter was received by NYPA. To prevent recurrence, NYPA developed and implemented a procedural control that ensures the responsible engineer will fill out the TFSP forms, get the changes onto the TFSP agenda, and that approval of TFSP will be acquired within 12 months. This procedural control must be satisfied before NYPA's Protection and Control Engineering group will approve Protection System modifications or transmit new relay settings for field implementation.

The CC recommended that the RCC accept these CC determinations of noncompliance.

The RCC then approved the 2018 NPCC Criteria Compliance Enforcement Program (CCEP) Assessment Report as provided in the Agenda package (NYPA Sectors 1,3,4,5,6 abstaining; written proxy in favor).

Mr. Nied indicated that following RCC approval of the 2018 NPCC Criteria Compliance Enforcement Program Assessment Report, a letter will be sent to the CEO of the non-compliant Full Member that includes a recap of the noncompliance, the status of mitigation activities, and an explanation of the assessment by the CC and subsequent acceptance by the RCC.

Items for Discussion

Status of NPCC A-10 Document Review

Ms. Dawes summarized the status of the Task Force on Coordination of Planning (TFCP) and the CP-11 Working Group on Review of NPCC Basic Criteria review of NPCC Document A-10 - *Classification of Bulk Power System Elements*.

The recommendations contained in the CP-11 Working Group Phase 2 Final Report of the Document A-10 Review were incorporated into a revised version of the A-10 Document and posted to the NPCC Open Process for a comment period which concluded on July 1, 2019. The TFCP and the CP-11 Working Group have considered comments received during the first posting of the A-10 Document and have recommended further changes to the draft. The revised draft will be posted to the Open Process for a second 45-day comment period.

The TFCP and the CP-11 Working Group anticipate presenting a final A-10 Document draft to the RCC in December with a subsequent expected Full Member approval ballot.



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Con Ed July 13, 2019 load loss event

The RCC received a presentation by Messrs. Taft and Sasson of Consolidated Edison regarding the July 13, 2019 New York City West Side Power Outage. They reviewed the events that resulted in isolation of the fault at the West 49th Street transmission substation, and the subsequent loss of several electrical networks.

New York Public Service Commission Review of New York's Resource Adequacy Programs

Mr. Crissman referred the RCC to the New York Public Service Commission Order included in the Agenda package that describes the initiation of a proceeding to examine how to reconcile resource adequacy programs and the State's renewable energy and environmental emission reduction goals. Interested entities are asked to submit comments by November 8, 2019.

2019 NPCC Corporate Goals Deliverables

Goal III-1

Mr. Rufrano reported on the trend analysis of NPCC extreme contingency testing and all ERO- wide Event Analysis program (EAP) events since 2015 and the identified past resilience performance as provided in the Agenda package.

Goal III-3

Mr. Latulipe reported on the development of acceptable DER_A model default data for NPCC and tests through UFLS sensitivity analysis provided in the agenda package. The SS-38 Working Group on Inter-Area Dynamic Analysis completed the development of default parameters of the DER_A model for NPCC in May 2019 and have completed testing of the DER_A model through the UFLS sensitivity analysis in August 2019.

The sensitivity testing results showed that incorporating DER models into UFLS simulations impact system performance during frequency excursions, with the most significant impacts seen for the most conservative DER modeling assumptions. The findings were presented to the Task Force on System Studies at a teleconference on August 19, 2019 and approved for presentation to the RCC.

Goal IV-1

Mr. Lombardi reported on the findings of the pilot program with key Distributed Energy Resource (DER) stakeholders to define data and practices needed to effectively and efficiently integrate DERs into the Bulk Electric System (BES) and identify and prioritize the gaps between the current state and the desired state. His presentation, included in the Agenda package, highlighted the related activities of the IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power



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Systems Interfaces and the NERC System Planning Impacts of DER Impacts Working Group (SPIDERWG) Modeling Subgroup's Reliability Guideline: DER Data Collection for Modeling.

Goal IV-3

Mr. Oks summarized the Tabletop Exercise included in the Agenda package developed involving the NPCC electric system operators, gas producers and pipeline representatives. The Tabletop Exercise leveraged the experience and expertise of Argonne National Lab and input from the natural gas and electric sector operating organizations.

He explained the goals of the exercise are to:

- ✓ Inform and educate participants on interconnected electric-natural gas systems and their impacts on other critical infrastructure systems;
- ✓ Prepare/practice response to an event impacting cross-borders electric and gas systems, across a wide stakeholder group; and,
- ✓ Identify Bulk Power System (BPS) reliability risks and solutions, including opportunities for more resilience through cooperation, communications and decision-making.

NERC Agenda Items

Joint Session: Planning, Operating & Critical Infrastructure Protection Committee

Mr. Oks reviewed the following presentations that are scheduled for the September 10, 2019 Joint Session included in the Agenda package:

- ✓ Cold Weather Bulk Electric System Event of January 17, 2018;
- ✓ Argentina Blackout;
- ✓ Committee Restructuring Proposal Feedback and Next Steps; and,
- ✓ Update on EMP Task Force Strategic Recommendations.

Operating Committee (OC) Meeting

Mr. Rufrano highlighted the following items from the September 10-11, 2019 OC Agenda included in the Agenda package:

Approval Items:

- ✓ Reliability Guideline: *Improvements to Interconnection Requirements for BPS-Connected Inverter-Based Resources.*

Informational Items:

- ✓ Cold Weather Bulk Electric System Event of January 17, 2018;
- ✓ Task Force & Working Group Updates;
 - Real-time Assessments Quality Task Force; and,
 - System Planning Impacts from Distributed Energy Resources Working Group.
- ✓ WECC Reliability Coordinator Updates.



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Planning Committee (PC) Meeting

Mr. Fedora highlighted the following items from the draft September 10-11, 2019 Planning Committee Agenda included in the Agenda package:

Consent Agenda

- ✓ Technical Analysis Report *Reliability Standard PRC-019 Reliability Gaps* – Approved by PC email vote on August 2, 2019; and,
- ✓ Standard Authorization Request - Revisions to Address Dispersed Power Resource (PRC-019-2) – Endorsed by PC email vote on August 2, 2019.

Items for Approval

- ✓ Reliability Guideline: *DER_A Model Parameterization*; and,
- ✓ Reliability Guideline: *Improvements to Interconnection Requirements for BPS-Connected Inverter-Based Resources*.

Critical Infrastructure Protection Committee (CIPC)

Mr. Hogue noted the following items from the September 17-18, 2019 CIPC Agenda included in the Agenda package:

- ✓ Security Metrics Working Group disbanding - work concluded.
- ✓ Physical Security Guidelines Task Force disbanding - work concluded.

No Voting Items.

Informational/discussion Topics:

- ✓ Compliance Input Working Group:
 - Cloud Implementation Guidance
 - Federal Risk and Authorization Management Program (FedRAMP).

Informational Items

NPCC Guidance Document - Approaches to Preserve System Resilience and Reliability for a High DER Penetration Future- Version 1

Mr. Crissman referred to the NPCC Guidance Document provided in the Agenda package. Due to the uncertain nature of a number of Distributed Energy Resource (DER) implementation issues, this document will undergo continual revisions and is provided as a “Version 1.” The document was endorsed by the NPCC Reliability Standards Committee and will be posted on the NPCC website. The guidance document, and future versions, represent an effort and intent to incrementally provide the industry with up-to-date information on implementing DER as it becomes available. He asked that comments be provided to Mr. Zito.



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Cyber & Physical Security Update

Mr. Vesely reviewed the following Cyber & Physical Security information provided in the Agenda package:

- ✓ CIP Modifications Standard Drafting Team;
- ✓ BES Cyber Systems Information Standards Authorization Request;
- ✓ Incident Reporting and Response Planning;
- ✓ Communications between Control Centers;
- ✓ CIP – 003 - Low Impact program must be in place by January 1, 2020;
- ✓ Supply Chain Risk Management;
- ✓ Communications; and,
- ✓ CIP Standards Efficiency Review.

NERC Probabilistic Assessment Forum

Mr. Klaube referred the RCC to the announcement included in the Agenda package for the NERC Probabilistic Analysis Forum scheduled for December 11-13, 2019 at NERC's Atlanta Office.

Mr. Crissman then referred the RCC to the other Informational Items materials provided in the Agenda package.

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

Next RCC Meeting Date

Tuesday, December 3 2019

Location

Montréal Marriott Château Champlain
1050 De, Rue de la Gauchetière O,
Montréal, Quebec

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



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Ruta Skucas, Esq.

and

Federal Energy Regulatory Commission – Andy Dodge, David Ortiz, David O’Connor,
Juan Villar

La Régie de L’Énergie – Christian Garneau

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.



NORTHEAST POWER COORDINATING COUNCIL, INC.
1040 AVE OF THE AMERICAS, NEW YORK, NY 10018 (212) 840-1070 FAX (212) 302-2782

March 25, 2020

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 3, 2019 RCC Meeting

Sir / Madam:

Attached are the Minutes of the December 3, 2019 meeting of the NPCC Reliability Coordinating Committee, as approved at the February 27, 2020 RCC meeting.

Sincerely,

Phil Fedora

Philip A. Fedora
Assistant Vice President - Reliability Services

cc: NPCC Staff



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Mr. Crissman called the meeting of the Reliability Coordinating Committee (RCC), held at the Montréal Marriott Château Champlain, Montréal, Quebec to order at 9:00 am.

Attendance

Officers of the Reliability Coordinating Committee

Randy Crissman, Chair	New York Power Authority
David Conroy, Co-Vice Chair (via phone)	Central Maine Power Company
Gabriel Adam, Co-Vice Chair	Ontario IESO

Sector 1 - Transmission Owners

Central Hudson Gas & Electric Corporation	Michael E. Ridolfino - Alternate
Central Maine Power Company	David Conroy (via phone)
Consolidated Edison Company of New York, Inc.	(proxy to Aleksandra Gofman)
Eversource Energy	George Wegh (via phone)
Hydro-One, Inc.	Ajay Garg - Alternate
Long Island Power Authority	Anie Philip (via phone)
National Grid USA	Brian Hayduk (via phone)
New York Power Authority	(proxy to Randy Crissman)
New York State Electric & Gas Corp.	(proxy to David Bradt – via phone)
Nova Scotia Power, Inc.	Joy Brake – Alternate
Orange & Rockland Utilities, Inc.	(proxy to Aleksandra Gofman)
Rochester Gas & Electric Corporation	(proxy to David Bradt – via phone)
The United Illuminating Company	David Bradt (via phone)
Vermont Electric Power Company, Inc.	Hantz Presume

Sector 2 – Reliability Coordinators

Hydro-Quebec TransEnergie	Stephane Desbiens
ISO New England, Inc.	Michael Henderson
New Brunswick Power Corporation	(proxy to Randy MacDonald)
New York ISO	(proxy to Aaron Markham)
Ontario IESO	Gabriel Adam

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

Consolidated Edison Company of New York, Inc.	(proxy to Aleksandra Gofman)
Hydro-Quebec Distribution	Hakim Sennoun - Alternate (via phone)
Long Island Power Authority	Robert Eisenhuth



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National Grid	Mike Jones
New York Power Authority	(proxy to Randy Crissman)
New Brunswick Power Corporation	Randy MacDonald (via phone)
Orange & Rockland Utilities, Inc.	(proxy to Aleksandra Gofman)

Sector 4 Generation Owners

Consolidated Edison Company of New York, Inc.	Peter Yost
Dominion Energy, Inc.	Sean Bodkin
Long Island Power Authority	(proxy to Anie Philip – via phone)
New York Power Authority	Randy Crissman
Ontario Power Generation	David Kwan - Alternate
Talen Energy Supply, LLC	(via written proxy)
Vistra Energy Corp.	Ken Stell (via phone)

Sector 5 – Marketers, Brokers, and Aggregators

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
Long Island Power Authority	(proxy to Anie Philip– via phone)
New York Power Authority	(proxy to Randy Crissman)
Utility Services, Inc.	Brian Robinson - Alternate

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	(proxy to Aleksandra Gofman)
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NPCC Staff

Gerard Dunbar	Manager, Reliability Criteria
Phil Fedora	Assistant Vice President, Reliability Services
Brian Hogue	Information Systems & Security Management
Andreas Klaube	Senior Engineer, Operations
Neeraj Lal	Senior Reliability Engineer
Quoc Le	Manager, System Planning
Michael Lombardi (via phone)	Director, Reliability Assessments
Jennifer Budd Mattiello (via phone)	Senior Vice President and COO
Kristin S. McKeown, Esq.	General Counsel
Scott Nied	Assistant Vice President, Compliance



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Andrey Oks	Director of Operations Coordination
Ralph Rufrano (via phone)	Manager, Events Analysis
Rafael Sahiholamal	Manager, System Protection
Peter Scalici (via phone)	Manager, Security Outreach Programs
Edward Schwerdt	President & CEO
Guy Zito	Assistant Vice President of Standards

Guests

Scott Brown	New Brunswick Power Corporation
George Fatu	Chair, Task Force on System Studies
Farzad Farahmand (via phone)	Ontario IESO
Jeff Fenn	SGC Engineering, LLC
Dean Latulipe (via phone)	SS-38 Working Group Chair
Anthony Napikoski (via phone)	Vice Chair, Task Force on System Protection

Quorum Statement

Mr. Fedora indicated that a quorum had been achieved, by member attendance, proxy, or alternate designation. He also indicated he received the following written proxy:

Sector 4 – Generator Owners

Scott Etnoyer– Talen Energy Supply, LLC.

Antitrust Guidelines for NPCC Meetings

Mr. Fedora reviewed the NPCC Antitrust Guidelines in the Agenda package, and suggested contacting NPCC Inc.'s Assistant Secretary, Ruta Skučas, Esq. at (202) 530-6428 for further information.

President & CEO Report

ERO Enterprise Long-Term Strategy

Mr. Schwerdt reported that the ERO Enterprise Long-Term Strategy represents a five to seven-year framework in which NERC and the six Regional Entities will pursue their collective missions of assuring the effective and efficient reduction of risks to the reliability and security of the international Bulk Power System (BPS) within North America.

The reliability and security of the ecosystem is being rapidly transformed by significant policy and technical forces that are driving fast paced changes in how electric systems are designed, planned operated and secured.

The ERO Long-Term Strategy explicitly recognizes the different, but important complementary roles, that NERC and the Regional Entities play in developing successful



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enterprise-wide reliability orientated programs. The strategy lays out a number of key areas that can be leveraged by the ERO Enterprise model, and identifies five long term focus areas with a set of desired outcomes. These focus areas include:

- ✓ Expanding the risk-based approach in all standards, compliance monitoring and enforcement programs;
- ✓ Assessing and mitigating known and emerging risks to reliability and security;
- ✓ Building a strong Electricity Information Sharing & Analysis Center (E-ISAC) and expanding its security capacity;
- ✓ Strategy engagement across the reliability and security ecosystem within North America (enhanced regulatory interaction); and,
- ✓ Capturing effectiveness and efficiency with continuous improvement.

The NERC Board of Trustees is scheduled to consider the draft ERO Enterprise Long-Term Strategy document for approval at its December 12, 2019 teleconference meeting. An initial version was sent out to the industry, comments were received, and a revised draft has been crafted and will be distributed in the Agenda package for the Board of Trustees December teleconference meeting.

NPCC Board's Working Draft Strategic Plan

To both influence the ERO's direction and facilitate NPCC's implementation alignment with the Enterprise wide Long-Term Strategic Plan, the NPCC Board met in strategic session in early September and developed a working draft strategic plan. The Plan looks ahead three to five years with the objective of successfully positioning NPCC as an international Regional Entity to respond to anticipated structural changes in the electric industry, growing reliability interdependencies, and evolving challenges and opportunities. The working draft strategic plan is intended to insure that NPCC's plans, resources, budget and reliability assurance support and add value to the ERO Enterprise and to NPCC's members.

The NPCC Working Draft Strategic Plan outlines three strategic focus areas that leverage NPCC's current strengths and can expand its future achievements to assure BPS reliability in Northeastern North America. These focus areas include:

- ✓ Enhancing system resilience and assuring energy sufficiency;
- ✓ Reliably integrating Distributed Energy resources; and,
- ✓ Addressing both Cyber and Physical threats.

Future technical initiatives, resource needs and potential resource reallocation in support of these activities will be addressed in the development of NPCC's annual corporate reliability goals and incorporated into future NPCC Business Plans & Budgets.



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GridEx V

This year's annual GridEx exercise was conducted on November 13 -14, 2019. The exercise consisted of a number of simulated coordinated cyber and physical attacks that were designed to challenge several critical infrastructures interdependencies including interdependencies between the electric, gas, telecommunications and water systems.

Additionally, the involvement of multiple international governmental agencies allowed for the testing of crisis management and recovery response plans.

This year's Executive Table Top exercise was held on the second day of GridEx V. It included the simulated drafting and potential operational impacts of a Presidential Grid Security Emergency (GSE) Order. This is a new aspect of Section 2015 of the Federal Power Act; the President has the authority to issue a GSE, upon consultation with the Department of Energy and the industry. The overall lessons learned from GridEx V are scheduled to be made available in the January 2020 timeframe.

Mr. Henderson asked about the NPCC Task Force structure within the framework of the NPCC three to five year strategic plan, given the proposed NERC technical committee restructuring. Mr. Schwerdt responded that NPCC would strive to insure that RCC stakeholders are represented on the NERC Reliability and Security Technical Committee (RSTC), and that issues being considered and raised at the NERC level are brought back to the RCC for discussion. The process will be developed through by RCC leadership and NPCC staff.

Mr. Schwerdt encouraged the RCC members to consider applying for membership in the RSTC in their respective Sectors; NPCC needs Northeastern North American voices on the RSTC. He noted NPCC was successful in requiring Canadian representation on the RSTC.

Mr. Fedora noted that the RSTC structure is similar to that of the RCC; one of the first tasks of the RSTC will be to review its reporting Subcommittees, Task Forces and Working Groups to determine whether or not efficiencies can be gained through elimination of duplicative efforts, or if gaps exist that should be addressed. The RSTC activities will be monitored during the transition and the RCC will be informed moving forward.

Chair Report

Mr. Crissman thanked the NPC Task Force and Working Group leadership and their respective members for all their efforts in 2019. He also thanked Mr. Adam for agreeing to present the RCC report at tomorrow's NPCC Annual Meeting.



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Agenda

Mr. Crissman reviewed the Agenda provided in the Agenda package. He said that consideration of the revised NPCC A-10 Criteria Document has been postponed until the next RCC meeting, in order to allow more time for discussion. The Joint Task Force Chairs discussed this approach, and agreed that a WebEx will be scheduled before the February RCC meeting, in order to provide an additional opportunity for RCC discussion and dialog.

Mr. Henderson asked if any additional work on A-10 would be required of the Task Force on Coordination of Planning (TFCP) or of the CP-11 Working Group. Mr. Crissman clarified that no further work is anticipated, and thanked the TFCP and the CP-11 Working Group for their efforts over the two years it has taken to bring the project to closure.

Mr. Crissman also noted that the Physical and Cyber Security update will be moved from the Informational Items to be covered as the last Discussion Item at today's meeting.

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

NERC Technical Committee Restructuring

Mr. Crissman stated the NERC Board of Trustees approved the charter for a new Reliability and Security Technical Committee (RSTC) at its November meeting. The objective of establishing the RSTC is to improve the effectiveness and efficiency of ERO Enterprise operations. A stakeholder engagement team recommended replacing the three existing technical committees with the single RSTC, which will report to the Board. This new committee will focus on managing the work of the subcommittees, working groups and task forces to address specific risks to reliability and security.

New York PSC Proceeding on Resource Adequacy Matters

Mr. Crissman referred the RCC to the New York PSC Proceeding Resource Adequacy Matters comments submitted by the New York State Reliability Council provided in the Agenda package. Other submitted comments are available on the New York PSC website under Case number: 19-E-0530.

Electromagnetic Pulse (EMP) Task Force Update

Mr. Crissman reported that the NERC Board of Trustees accepted the NERC EMP Task Force's report, at its November 2019 meeting, that included a series of strategic recommendations. Recognizing the broad expanse of the recommendations in the report and NERC's focus on effectiveness and efficiency, the Board asked NERC staff to propose implementation priorities for the recommendations. The Board of Trustees requested stakeholder policy input on the recommendations, and will consider action based on stakeholder feedback at its February 6, 2020 meeting.



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Mr. Crissman reported that he is participating on a working group with the Electricity Subsector Coordinating Council and the DOE to review and discuss actions being taken under the March 26, 2020 Presidential Executive order on EMP. They are in the process of developing unclassified composite E1/E2/E3 waveforms for use by industry that can serve as the basis for threat waveform specifications and assessments of EMP; this is one of the recommendations from the NERC EMP Task Force report.

FERC and NERC Staff Report - *The South-Central United States Cold Weather Bulk Electric System Event of January 17, 2018*

Mr. Crissman reported that FERC and NERC representatives will be presenting their joint staff report on the January 2018 Extreme Cold Weather Event at the December 4, 2019 NPCC Annual Meeting of the Members.

Mr. Bodkin added that NERC initiated a Cold Weather Standard Authorization Request in response to the report, and that a SAR Drafting Team has been formed.

NPCC Distributed Energy Resources Forum

Mr. Crissman said that the NPCC Governmental/Regulatory Affairs Advisory Group meeting that follows the RCC meeting will focus on NPCC Distributed Energy Resources initiatives and activities and that interested RCC members are welcome to attend.

2020 - 2021 RCC Work Plan

Mr. Crissman reminded the RCC that the review and approval of the proposed 2020 - 2021 RCC Work Plan will take place following the RCC's approval of the proposed NPCC Task Force 2020 – 2021 Work Plans later in the meeting.

RCC Scope

Mr. Crissman noted that consideration of the updated RCC Scope is part of the consent Agenda. The RCC Scope was revised to reflect the resilience activities underway by the Task Forces.

2020 RCC Roster

Mr. Fedora referred the RCC to the 2020 RCC Roster provided in the Agenda package; the roster will be acknowledged at the December 4, 2019 NPCC Annual Meeting of the Members.

2020 NPCC Meeting Locations & Dates

Mr. Fedora confirmed the following dates and locations for the 2020 RCC meetings:

- ✓ Thursday February 27, 2020 - New York Times Square Residence Inn by the Marriott;
- ✓ Wednesday May 27, 2020 - New York Times Square Residence Inn by the Marriott;



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- ✓ Wednesday September 2, 2020 - New York Times Square Residence Inn by the Marriott; and,
- ✓ Tuesday December 1, 2020 - Albany Marriott, 189 Wolf Rd, Albany NY (in conjunction with the NPCC 2020 Board/Annual/General Meetings)

Consent Agenda

The Reliability Coordinating Committee unanimously approved the following Consent Agenda items (written proxy in favor):

September 4, 2019 Meeting Minutes

Approved as provided in the Agenda package, with the changes as noted at the meeting.

RCC Membership Changes

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

Sector 1 - Transmission Owners

- ✓ Martin Huang, P. Eng. of Hydro One Networks, Inc. to serve as the representative.
- ✓ Deidre Altobell of Consolidated Edison Company of New York, Inc. to serve as the representative.

Sector 4 – Generator Owners

- ✓ Joel Plessinger of Entergy Nuclear Northeast, Inc. to serve as the alternate.

Task Force Roster Changes

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

Task Force on Coordination of Operation

- ✓ Tim Aliff will replace Ron Arness as a participant for the MISO.

Task Force on System Studies

- ✓ Carl Benker of Eversource succeeds Alex Rost of ISO-NE as Vice Chair
- ✓ Dan Schwarting succeeds Alex Rost as primary member, both of ISO-New England
- ✓ Alex Rost succeeds Brent Oberlin as alternate member, both of ISO-New England
- ✓ Dan Kopin succeeds Tracy MacNicoll as primary member, both of Utility Services, Inc.; Tracy MacNicoll to serve as an alternate member

Task Force on Infrastructure Security & Technology

- ✓ Rob Antonishen succeeds David Dunn as member for the Ontario IESO
- ✓ Michael Tetto to serve as an alternate for Eversource Energy
- ✓ Rob Antonishen to serve as member of for the Ontario IESO
- ✓ Zach Taylor to serve as an alternate for the New York ISO
- ✓ Danny Cvijic to serve as alternate for NPCC
- ✓ Kristi Honey to serve as an alternate for Ontario Power Generation Inc.



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- ✓ Kip Winrow will no longer serve as an alternate for Consolidated Edison Company of New York, Inc.
- ✓ Daniel Camp will no longer serve as an alternate for Eversource Energy
- ✓ Rob Antonishen will no longer serve as a member for Ontario Power Generation Inc.
- ✓ Warren Harris will no longer serve as an alternate for Utility Services Inc.

CO-2 Operator Trainers Working Group

- ✓ Andrew Salter no longer serves as an alternate member for the Ontario IESO

System Operations Managers Working Group (CO-8)

- ✓ Marie-Eve Bergeron to serve as a second alternate representative for Hydro-Quebec TransÉnergie
- ✓ Tim Aliff will replace Ron Arness as an alternate representative for the MISO

CO-10 System Operational Tools Working Group

- ✓ Pablo Gutierrez succeeds Nick Zourntos of the Ontario IESO as member

Restoration Working Group (CO-11)

- ✓ Matt Antonio to serve as primary member for National Grid

CO-12 Operations Planning Working Group (CO-12)

- ✓ Courtney Fasca succeeds Scot Rolfe as the primary member for ISO-New England
- ✓ Joseph Cohen to serve as an alternate member for ISO-New England
- ✓ Salahuddin Masjedi succeeds Yannick Roy as alternate member for Hydro-Quebec TransÉnergie

SS-38 LMWG Load Modeling Working Group

- ✓ Catherine Bittar to serve as an alternate member for Hydro-Québec TransÉnergie
- ✓ Edward Davidian of the Ontario IESO succeeds Simon Couture-Gagnon of Hydro-Quebec TransÉnergie as Chairman

IST-2 Telecommunications Working Group

- ✓ Danny Cvijic to serve as an alternate for NPCC

IST-4 Working Group on Cyber Security

- ✓ David Cadregari of Rochester Gas & Electric Corporation succeeds Rob Antonishen of Ontario Power Generation Inc. as Chair
- ✓ Rob Antonishen will no longer serve as a member of Ontario Power Generation Inc.

2019 Interim Area Transmission Reviews

- ✓ New York Area
Approved as provided in the Agenda package.
- ✓ Ontario Area
Approved as provided in the Agenda package.



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- ✓ Maritimes Area
Approved as provided in the Agenda package.

2019 Interim Reviews of Resource Adequacy

- ✓ New York Area
Approved as provided in the Agenda package.
- ✓ New England Area
Approved as provided in the Agenda package.
- ✓ Ontario Area
Approved as provided in the Agenda package.
- ✓ Quebec Area
Approved as provided in the Agenda package.

2020 NPCC Criteria Compliance Enforcement Program Implementation Plan

Approved as provided in the Agenda package.

RCC Scope

Approved as provided in the Agenda package, with a typographical correction noted.

Items for Approval

2019 Maritimes Comprehensive Review of Resource Adequacy

Mr. Brown presented the 2019 Maritimes Area Comprehensive Review of Resource Adequacy provided in the Agenda package. The Review, covering the period from 2020 through 2024, demonstrated that the Maritimes Area complies with the NPCC resource 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 agreed with the Review's conclusion that the Maritimes complies with the NPCC resource adequacy criterion and recommended RCC approval of the 2019 Maritimes Area Comprehensive Review of Resource Adequacy.

The RCC unanimously approved the 2019 Maritimes Comprehensive Review of Resource Adequacy provided in the Agenda package. (written proxy in favor).

NPCC Directory No. 4 – System Protection Criteria

Mr. Dunbar reviewed the changes to the revised Regional Reliability Directory No. 4 *System Protection Criteria* provided in the Agenda package. He explained that the Task Force on System Protection (TFSP) considered emerging protection technologies, industry lessons learned and the impact of the evolving NERC Standards on the criteria in its review of Directory No. 4.



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In accordance with the recommendations of the Strategic Review of the NPCC Criteria, the TFSP also solicited feedback from the Membership on the cost effectiveness and contribution to system resilience of the individual criteria attributes contained in Directory No. 4. The results of this cost effectiveness evaluation have been documented in the permanent review record of Directory No. 4.

The revised draft of Directory No. 4 was posted to the Open Process for two 45-day comment periods and the TFSP has responded to all comments.

The RCC unanimously recommended balloting the revised NPCC Regional Reliability Directory No. 4 – *System Protection Criteria* for Full Member approval (written proxy in favor).

NPCC 2019-2020 Winter Reliability Assessment

Messrs. Klaube and Fedora presented the results of the 2019-2020 NPCC Winter Reliability Assessment provided in the Agenda package. It was noted that the Task Force on Coordination of Operation is reviewing the findings and recommendations of the 2019 FERC-NERC Staff Report, *The South-Central United States Cold Weather Bulk Electric System Event of January 17, 2018*, to determine appropriate NPCC follow-up actions.

The *NPCC 2019-2020 Winter Reliability Assessment* was approved by the Task Force on Coordination of Operation on November 15, 2019; the corresponding *NPCC 2019-2020 Winter Multi-Area Probabilistic Reliability Assessment* was approved by the Task Force on Coordination of Planning on November 13, 2019 and is included as Appendix VIII.

The RCC unanimously approved the NPCC 2019-2020 Winter Reliability Assessment provided in the Agenda package. (written proxy in favor).

Modification of the Ontario Saunders Type I Special Protection System (SPS)

Mr. Farahmand explained that the Ontario IESO requested approval of a change to the Saunders Type I SPS. This SPS protects 230 kV circuits in the St. Lawrence area from overloading as well as the units in the area including the New York Moses plant from potential loss of synchronism if there are certain combinations of outages on critical elements in the New York Control Area and the IESO Control Area. The modified SPS would add the capability to arm the Nation Rise wind farm for rejection in response to the loss the 230 kV circuits in the area. The wind farm has a total capacity of 100 MW.

In accordance with the NPCC Regional Reliability Reference Directory No. 7, *Special Protection Systems*, the Task Force on System Studies reviewed the Ontario IESO modified



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Saunders Generation Rejection and Intertie Cross-Trip SPS No. 237, which is currently classified as a Type I SPS and concurs with the Ontario IESO that the classification of the SPS will remain as Type I after the proposed modifications to the SPS are implemented. The Type I classification for this SPS is due to a possible significant adverse impact outside of the local area when the SPS fails to operate.

The NPCC Task Force on Coordination of Operation, at its meeting on August 14-15, 2019, reviewed the operability of the modified Type I Saunders SPS and concluded that it can be operated in a secure and reliable manner and recommended the approval of this Special Protection System.

At the May 14-16, 2019 and September 17-19, 2019 Task Force on System Protection (TFSP) meetings, EDPR Nation Rise presented the proposed modification to the Ontario IESO Saunders Type I SPS scheme with the addition of the Nation Rise Wind Farm to the Saunders SPS. Based on the information presented, the TFSP accepted the statement made by EDPR Nation Rise that the protections associated with this modification are designed in conformance with the intent of the criteria in NPCC Directory No.7 *Special Protection Systems*.

The Task Force on Coordination of Planning (TFCP) reviewed the Task Force's findings at its November 13-14, 2019 meeting. The TFCP also reviewed this modified SPS and agreed that the SPS remains in conformance with NPCC Reliability Reference Directory No. 1 *Design and Operation of the Bulk Power System*", and recommended RCC approval of this modified Type I SPS.

Mr. Bodkins asked about the status of moving away from SPS in favor of NERC Remedial Action Scheme (RAS) definition. Ms. Brake responded that the TFCP has a work plan to consolidate input on this matter from all the Task Forces. The TFCP is working with the Task Force on System Protection regarding the methodology and process for inclusion in NPCC Directory No. 7, *Special Protection Systems*.

After discussion, the RCC approved the modification of the Ontario Saunders Type I Special Protection System provided in the Agenda package (written proxy in favor, with Consolidated Edison Company of New York, Inc. opposed (Sectors 1,3,4 and 5)).

2020 - 2021 Task Force Work Plans

The Task Force chairs highlighted their respective 2020 - 2021 Task Force Work Plans provided in the Agenda Package.



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Mr. Fedora described a correction in the Task Force on Coordination of Planning 2020-2021 Work Plan associated with the timing of the NERC Probabilistic Assessment in 2020 and the NPCC Tie Benefits Report in 2021.

Mr. Fedora also noted a clarification to the Task Force on System Studies 2020-2021 Work Plan for 2020 regarding the NPCC Overall Transmission Review.

Mr. Henderson provided a general comment that the Task Forces should be engaged early in the Board's strategic process so that timely NPCC member technical input and review can be considered.

Mr. Garg observed that related NERC and Canadian Electric Association input should also be considered. Mr. Wegh asked Mr. Henderson to clarify his comment.

Mr. Henderson responded that NPCC has a number of Board directives that eventually become part of the Task Force work plans. He encouraged NPCC to make sure those directives are brought to the Task Forces and Working Groups with sufficient time so they would have an opportunity to review and improve/inform the final product and help NPCC through some of the items, as required. He mentioned he has brought up these concerns in previous RCC meetings and that, in terms of the Board items themselves, some wider robust discussions at the RCC would be in order so that what is developed results in useful studies for the NPCC membership.

Mr. Schwerdt thanked Mr. Henderson for his comments, suggesting that the RCC and the RCC leadership plan for more strategic discussions at RCC meetings around the tactical initiatives in the upcoming year, providing further time on RCC Agendas in general regarding the strategic initiatives within NPCC.

Mr. Schwerdt recalled at last year's December RCC meeting there was a comment made during the approval of the Task Forces and RCC work plans regarding how they had the opportunity to align with the Board's strategic discussions in the September time-frame. The Board strategy session is meant to lay out a near-term set of NPCC reliability initiatives and also inform the long-term ERO Enterprise strategies. Taking account of the discussion at last December's RCC meeting, the Board authorized the sharing of an initial draft of the strategic plan with the Task Force Chairs, to help inform the development of their respective Task Force work plans; the extent of that effort can be seen in the Task Force work plans before the RCC today. This is the intent this year, and moving forward, to address the issues previously brought up and brought up today.



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Mr. Henderson thanked Mr. Schwerdt for those first steps taken, and said they should be recognized as but first steps and that additional steps can be taken going forward, and particularly having the ability to utilize the vast expertise of NPCC's membership, that can only benefit all. Mr. Schwerdt agreed, recognizing the collaborative effort; things are changing very rapidly, with reliability threats coming from different directions.

Mr. Crissman noted when the initial draft strategic plan was distributed to the Task Force Chairs, they were asked not to further distribute it, but to review it, and use it to facilitate discussions with their respective Task Forces, regarding how the information would impact their work plans. He suggested this approach could be improved moving forward.

Mr. Bodkin stated that he feels that the RCC should be more of a policy discussion group, rather than a technical group; it would be more appropriate for the RCC to discuss policy issues, such as related to interdependencies between fuel types, increased cyber and physical security risks, and the Align Tool, for example, rather than pushing those discussion down to the Task Forces. He suggested he would like to see more of these type policy discussions at future RCC Agendas, and then reaching out to the Task Forces on associated related technical issues.

Mr. Schwerdt responded that the RCC is the top technical committee in NPCC, and there is no intent, structurally, to push policy issues down to the Task Force level; recognizing that some tactical issues in the strategic plan touch both policy and technical considerations. He agreed that the RCC should be discussing the policy issues, with the Task Forces addressing the technical issues. It's not just the RCC approval process, but the discussion around where the industry is going, and how future resource adequacy would be assessed – these are examples of the types of issues that the RCC would look to discuss, and offer insight into how to continue as an organization that provides for reliability. Mr. Bodkin agreed, and said he looks forward to future RCC Agendas organized along these lines.

The RCC then unanimously approved (written proxy in favor) the 2020 - 2021 Task Force Work Plans as provided in the Agenda package, with the changes noted.

2020 – 2021 RCC Work Plan

Following the review and approval of the NPCC Task Forces' respective 2019 - 2020 Work Plans, the RCC reviewed its 2020 – 2021 Work Plan.

Mr. Fedora explained that the RCC Work Plan was revised for 2020 - 2021 to be consistent with the NPCC 2020 Business Plan & Budget (accepted by FERC on October 17, 2019); the RCC Scope (to be considered for approval by the NPCC Board of Directors at their January 29, 2020 meeting), the ERO 2019 ERO Reliability Risk Priorities Report (accepted by the



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NERC Board of Trustees on November 5, 2019) and the ERO Enterprise Operating Plan (approved by the NERC Board of Trustees on November 9, 2017).

He noted that currently the ERO Enterprise is transitioning away from the use of the ERO Enterprise Operating Plan by replacing it through updates to the ERO Enterprise Long-Term Strategy and additional information in the NERC and Regional Entity Business Plan and Budgets.

The RCC Work Plan for 2020 – 2021 was updated to reflect the due dates of projects anticipated to be brought for RCC approval, and was informed by the latest draft of the Working Draft NPCC Strategic Plan 2020-2023.

Mr. Bodkin said he did not see specific mention in the RCC Work Plan for 2020 – 2021 regarding consideration on how ERO Enterprise tools may impact the stakeholders (e.g. the Align Tool). Mr. Schwerdt responded that not everything should come to the RCC. Specifically, the NPCC Compliance Committee has actively discussed the Align Tool and the DER Forum is under the auspices of NPCC Regional Standards Committee. However, all Committees report to the NPCC Board.

Mr. Bodkin stated that some RCC discussion and awareness from a higher-level policy point of view of this topic would be beneficial.

Mr. Fedora suggested that the concept could be added under Goal 3, On-going Activities, first bullet. The RCC then discussed the difference between data tools (such as NERC MIDAS, TADS, GADS, etc.) and analytic tools (as used in assessment simulations). Rather than edit the RCC Work Plan for 2020 -2021 ‘by committee’ at the meeting, the RCC agreed to the suggestion that the RCC Work Plan for 2020 – 2021 will be modified to include consideration around tools, once the concept is further clarified.

The RCC then unanimously recommended (written proxy in favor) that the 2020 - 2021 RCC Work Plan as provided in the Agenda package be submitted for NPCC Board approval.

Items for Discussion

NERC Agenda Items

Joint Session: Planning, Operating & Critical Infrastructure Protection Committee

Mr. Oks reviewed the following presentations that are scheduled for the December 10, 2019 Joint Session to be included in the Agenda package:

- ✓ EMP Task Force report;



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- ✓ Reliability & Security Technical Committee Update;
- ✓ DOE North American Energy Resilience Model;
- ✓ 2019-20 NERC Winter Assessment; and,
- ✓ Section 1600 Supply Chain Data request.

Operating Committee (OC) Meeting

Mr. Oks then highlighted the following items from the December 10-11, 2019 OC Agenda included in the Agenda package:

Approval Items:

- ✓ Reliability Reference Documents:
 - Time Error Monitoring;
 - GMD Monitoring;
 - Dynamic Transfer; and,
 - Integrating Reporting ACE with NERC Reliability Standards.
- ✓ Events Analysis Process Document.

Informational Items:

- ✓ July 13, 2019 West Side outage presentation by Con Edison
- ✓ WECC Reliability Coordinator Updates.

Planning Committee (PC) Meeting

Mr. Fedora highlighted the following items from the draft December 10-11, 2019 Planning Committee Agenda included in the Agenda package:

Items for Approval/Endorsement

- ✓ Posting Reliability Guideline: *BPS Perspectives for Implementing IEEE 1547-2018*;
- ✓ Posting Misoperations Information Data and Analysis System – Data Reporting Instruction;
- ✓ White Paper: *Inverter-Based Resource Disturbance Monitoring*; and,
- ✓ White Paper: *Applicability of Transmission-Connected Reactive Devices*.

Critical Infrastructure Protection Committee (CIPC)

Mr. Hogue noted the following items from the December 10-11, 2019 CIPC Agenda included in the Agenda package.

Voting Items:

- ✓ Supply Chain Working Group – Security Guidelines:
 - Vendor Identified Incident Report Measures; and,
 - Risk Related to Cloud Service providers.

Informational/Discussion Topics:

- ✓ Reliability & Security Technical Committee Update;
- ✓ Supply Chain Compliance;
- ✓ Standards Development:



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- 2016-02 Modification to CIP Standards
- 2019-02 BES Cyber System Information Access Management
- 2019-03 Supply Chain Risks
- ✓ Overview of the Universal Utility Data Exchange Project- (Pacific Northwest National Laboratory).

2019 NPCC Corporate Goals Deliverables

The following 2019 NPCC Corporate Goal reports included in the Agenda package were presented and discussed:

Goal III-1 - Recommendations for System Resilience Metrics

Mr. Rufrano reported on the development of recommendations for system resilience metrics provided in the Agenda package. He explained how the comparisons between 'pseudo' event Severity Risk Index (eSRI) categories based on NPCC Extreme Contingency's testing with the annual actual documented max event eSRIs can be used as a relative measure of BES impact; the change in trend margin serves as an indicator of resilience level.

Goal III-2 - Reducing risk of Protection System Misoperations

Mr. Sahiholamal reported on the effectiveness of the use of the Misoperation Risk Index (MRI) Score (f/n/a the Entity MCM Score) in reducing protection system misoperations provided in the Agenda package. He explained that NPCC has shared this innovative approach to analyzing protection system misoperations with NERC, other Regional Entities and industry groups, including the North American Transmission Forum (NATF). As a result of this outreach, SERC and RF have implemented the NPCC MRI Score for their regions and the results of the MRI assessments have been shared for further analysis. Further collaboration is underway with the ERO Enterprise to identify opportunities to reduce protection system misoperations using the Entity MRI Score methodology.

Goal III-3 - Dynamic Load Model for NPCC Underfrequency Load Shedding sensitivity analysis

Mr. Latulipe described the progress toward resolving the issues involving the use of a dynamic load model for the NPCC UFLS sensitivity analysis provided in the Agenda package. The SS-38 Working Group on Inter-Area Dynamic Analysis received technical assistance from Power World Corporation to resolve issues involving the use of the CMLD dynamic load model for the NPCC UFLS sensitivity analysis.



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Goal IV-1 - Facilitate the Integration of Distributed Energy Resources (DER) - Coordination of Data at the T-D Interface

Mr. Lombardi described how the collaboration with transmission and distribution entities resulted in the development of a plan addressing the steps needed to improve the coordination of the identified priority gaps in distribution and transmission planning.

His report, included in the Agenda package, highlighted the related IEEE and Argonne National Laboratory activities related to integrated T & D planning, including the NERC System Planning Impacts from Distributed Energy Resources Working Group (SPIDERWG) Modeling Subgroup's Reliability Guideline: *DER Data Collection for Modeling*.

Goal IV-2 - NPCC Long-Range Energy Security Analysis

Mr. Fedora summarized the findings illustrating the range of LOLE impacts from scenario-based analyses corresponding recommended reliability risk level provided in the Agenda package. He illustrated how the level of reliability risk can be measured by comparing the amount of Area Loss of Load Hours (LOLH) for a defined period associated with the estimated need for emergency operating procedures between Base Case and identified Severe Case assumptions/scenarios.

Goal IV-3 - Gas-Electric Inter-dependency Tabletop Exercise – Lessons Learned

Mr. Oks summarized the 'lessons learned' provided in the Agenda package from the NPCC Table Top Exercise to identify operational issues associated with electric and gas system interdependencies. In collaboration with Argonne National Labs, gas sector representatives, several NPCC RCs and PJM, an electric and gas inter-dependency training table top exercise was held on October 8, 2019 at the New York ISO's office. The exercise involved in-person participation of the operations departments representatives from the interstate pipelines, Local Distribution Companies, Gas-Electric utilities, Reliability Coordinators (from the NPCC Region and PJM), Transmission Owners/Operators organizations, representatives of the Northeast Gas Association and Interstate Natural Gas Association of America and was facilitated by representatives from the Argonne National Lab.

Goal V-1 - Develop Confidential Physical Security Guidance

Mr. Scalici summarized the development of confidential guidance regarding better practices and technologies under a confidentiality agreement to physical security experts at registered entities. He explained that the NPCC Physical Security Work Group developed a confidential "smart practices" guidance document. The document outlines physical security risk mitigation approaches through identification of what the subject matter experts in the group consider smart security practices, leading and emerging technologies.



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In response to a question raised, he indicated that the NPCC Physical Security Working Group is investigating ways to allow for a wider distribution of their findings to other stakeholders while protecting its confidentiality.

The RCC reiterated the need for the close coordination of Task Force activities during the development of future NPCC Corporate Goals, in order to maximize value and avoid duplication of effort.

Cyber & Physical Security Update

In the interest of time, Mr. Crissman referred the RCC to the Cyber & Physical Security information provided in the Agenda package, and suggested contacting Mr. Hogue with questions or for additional information.

Informational Items

Mr. Crissman then referred the RCC to the other Informational Items materials provided in the Agenda package.

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

Next RCC Meeting Date

Thursday, February 27, 2020

Location

New York Times Square Residence Inn by the
Marriott, New York, New York

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 Skučas, Esq.

and

Federal Energy Regulatory Commission – Andrew Dodge, David Ortiz, David O'Connor,
Juan Villar



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La Régie de L'Énergie – Christian Garneau
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.