



Rapport annuel 2022 sur l'application du Code de conduite du Coordonnateur de la fiabilité

Déposé à la Régie de l'énergie

19 juin 2023

Rapport annuel de 2022 sur l'application du *Code de conduite du Coordonnateur de la fiabilité au Québec*

Le 19 juin 2023

La direction principale – Contrôle des mouvements d'énergie et exploitation du réseau a été désignée en tant que Coordonnateur de la fiabilité au Québec (le « Coordonnateur ») par la Régie de l'énergie (la « Régie ») dans sa décision D-2021-064. Le *Code de conduite du Coordonnateur de la fiabilité au Québec* (le « *Code de conduite* ») adopté par la Régie prévoit à son article 5.4 qu'un rapport annuel sur l'application du *Code de conduite* effectué auprès de la vice-présidente exécutive et cheffe des infrastructures et du système énergétique ainsi qu'au vice-président - Opérations et maintenance doit être déposé auprès de la Régie et publié sur le site Internet du Coordonnateur. Conformément à la décision D-2011-132 rendue par la Régie le 31 août 2011, ce rapport annuel est signé par la directrice principale — Contrôle des mouvements d'énergie et exploitation des réseaux (la « DPCMEER »). 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.

Application du *Code de conduite* en 2022

La DPCMEER, 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 DPCMEER 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 2022, la DPCMEER n'a apporté aucune modification au site du Coordonnateur concernant le *Code de conduite*. La DPCMEER ne rapporte également aucune allégation de dérogations au *Code de conduite* à la section plainte sur le site du Coordonnateur.

Depuis sa décision D-2021-064 du 18 mai 2021, la Régie demande au Coordonnateur d'assujettir à l'application du *Code de conduite* tout le personnel sous l'autorité du Coordonnateur, qu'ils exercent des tâches reliées au rôle du Coordonnateur ou non, ainsi que le personnel des autres directions d'Hydro-Québec effectuant des tâches reliées au rôle du Coordonnateur.

Dans le cadre de sa décision D-2022-146, « [...] la Régie prend acte de l'intention du Coordonnateur de présenter, lors du dépôt du rapport annuel 2022 sur l'application de son Code de conduite ou lors d'une rencontre administrative, les rôles et responsabilités, les organigrammes et listes d'unités en lien avec les fonctions remplies par Hydro-Québec en matière de fiabilité, en vigueur depuis la mise en place d'une nouvelle structure organisationnelle le 28 février 2022 ». À cet effet, la DPCMEER intègre à son rapport annuel 2022 une annexe supplémentaire contenant la liste des unités sous son autorité et celles réalisant des tâches reliées au rôle de Coordonnateur et décrivant les rôles et responsabilités de chacune de ces unités.

Les annexes suivantes font partie du rapport annuel sur l'application du *Code de conduite* :

- Annexe A : illustration des organigrammes d'Hydro-Québec, et du groupe Technologies numériques d'Hydro-Québec identifiant les unités dont le personnel est assujéti au *Code de conduite*.
- Annexe B : présentation de la liste des unités sous l'autorité du Coordonnateur et celles réalisant des tâches reliées au rôle de Coordonnateur.
- Annexe C : sommaire des représentations d'Hydro-Québec aux réunions du NPCC pour l'année 2022.
- Annexe D : présentation de la liste des unités sous l'autorité du Coordonnateur et celles réalisant des tâches reliées au rôle de Coordonnateur décrivant leurs rôles et responsabilités.

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

Le contrôleur n'a relevé aucune piste d'amélioration pour l'année 2022.

Conclusion

À titre de directrice principale de la DPCMEER, je suis responsable de produire le présent rapport et d'en assurer le suivi. En 2022 le *Code de conduite* a été appliqué de façon conforme, et aucune dérogation, plainte ou problématique n'ont été portées à l'attention de la directrice principale.



Maryse Dalpé
Directrice principale
DPCMEER

**Attestation de conformité
Code de conduite du Coordonnateur de la fiabilité
Année 2022**

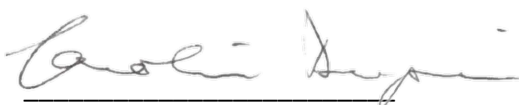
En 2022, dans la volonté d'adapter ses façons de faire aux réalités de la transition énergétique, l'entreprise a aboli les divisions pour évoluer vers le concept d'une Hydro. Elle poursuit néanmoins ses activités de transport d'électricité au sens de la Loi sur la Régie de l'énergie. L'attestation du Code de conduite du Coordonnateur (le « Code ») pour l'année 2022 tient compte de cette évolution et continue de cibler les équipes responsables des activités de transport comme elle le faisait au cours des années passées.

Le Code a pour but de régir les actions ou les décisions du personnel afin qu'en toute circonstance la fiabilité du réseau de transport d'électricité 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 2022, l'attestation de conformité au Code est signée par la directrice p.i. – Conformité d'entreprise.

Le travail de la DCE 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. Sur la base du travail effectué, la DCE atteste que le Code a été appliqué de façon satisfaisante tout au long de l'année 2022.



Caroline Dupuis
Directrice p.i. – Conformité d'entreprise
Direction - Conformité d'entreprise
Groupe - Affaires corporatives, juridiques et réglementaires, et gouvernance

Le 8 juin 2023

N° Code de conduite du Coordonnateur
de la fiabilité

(Code de classement)

Date Le 19 juin 2023

Destinataires **Mme Claudine Bouchard**
Vice-présidente exécutive,
Infrastructures et système énergétique
Édifice Jean-Lesage, 20^e étage
Montréal, QC
H2Z 1A4

Expéditeur **Maryse Dalpé**
Directrice principale
DPCMEER
Complexe Desjardins, 13^e étage
Montréal, QC
H5B 1H7

M. Régis Tellier
Vice-président,
Opérations et maintenance
Édifice Jean-Lesage, 18^e étage
Montréal, QC
H2Z 1A4

Objet **Rapport annuel 2022 sur l'application du Code de conduite du Coordonnateur de la fiabilité au Québec (le « Code de conduite »)**

Conformément à l'article 5.4 du Code de conduite, vous trouverez ci-joint le rapport annuel 2022 sur l'application du Code de conduite ainsi que l'attestation de conformité signée.

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

Sincères salutations,



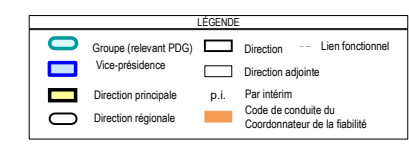
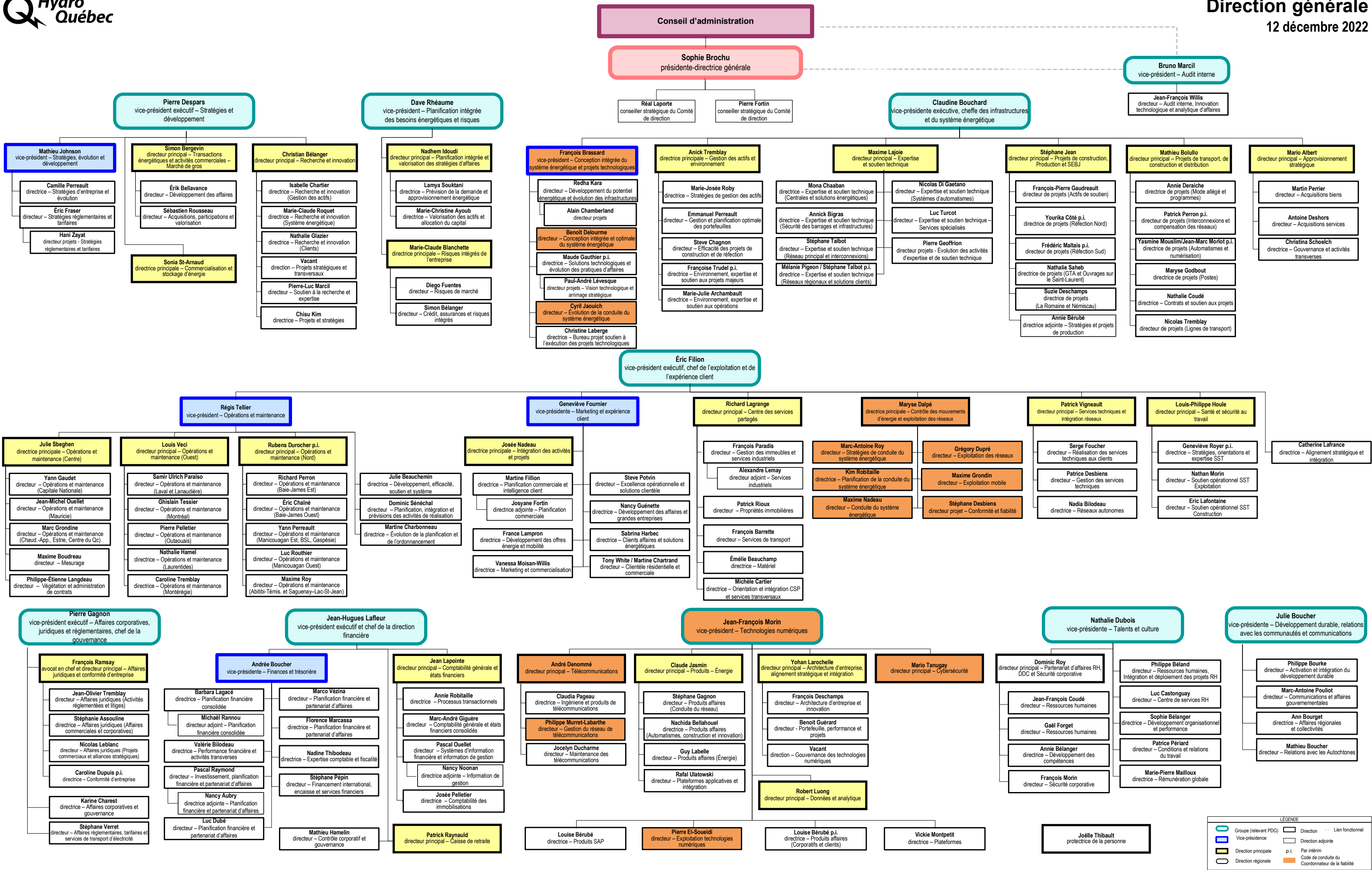
Maryse Dalpé

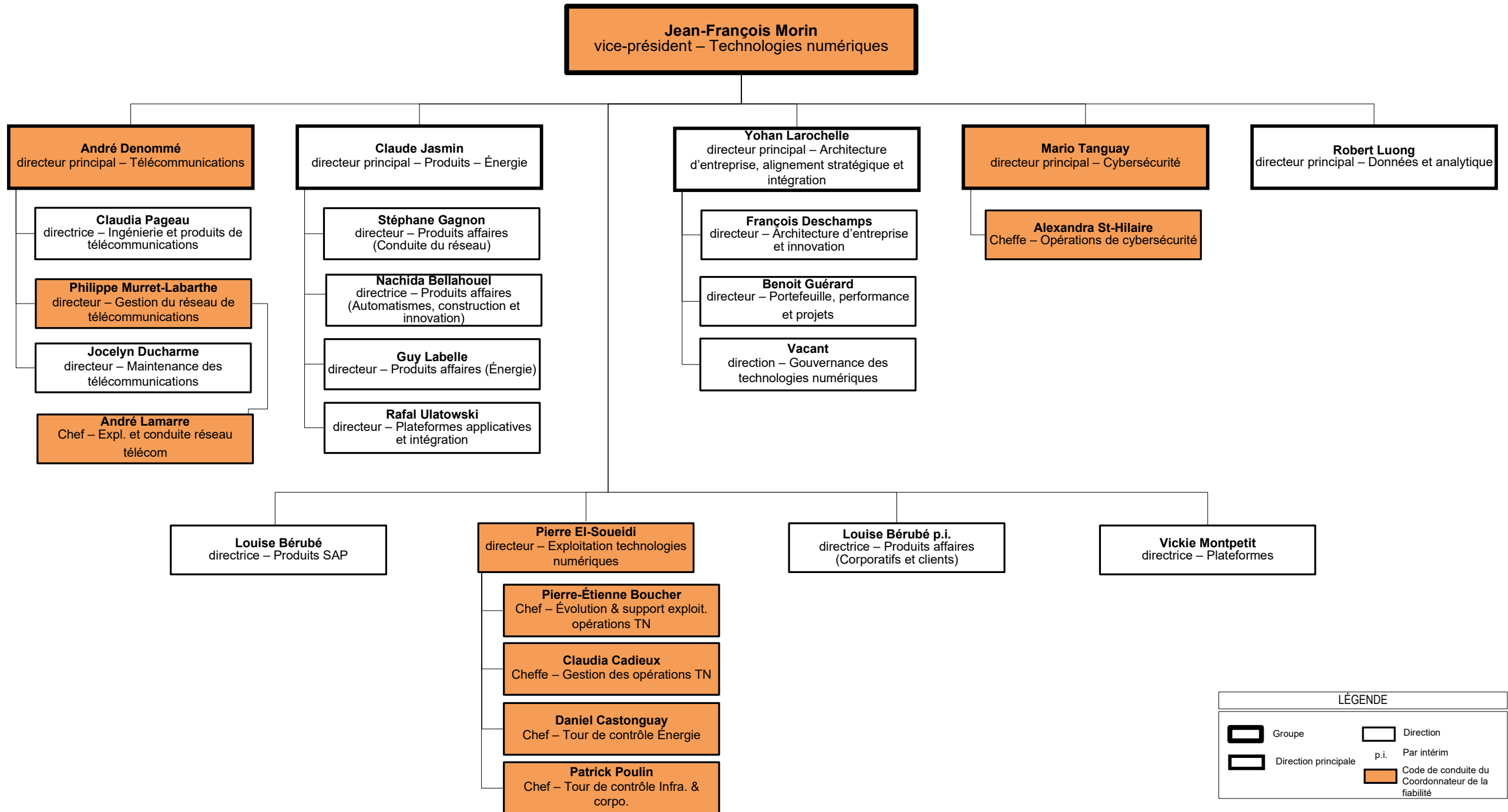
CC. Stéphane Desbiens, directeur – Conformité et fiabilité





P.j. Rapport annuel 2022 sur l'application du *Code de conduite du Coordonnateur de la fiabilité*

Annexe A

**Organigrammes identifiant les unités
dont le personnel est assujéti au Code
de conduite**





LÉGENDE	
	Groupe
	Direction
	p.i. Par intérim
	Code de conduite du Coordonnateur de la fiabilité

Annexe B

**Liste des unités sous l'autorité
du Coordonnateur de la fiabilité
et celles réalisant des tâches
reliées au rôle du
Coordonnateur de la fiabilité**

Liste des unités sous l'autorité du Coordonnateur de la fiabilité et celles réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité

Le tableau 1 suivant fournit la liste des unités sous l'autorité du Coordonnateur de la fiabilité et celles réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité et leur direction d'appartenance, suivant les organigrammes d'Hydro-Québec de l'annexe A du présent rapport annuel. La fréquence à laquelle des tâches reliées au rôle du coordonnateur sont exécutées, le cas échéant, est indiquée au tableau.

Tableau 1

Unités sous l'autorité du Coordonnateur de la fiabilité et celles réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité

Groupe Exploitation et expérience client							
Direction principale – Contrôle des mouvements d'énergie et exploitation des réseaux							
Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> • Stratégies, performance & projets d'affaires 	Stratégies, performance & projets d'affaires	Contrôle des mouvements d'énergie et exploitation des réseaux					X
<ul style="list-style-type: none"> • Affaires réglementaires du Coordonnateur de la fiabilité, analyse et encadrements • Mise en conformité 	Affaires réglementaires du Coordonnateur de la fiabilité et conformité	Conformité et fiabilité	X				
<ul style="list-style-type: none"> • Bureau de conformité normes de fiabilité • Gouvernance et relations d'affaires 	Expertise et conformité des normes de fiabilité						

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> • Soutien Opérations – Intégr. act. exploit. • Soutien Opérations – Stratégies BDD • Soutien Opérations – Stratégies Est • Soutien Opérations – Stratégies Nord • Soutien Opérations – Stratégies Sud 	Stratégies d'exploitation & d'intégration des réseaux	Stratégie de conduite du système énergétique					
<ul style="list-style-type: none"> • Optimisation & modélisation mathématique • Projets d'évolution système énergétique 	Stratégies projets d'évolution du système énergétique		X				
<ul style="list-style-type: none"> • Expertise de contrôle du réseau • Soutien technique – Conduite • Stratégies & encadrements provinciaux • Stratégies & encadrements régionaux 	Stratégies système énergétique						

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> Centre de contrôle du réseau 	Programmation et contrôle du réseau	Contrôle du système énergétique	X				
<ul style="list-style-type: none"> Coordination des mesures d'urgence 	Coordination des mesures d'urgence						
<ul style="list-style-type: none"> Centre de coordination du réseau 	Coordination du réseau						
<ul style="list-style-type: none"> Prévision des apports et de la demande Qualité données, météo & trans. énerg. 	Prévision & optimisation de la conduite du système énergétique	Planification de la conduite du système énergétique	X				
<ul style="list-style-type: none"> Plan des retraits et stratégies opérationnelles Planification de la production 	Planification du système énergétique						
<ul style="list-style-type: none"> Planification des retraits CED Est Planification des retraits CED Ouest Planification des retraits CT Nord-Est Planification des retraits CT Sud-Ouest Planification des retraits RTP 	Gestion intégrée des retraits						

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> • CED – Richelieu • CT – Chicoutimi (Opé) • CT – Chicoutimi (Rép) • CT – Trois-Rivières (Opé) • CT – Trois-Rivières (Rép) 	Exploitation des réseaux – Centre	Exploitation des réseaux					
<ul style="list-style-type: none"> • CED Québec • CED Rimouski • CT Baie-Comeau (Opé) • CT Baie-Comeau (Rép) • CT Québec (Opé) • CT Québec (Rép) 	Exploitation des réseaux - Est			X	X	X	
<ul style="list-style-type: none"> • CED Laurentides • CT Rouyn (Opé) • CT Rouyn (Rép) • CT St-Jérôme (Opé) • CT St-Jérôme (Rép) 	Exploitation des réseaux – Nord-Ouest						
<ul style="list-style-type: none"> • CED Montréal • CT Montréal (Opé) • CT Montréal (Rép) 	Exploitation des réseaux – Sud-Ouest						

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> • Exploitation Abitibi • Exploitation Estmain / Sarcelle / LG1 • Exploitation LG2 • Exploitation Montréal Est / Montérégie • Exploitation Montréal Ouest / Suroît • Exploitation Némiscau / Radisson 	Exploitation réseaux Secteur MTL/Nord-Ouest	Exploitation des mobiles					
<ul style="list-style-type: none"> • Bas St-Maurice / Joliette • Exploitation Haut St-Maurice / Trois-Rivières • Exploitation Matapédia • Exploitation Richelieu / Bécancour • Exploitation Rive-Nord de Québec • Exploitation Rive-Sud de Québec 	Exploitation réseaux Secteur Centre - Est						X

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> • Exploitation Beauharnois A • Exploitation Beauharnois B • Exploitation Carillon / RDP • Exploitation Gatineau • Exploitation Laval / Laurentides • Exploitation Les Cèdres • Exploitation Outaouais 	Exploitation réseaux Secteur Sud - Ouest	Exploitation des mobiles					
<ul style="list-style-type: none"> • Exploitation Bas du Complexe • Exploitation Haut du Complexe • Exploitation LA1 – Brisay – LG4 • Exploitation LG3 – Péribonka • Exploitation Manicouagan • Exploitation Milieu du Complexe • Exploitation Romaine • Exploitation Saguenay • Gestion de la relève Nord 	Exploitation réseaux Secteur Nord - Est						

Vice-présidence – Conception intégrée du système énergétique et projets technologiques							
Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> • Stratégie capacité et optimisation du système énergétique 	Stratégie capacité et optimisation du système énergétique	Conception intégrée et optimale du système énergétique	X				
<ul style="list-style-type: none"> • Expertise SRC – Fonctions de base 1 • Expertise SRC – Fonctions de base 2 • Expertise SRC – Fonctions de base 3 	Évolution des systèmes de conduite du réseau (Fonctions conduite)	Évolution de la conduite du système énergétique					
<ul style="list-style-type: none"> • Expertise SRC – Fonctions avancées 1 • Expertise SRC – Fonctions avancées 2 	Évolution des systèmes de conduite du réseau (Fonction fiabilité et contrôle)						
<ul style="list-style-type: none"> • Expertise SRC – Orientat. fonctionnelles • Expertise SRC – Orientat. techniques 	Évolution des systèmes de conduite du réseau (Orientation technique et fonctionnelle)			X			
<ul style="list-style-type: none"> • Org. & processus conduite 	Évolution projets technologiques du système énergétique						
<ul style="list-style-type: none"> • Expertise SRC – Fonctions de base • Expertise SRC – Fonctions avancées 1 • Expertise SRC – Fonctions avancées 2 	Évolution des systèmes de conduite du réseau (Fonctions distribution et intégration des RED)						

Vice-présidence - Technologies de l'Information et des communications							
Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> • Gestion des points de contrôle de cybersécurité • Centre de surveillance cybersécurité d'entreprise 	Opérations de cybersécurité	Cybersécurité d'entreprise	X				
<ul style="list-style-type: none"> • Évolution de l'exploitation, observ. & perf. TN • MEP, concil. & modél. des services TN 	Évolution & support exploit. des opérations TN	Exploitation technologies numériques	X				
<ul style="list-style-type: none"> • Gestion des probl. & contin. des serv. TN • Gestion Incidents & rel. Partenaires TN 	Gestion de l'exploitation TN						
<ul style="list-style-type: none"> • Centre d'exploitation du réseau Télécom. • Centre d'exploitation énergie TN 	Tour de contrôle Énergie						
<ul style="list-style-type: none"> • Centre d'exploitation TN • Contrôle des changements TN 	Tour de contrôle infra. & corpo.						
<ul style="list-style-type: none"> • Conduite du réseau de télécommunications • Conduite du réseau de télécommunication 1 	Gestion du réseau de télécommunications	DP-Télécommunications	X				



Annexe C

Représentation d'Hydro-Québec dans le cadre des rencontres 2022 au RCC du NPCC

Représentations d'Hydro-Québec au RCC du NPCC

En date du 23 août 2019, dans le cadre de la décision D-2019-101 en lien au dossier R-3996-2016 phase 2, 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 la décision stipulait :

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 la décision D-2019-101, le Coordonnateur déposait à la Régie le document HQCF11, document 1 indiquant qu'il déposera, lors du dépôt du rapport annuel, une nouvelle section contenant les dates des rencontres du RCC, ainsi que la documentation du comité RCC du NPCC diffusée à ses membres de même qu'à la Régie, telle que les ordres du jour des rencontres et le compte rendu de ces rencontres.

Dans le cadre du suivi de la décision D-2019-101 et D-2019-147 en date du 3 juin 2020, la Régie est satisfaite de la proposition du Coordonnateur en réponse à l'ordonnance du paragraphe 366 de la décision. Elle est d'avis que l'inclusion de ces informations au rapport annuel du Coordonnateur sera utile à ses activités régulières en 2020 et les années subséquentes. **En conséquence, elle accueille cette proposition.**

L'annexe C du rapport annuel du Code de conduite du Coordonnateur de la fiabilité ci-joint inclut les informations telles qu'exigées dans le suivi des décisions du dossier D-2019-101 et D-2019-147 de la Régie de l'énergie.

Rencontres d'Hydro-Québec au RCC du NPCC

Date	Dossiers à l'ordre du jour approuvés par le RCC	Commentaires
2 mars 2022		Aucune approbation de dossier ayant un impact au Québec.
8 juin 2022		Aucune approbation de dossier ayant un impact au Québec.
14 septembre 2022	<ul style="list-style-type: none"> • Directory No. 1 Implementation Plan. • Directory No. 5 – Reserve, Request for criteria Clarification. • 2021 CCEP Assessment Report. 	Le RCC approuve la recommandation.
6 décembre 2022	<ul style="list-style-type: none"> • TFSP Review of Mitigations for BPS Risk Reduction Implementation. • Directory No. 8 System Restoration. 	Le RCC approuve la recommandation.
16 décembre 2022		Aucune approbation de dossier ayant un impact au Québec.



**Comptes-rendus des réunions
dans le cadre des rencontres
2022 du RCC du NPCC**



June 9, 2022

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: Draft for Comment Minutes of the March 2, 2022 RCC Meeting

Sir / Madam:

Attached are the Minutes of the March 2, 2022 meeting of the NPCC Reliability Coordinating Committee, as approved at the June 8, 2022 RCC meeting.

Sincerely,

Michael R. Lombardi

Michael R. Lombardi
Director, Reliability Assessments

cc: NPCC Staff



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

Mr. Adam called the meeting of the Reliability Coordinating Committee (RCC), held by WebEx to order at 10:00 am.

Attendance

Officers of the Reliability Coordinating Committee

Gabriel Adam, Chair	Ontario IESO
Anie Philip, Co-Vice Chair	Long Island Power Authority
Michael Jones, Co-Vice Chair	National Grid

Sector 1 - Transmission Owners

Central Hudson Gas & Electric Corporation	Michael E. Ridolfino
	Damian Interrante - Alternate
	(via written proxy)
Central Maine Power Company	(proxy to Aleksandra Gofman)
Consolidated Edison Company of New York, Inc.	George Wegh
Eversource Energy	Ajay Garg - Alternate
Hydro-One, Inc.	Anie Philip
Long Island Power Authority	Abhinav Rawat
National Grid USA	Mark Domino
	Randy MacDonald
	(proxy to Frank Ronci)
	(via written proxy)
New Brunswick Power Corporation	Chris Milligan - Alternate
New York Power Authority	Nick Kowalczyk
New York State Electric & Gas Corporation	(via written proxy)
Nova Scotia Power, Inc.	(via written proxy)
Orange & Rockland Utilities, Inc.	Hantz Presume
Rochester Gas & Electric Corporation	
The United Illuminating Company	
Vermont Electric Power Company, Inc.	

Sector 2 – Reliability Coordinators

Hydro-Québec TransÉnergie	(proxy to Stéphane Desbiens)
ISO New England, Inc.	James Helton
New Brunswick Power Corporation	Scott Brown
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 Aleksandra Gofman)
Hydro-Quebec Distribution	Hakim Sennoun - Alternate
Long Island Power Authority	(proxy to Anie Philip)
National Grid	Mike Jones
New York Power Authority	(proxy to Frank Ronci)



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

Sector 4 Generation Owners

Consolidated Edison Company of New York, Inc.	(proxy to Aleksandra Gofman)
Dominion Energy, Inc.	Sean Bodkin
Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Salvatore Spagnolo - Alternate
NextEra Energy Resources	Allen D. Schriver
	Rigoberto Milla - Alternate
Ontario Power Generation	David Kwan - Alternate
Talen Energy Marketing	(proxy to Phil Fedora)
Vistra Energy Corporation	Ken Stell

Sector 5 – Marketers, Brokers, and Aggregators

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
Long Island Power Authority	(proxy to Anie Philip)
Utility Services of Vermont, LLC	Brian Robinson - Alternate

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

Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Shivaz Chopra

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

New York State Reliability Council, LLC	Roger Clayton
RLC Engineering	David Conroy

NPCC Staff

Charles Dickerson	President & Chief Executive Officer
Phil Fedora	Vice President Reliability Services and Chief Engineer
Brian Hogue	Information Systems & Security Management
Scott Nied	Vice President, Compliance
Jessica Hala	Director, Finance and Accounting
Damase Hebert	Associate General Counsel & Director, Enforcement
Andrey Oks	Director of Operations Coordination
Ruida Shu	Manager, Reliability Standards
Michael Lombardi	Director, Reliability Assessments
Quoc Le	Manager, System Planning
Rafael Sahiholamal	Manager, System Protection
Andreas Klaube	Senior Engineer, Operations Planning
Neeraj Lal	Manager, System Studies
Shayan Rizvi	Senior Reliability and Performance Analysis Engineer

Guests

Calvin Curry	Vice Chair, Task Force on Infrastructure Security & Technology
Edward Roedel	Chair, Task Force on Coordination of Planning
Frank Peng	Chair, CO-12 Working Group
Gary Trezza	Long Island Power Authority



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

Jim Fawcett	Ontario IESO
John Babu	Chair, Task Force on System Protection
Jonathan Pollock	Chair, Task Force on Coordination of Operation
Joy Brake	Chair, Task Force on System Studies
William Vesely	Chair, Task Force on Infrastructure Security & Technology

Quorum Statement

Mr. Lombardi indicated that a quorum had been achieved, by member attendance, proxy, or alternate designation. Mr. Fedora also indicated receiving the following written proxies:

Sector 1 – Transmission Owners

Matt Saddler - Central Maine Power Company
Tim Lynch - New York State Electric & Gas Corp.
David Kimiecik - Rochester Gas & Electric
David Bradt - The United Illuminating Company

Antitrust Guidelines for NPCC Meetings

Mr. Lombardi read the NPCC Antitrust Guidelines provided in the Agenda package.

Safety Message

Mr. Lombardi provided a safety message in recognition of March Poison Prevention Awareness Month.

President & CEO Report

NPCC 2023 Business Plan and Budget Development Schedule

Mr. Dickerson reported that the *NPCC 2023 Business Plan and Budget* is being developed considering the workload, resources, gaps, necessary travel along with guidance from the NPCC Board and the Board's Finance and Audit Committee. The NPCC 2023 Business Plan and Budget schedule was provided in the Agenda package. Ms. Hala reported that the 2023 NPCC Business Plan and Budget will be posted on the NPCC public website on May 4, 2022 with a comment period ending May 25, 2022. A summary of both the NPCC 2023 Business Plan and Budget and the ERO Enterprise 2023 Business Plan and Budget will be provided at the June 8, 2022 RCC meeting.

NPCC 2022 Corporate Reliability Goals

Mr. Dickerson reported on the NPCC 2022 Corporate Reliability Goals; specifically, the strategic reliability Focus Areas under which these goals are set - enhancing system resilience and assuring energy efficiency, reliable integration variable resources, and addressing cyber and physical threats. Mr. Dickerson noted that the full set of the NPCC 2022 Corporate Reliability Goals are included in the Agenda package. Mr. Fedora indicated the 2022 Corporate Reliability Goals associated with the RCC will be reviewed later in the meeting.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

Chair Report

Agenda

Mr. Adam reviewed the Agenda provided in the Agenda package. The November 30, 2021 and the December 10, 2021 RCC Meeting Minutes, respectively, were not made available for review and approval prior to the RCC meeting. Additionally, there were no RCC Roster Changes identified at this time. Therefore, the three items were removed from the Consent Agenda.

The RCC approved the Agenda with these changes.

Approved RCC Scope

Mr. Adam reported that NPCC Board approved the RCC Scope of Work, included in the Agenda package, at their February 2, 2022 meeting.

Approved RCC 2022-2023 Work Plan

Mr. Adam reported that NPCC Board approved 2022-2023 RCC Work Plan, included in the Agenda package, at their February 2, 2022 meeting; he added that the Board expressed their appreciation over the quantity and quality of work conducted by the RCC and its Task Forces and Working Groups.

RCC 2022 Meeting Schedule

Mr. Adam suggested that additional RCC meetings could be beneficial to address the high volume of work anticipated for this year. Mr. Fedora indicated that the RCC typically has four meetings a year, however, at the discretion of RCC leadership additional meetings can be scheduled as needed.

NPCC Website Update

Mr. Hogue highlighted navigation changes for the NPCC web site. The changes primarily consist of the library links and document migration including, for the RAPA program, a new area menu for Publications and Reports. Mr. Fedora also indicated that a look up table is being used to ensure the old links still work with the new web site design.

Policy Discussion

February 2, 2022 NPCC Board Meeting - NPCC 2022 Corporate Reliability Goals

Mr. Fedora indicated that the NPCC Board stated the need for RCC goal endorsement is to provide a technical feedback loop and aid in determining goal attainment.

Mr. Fedora highlighted the following NPCC 2022 Corporate Reliability Goals associated with the RCC:

I-A Enhancing System Resilience

IA-4 Identify and provide recommendation(s) to revise NPCC Reliability Criteria for consideration by the NPCC Members:

- Present scope and goals proposed for a tabletop manual loadshedding exercise for RCC endorsement – by June 2022.
- Conduct the tabletop exercise – by September 2022.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

- Report “lessons learned” and any NPCC Reliability criteria revisions recommendations for RCC endorsement – by December 2022.

I-B Assuring Energy Sufficiency

IB-1 Assess gas-electric interdependencies:

- Form a technical committee, consisting of members of the gas transmission and distribution community as well as the electric utility industry, to identify future NPCC Regional gas-electric interdependency risk(s) - by June 2022.
- Report the results of the NPCC Regional gas-electric review– by September 22.
- Develop a report addressing the identified future gas-electric interdependencies with recommendations for mitigating actions for RCC endorsement - by December 2022.

IB-2 Identify and provide recommendation(s) to revise NPCC Reliability Criteria for consideration by the NPCC Members:

- Actively participate in the EPRI Resource Adequacy for a Decarbonized Future Project – through December 2022.
- Draft a report that summarizes resource adequacy scenario definition guidelines in support of regional energy sufficiency and reliability objectives. Status to the RCC – by September 2022.
- Present NPCC Regional recommendation(s) addressing identified gaps in commercial reliability adequacy assessment tools and suggest areas new metric, model, and algorithm improvements to the RCC - by December 2022.

IB-3 Assure sufficient real-time awareness of DER/VER resource availability and capability and that there are contingency plans when energy limitations affect the resource:

- Participate in the US DOE Atlantic Offshore Wind Study - through December 2022.
- Present identified potential resource energy limitations such as caused by weather events, common mode failure scenarios caused by interdependencies and transmission constraints to the RCC – by September 2022.
- Develop NPCC Regional recommendations for resource adequacy energy sufficiency assessments for RCC endorsement - by December 2022.

II Reliably Integrating the Resources brought forward by Societal De-Carbonization Objectives, including Distributed Energy Resources (DER) and Variable Energy Resources (VER)

II-1 Enhance the review and coordination of distributed energy resource requirements and the identification of potential inconsistencies between State and Provincial Regulatory rules and continuing enhancement of a Regionally consistent DER guidelines document by outreach to load serving entities.

- Present DER Guideline enhancements to the RCC and RSC for endorsement – by December 2022.
- Develop future revisions to NPCC Directory No. 1 to address reliability contributions and challenges of changing technologies and load characteristics for RCC and RSC endorsement – by December 2022.

II-2 Enhance outreach to states, provinces, planning authorities and other stakeholders to establish a higher degree of coordination and transparency during the energy transition brought forward by societal de-carbonization objectives;

- Provide quarterly status reports to the RCC and RSC - by December 2022.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

Mr. Adam noted that the RCC Scope of Work recognizes the NPCC strategic reliability Focus Areas and that the RCC will provide support as needed.

February 10, 2022 NERC Members Representative Committee (MRC)/Board of Trustees (BOT) Meeting(s)

Mr. Fedora referred to the materials in Agenda package and highlighted the following items:

- ✓ The Electric Reliability Organization 2021 activities were discussed; the BOT recognized importance of planning for the future. Given the complexities of the rapidly changing grid, the BOT is focused on enhancing NERC's processes to ensure timely risk mitigation.
- ✓ The MRC reelected BOT members for new terms; following the MRC meeting, the BOT approved Ken DeFontes as Chair, George Hawkins as Vice Chair and approved new BOT committee appointments. The Board also approved the appointment of NERC officers, including new additions.
- ✓ The BOT approved revisions to the NERC Standards Committee Charter, and approved the 2022 work plans for the Standards Committee, the Compliance and Certification Committee and the Personnel Certification Governance Committee, which also received approval for its System Operator Certification Manual.
- ✓ The BOT approved a modification to Reliability Standard CIP-014-3 – Physical Security. This modified version of the standard removes a unique compliance monitoring provision, which is no longer needed following the adoption of the ERO Enterprise Secure Evidence Locker and other tools for secure review of sensitive evidence. No changes were proposed to the mandatory and enforceable elements of the standard.

The BOT expressed its desire to return to face-to-face meetings. NERC indicated the May MRC/BOT meetings are scheduled to be held at a hotel in Pentagon city in Washington. D.C. In response to a question about the possibility of the meetings being hybrid, NERC responded that the meetings will be in-person only.

February 16, 2022 - NERC Industry Workshop – Energy Reliability Assessment Task Force (ERATF) Update

Mr. Fedora indicated that the ERAFT has developed a draft Standard Authorization Request to address energy assurance and fuel assurance. The ERAFT held a three panel industry workshop on February 16, 2022 to discuss their perspectives from the operations and operational planning view (Panel 1), the mid to long term planning view (Panel 2) and the R&D panel (Panel 3). The workshop was a full day in duration and provided thorough discussion of the issues. The information from workshop will be discussed at the upcoming NERC RSTC meeting.

March 8-9, 2022 NERC Reliability and Security Technical Committee (RSTC) Meeting

Mr. Oks noted that notice of the RSTC March 3rd Informational Session is included in the Agenda package. The Informational Session will discuss the upcoming agenda topics for the March 8-9, 2022 RSTC meeting(s). He then led a discussion of the following agenda topics scheduled for consideration at the March 8-9, 2022 NERC RSTC Meeting:

Energy Reliability Assessments Task Force (ERATF) Standard Authorization Request (SAR) – Information - the ERATF will provide update to the RSTC regarding its activities associated with the risks related to unassured energy supplies, including the timing and inconsistent output



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

from variable renewable energy resources, fuel location, and volatility in forecasted load, which can result in insufficient amounts of energy on the system to serve electrical demand.

RSTC Work Plan, Reliability Issues Steering Committee (RISC) Report Recommendations and Joint FERC NERC Cold Weather Report Recommendations Information

At the September RSTC meeting, the RISC Report Recommendations were reviewed, and a Tiger Team formed to review the RISC Report Recommendations and the Joint FERC/NERC Cold Weather Report recommendations to create or modify RSTC work plan items to address the recommendations. The Tiger Team is providing a status update as well as a plan to coordinate with RSTC subgroups to review risks, develop mitigation activities, and work plan items. The Tiger Team is also requesting to be disbanded.

NERC System Planning Impacts from DER Working Group (SPIDERWG) - Mr. Rizvi led a discussion on the following SPIDERWG agenda topics:

- ✓ **Reliability Guideline: DER Forecasting Practices and Relationship to DER Modeling for BPS Planning Studies** - the SPIDERWG developed the guideline and posted it for a 45-day comment period and has addressed comments/made conforming revisions to the document. The SPIDERWG is asking for RSTC approval of the Reliability Guideline. If approved, the Reliability Guideline will be posted on the RSTC Reliability and Security Guidelines web page for industry use.
- ✓ **White Paper: BPS Reliability Perspectives for Distributed Energy Resource Aggregators** - the white paper provides Bulk Power System (BPS) reliability perspectives and considerations regarding Distributed Energy Resource (DER) aggregation in light of FERC Order No. 2222, which introduces the concept of DER aggregation in wholesale electricity markets. The SPIDERWG is asking for RSTC members to review and provide comment on the white paper.
- ✓ **White Paper: NERC Reliability Standards Review**- the SPIDERWG has evaluated the current body of NERC Reliability Standards and the requirements within those standards for their applicability and effectiveness to remain relevant with increasing levels of DERs. The white paper details the findings of the SPIDERWG review and makes recommendations for actions that should be taken to address identified issues. The SPIDERWG is asking for RSTC members to review and provide comment on the white paper.

Consent Agenda

The Reliability Coordinating Committee unanimously approved the following Consent Agenda Items (all written proxies in favor):

Task Force/Working Group Roster Changes

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

Task Force on Coordination of Planning

- ✓ Peter Wong of ISO-New England, Inc. to serve as an alternate
- ✓ Ismael El-Samahy of the Ontario IESO to succeed Christopher Reali as an alternate
- ✓ Alex Borovinski of Consolidated Edison Company of New York, Inc. to succeed Maximus Rizk as the representative

Task Force on Coordination of Operation

- ✓ David Cloutier of Eversource Energy to succeed Mike Gopinathan as an alternate
- ✓ Steve Gould of ISO-New England, Inc. to succeed John Norden as the representative and as the Vice Chair



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

- ✓ Jonathan Gravelin of ISO-New England, Inc. to succeed Steve Gould as an alternate
- ✓ Maxime Nadeau of Hydro-Québec TransÉnergie (Reliability Coordinator) to succeed
- ✓ Charles-Éric Langlois as the representative
- ✓ Pascal Prud'homme of Hydro-Québec TransÉnergie (Transmission Owner) to serve as the representative
- ✓ Sermad Badawi of Hydro-Québec TransÉnergie (Transmission Owner) to serve as an alternate

Task Force on System Studies

- ✓ Marc Morissette of Hydro-Québec TransÉnergie to serve as the Vice Chair
- ✓ Jim DiLuca of Eversource Energy to succeed Carl Benker as the representative
- ✓ Carl Benker of Eversource Energy to serve as an alternate
- ✓ Christopher Schramm of The United Illuminating Company to succeed Frank Walsh as the representative
- ✓ Noor Leghari of Rochester Gas & Electric (Avangrid) to serve as the representative
- ✓ Kofi Nimako of New York State Electric & Gas (Avangrid) to serve as an alternate
- ✓ Bryce Clothier of Nova Scotia Power Inc. to succeed Hung Huynh as an alternate
- ✓ Alex Borovinski of the Consolidated Edison Company of New York, Inc. to succeed Maximus Rizk as the representative

Task Force on System Protection

- ✓ Dallas Evans of IRONHOUSE Inc. to succeed Brian Langlais as an alternate
- ✓ Harshill Patel of New York State Electric & Gas (Avangrid) to serve as an alternate
- ✓ Philip Chorazy of the New York Independent System Operator to serve as an alternate
- ✓ Alex Norton of TRC to serve as the representative

Task Force on Infrastructure Security & Technology

- ✓ Anthony Bussard of National Grid USA to succeed John Keany as the representative
- ✓ Nicholas Boffoli of Central Hudson Gas and Electric Corporation to succeed Erica Tyler as the representative
- ✓ Nayab Saeed of Ontario Power Generation Inc. to serve as an alternate
- ✓ Matthew Purnell of Central Maine Power Company to serve as an alternate
- ✓ Jerry Mogan of Central Maine Power Company to serve as an alternate

CO-8 System Operations Managers Working Group

- ✓ Jonathan Gravelin of ISO-New England, Inc. to succeed Steve Gould as the representative and as the Vice Chair
- ✓ Steve Gould of ISO-New England, Inc. to succeed Jonathan Gravelin as an alternate
- ✓ Marc Theriault of the New Brunswick Power Corporation to succeed Rod Hicks as an alternate
- ✓ Matthew Vos of the Ontario IESO to serve as an alternate
- ✓ Kevin Hatch of PJM, Inc. to succeed Donnie Bielak as the representative
- ✓ Donnie Bielak of PJM, Inc. to succeed Chris Pilon as an alternate

CO-11 Restoration Working Group

- ✓ Robert Golen of the New York ISO to succeed Kevin Clark of ISO-New England, Inc. as the Chair
- ✓ Joe Koltz of ISO-New England, Inc. to succeed Kevin Clark as the representative
- ✓ Mark Townsend of Hydro One Inc to succeed Rick Johnson as the representative
- ✓ Marzuq Ajani of Hydro-Québec TransÉnergie to succeed Martin Beaudin as the representative
- ✓ Martin Beaudin of Hydro-Québec TransÉnergie to succeed Marzuq Ajani as an alternate

CO-12 Operations Planning Working Group

- ✓ Frank Peng of the Ontario IESO to succeed Tim Hicks of New Brunswick Power Corporation as the Chair
- ✓ Tim Hicks of New Brunswick Power Corporation to succeed Frank Peng of the Ontario IESO as the Vice Chair



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

- ✓ Connor Corsi of ISO-New England, Inc. to succeed Kevin Clark as the representative

CO-14 Operations Load Forecast Working Group

- ✓ Tim Hicks of the New Brunswick Power Corporation to serve as an alternate

CP-8 Resource and Transmission Adequacy Review Working Group

- ✓ Gary Jordan to replace Greg Drake as the NYSRC representative
- ✓ Kevin Osse to replace Frank Ciani as the New York ISO representative
- ✓ Rahul Mittal to serve as the Ontario IESO representative
- ✓ Vithy Vithyananthan, Anna Lafoyiannis, and Emanuel Moldovan to serve as the Ontario IESO alternates

SP-7 Protection System Misoperation Review Working Group

- ✓ Alain Matte of Hydro-Québec TransÉnergie to serve as the representative
- ✓ Nathan Cote of Eversource Energy to no longer serve as the representative
- ✓ Ted Nurilov of Nova Scotia Power Inc. to succeed Xiankai Wang as the representative

SS-37 Base Case Development Working Group

- ✓ Ayman Eltantawy of the Ontario IESO to succeed Mohab Elnashar as the representative
- ✓ Susan Alexander of the Ontario IESO to succeed Devider Badhan as an alternate

SS-38 Inter-Area Dynamic Analysis Working Group

- ✓ Peter Huynh of Nova Scotia Power Inc. to serve as the Chair
- ✓ Tejas Tamhankar of the New York ISO to serve as the representative
- ✓ Praneeth Mudunuri of the New York ISO to serve as an alternate

SS-39 Geomagnetic Disturbances Working Group

- ✓ Ramya Nagarajan of LS Power Grid New York, LLC to serve as the representative
- ✓ Ed Roedel of The United Illuminating Company succeeds Frank Walsh as the representative

SS-40 Load Model Working Group

- ✓ Praneeth Mudunuri of the New York ISO to serve as the representative
- ✓ Tejas Tamhankar of the New York ISO to serve as an alternate

2021 BPS and DCT Exclusion Lists

Approved as provided in the Agenda package.

2021 Québec Interim Area Transmission Review

Approved as provided in the Agenda package.

Approval Items

NPCC 2021 Tie Benefits Study

Mr. Fedora reviewed the *2021 NPCC Tie Benefits Study* provided in the Agenda package. The study verified that the current levels of interconnection benefits assumed in each NPCC Area's resource adequacy studies are reasonable and do not overstate the amount of interconnection assistance available.

A draft report was presented for review at the February 8-9, 2022 Task Force on Coordination of Planning (TFCP) meeting. It was subsequently updated to include a trend analysis of the interconnection assistance reported for years 2011-2026. The TFCP agreed with the study's conclusions and recommended RCC approval.

After discussion, the RCC then unanimously approved the *2021 NPCC Tie Benefits Study* provided in the Agenda package (all written proxies in favor).



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

Discussion Items

NPCC 2021-2022 Winter Operations Review

Each NPCC Area provided an overview of their respective NPCC 2021-2022 Winter Operations experience. While cold weather in the northeast region of the U.S. and Canada resulted in some NPCC Areas hitting all-time peak loads and experiencing tight supply conditions, each NPCC Area reliably served their respective peak load exposure.

Presentations given by Hydro-Quebec and Ontario are included in the Agenda package.

2022 NPCC Summer Reliability Assessment

The preliminary *2022 NPCC Summer Reliability Assessment* results prepared by the NPCC CO-12 and CP-8 Working Groups included in the Agenda package were presented respectively by Mr. Peng, CO-12 Working Group Chair, and Mr. Fedora, CP-8 Working Group Chair.

The final assessment will be submitted for RCC comment and Task Force on Coordination of Operation and Task Force on Coordination of Planning approval on April 8, 2022. The final assessment will be officially released following presentation at the May 4, 2022 NPCC Board meeting.

NPCC Task Force 2022-2023 Work Plan Overview

Mr. Adam asked each Task Force Chair to highlight their respective activities. He noted that additional information can be found in the Agenda package, which contains all the individual Task Force updates.

Task Force on Infrastructure Security and Technology (TFIST)

Mr. Vesely highlighted the following TFIST activities:

- ✓ The number one issue deals with security updates given the recent global activity. The TFIST has endorsed three security bulletins since the last RCC meeting:
 - 1) Apache Log4j Vulnerability Guidance,
 - 2) Zoho ManageEngine ServiceDesk Plus Vulnerability, and,
 - 3) CISA Alert: Understanding and Mitigating Russian State-Sponsored Cyber Threats to U.S. Critical Infrastructure.
- ✓ For critical infrastructure protection compliance, the following dates are important to note:
 - July 1, 2022 – Effective Date of CIP-012-1, Cyber Security – Communications between Control Centers;
 - October 1, 2022 - enforceable date for some supply chain changes from project 2019-03;
 - April 4, 2022 – comments due for Project 2016-02, Modifications to CIP Standards; and,
 - April 11, 2022 comments due for Project 2020-03, Supply Chain Low Impact Revisions.

Task Force on Coordination of Planning (TFCP)

Mr. Roedel highlighted the following TFCP activities:

- ✓ A Joint TFCP/TFCO Working Group is reviewing Directory No. 1. The Joint Working Group is making progress and is expected to continue meeting through 2022.
- ✓ A discussion on the contingency testing of live tank breakers identified that an interim revision to Directory No. 1 may be warranted before the comprehensive review is complete. The TFCP will



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

review its findings with the TFCO before proceeding to an open process posting and request RCC approval.

- ✓ TFCP recently reviewed a few modifications to some remedial action schemes, both limited impact, and type 1, and approved the new limited impact type 1.

Task Force on System Studies (TFSS)

Ms. Brake highlighted the following TFSS activities:

- ✓ Review of annual lists - at this RCC meeting, the 2021 BPS and DCT lists were approved and the 2021 RAS and UVLS lists were included in the Informational Items in the Agenda package. The UVLS is blank and has been blank for some time. The TFSS will evaluate if there is a compliance or reliability reason to continue the annual review of the UVLS list.
- ✓ A Remedial Action Scheme (RAS) was recently evaluated by TFSS for typing. The RAS could result in voltage collapse in a very confined area (radial load station). A year ago, prior to the NPCC Directory No. 7 revision to conform with the NERC Standard PRC-012, this RAS would have clearly been a Type III SPS, and all type III SPS are considered limited impact RAS in NPCC. This RAS has been reviewed and approved as a limited impact RAS by both TFSS and TFCP. Additional discussions are warranted at TFSS and TFCP to ensure the RAS review process in Directory 7 gives a consistent and appropriate outcome for similar situations.

Task Force on Coordination of Operation (TFCO)

Mr. Pollock highlighted the following TFCO activities:

- ✓ The CO-7 Working group is jointly working with CP-11 Working Group on the Directory No. 1 Triannual Review; topics being discussed include:
 - Double Circuit Tower criteria differences between NPCC and NERC
 - Modifications needed to Directory No. 1 to account for DER/VER resources
- ✓ The CO-1 Working group is discussing Directory No. 5 reserves sustainability with hybrid resources;
- ✓ The CO-11 Working Group is leading the Directory No. 8 Triannual Review;
- ✓ This year, the CO-8 Working Group will be leading Directory No. 2 Triannual Review; and,
- ✓ The TFCO is reviewing the cold weather report to identify status of NPCC's readiness and to identify areas of opportunities to mitigate any potential risks.

Task Force on System Protection (TFSP)

Mr. Babu highlighted the following TFSP activities:

- ✓ Reviews of facility presentations. One facility presentation did initiate a process review of Directory No. 7 regarding the typing of a Type 1 RAS;
- ✓ Analysis of protection system misoperation reports and follow up on resulting trends; and,
- ✓ Discussion of the FERC Order on Ambient Adjusted Ratings and the impact from a protection setting perspective.

FERC December 21, 2021, Order 881 - Managing Transmission Line Ratings (RM20-16)

Mr. Fedora indicated that the FERC Order 881, regarding transmission line ratings, is included in the Agenda package. The FERC Order requires:

- ✓ Implementation of ambient adjusted ratings and seasonal ratings that transmission providers would use for evaluating requests for near term transmission service and would use the seasonal ratings for evaluating other longer term transmission service request;
- ✓ RTOs and the ISOs establish and implement the system and procedures necessary to allow the transmission owners through electronically updating transmission line ratings at least hourly; and,



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

- ✓ Transmission providers use uniquely determined emergency ratings for contingency analysis, in the operations horizon and post contingency simulations.

Mr. Fedora added that subsequent to FERC Order 881, on February 17th FERC launched an inquiry to examine whether the use of Dynamic Line Ratings (DLRs), which are based on a wide range of weather and line-specific factors affecting the operation of electric transmission lines, would help ensure just and reasonable wholesale rates by improving the accuracy and transparency of line ratings. Comments are due 60 days after publication in the Federal Register.

Mr. Helton indicated that ISO-NE is reviewing the FERC Order and would be interested in hearing from other RTOs and ISOs.

Informational Items

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

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

Next RCC Meeting Date	Location
June 8, 2022	[WebEx meeting]

Future RCC Meeting Dates	Location
September 14, 2022	[WebEx meeting]
December 6, 2022	[WebEx meeting]



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
March 2, 2022

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

and,

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

La Régie de L’Énergie – Christian Garneau

Ontario Energy Board – Catherine Ethier

United States Department of Energy – David Meyer

New Brunswick Department of Energy and Mines – David Sollows

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



November 16, 2022

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 June 8, 2022 RCC Meeting

Sir / Madam:

Attached are the Minutes of the June 8, 2022 meeting of the NPCC Reliability Coordinating Committee, as approved at the September 14, 2022 RCC meeting.

Sincerely,

Michael R. Lombardi

Michael R. Lombardi
Director, Reliability Assessments

cc: NPCC Staff



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

Mr. Adam called the meeting of the Reliability Coordinating Committee (RCC), held by WebEx to order at 10:00 am.

Attendance

Officers of the Reliability Coordinating Committee

Gabriel Adam, Chair	Ontario IESO
Anie Philip, Co-Vice Chair	Long Island Power Authority
Michael Jones, Co-Vice Chair	National Grid USA

Sector 1 - Transmission Owners

Central Hudson Gas & Electric Corporation	Damian Interrante - Alternate
Central Maine Power Company	Matt Sadler
Consolidated Edison Company of New York, Inc.	Martin Paszek - Alternate
Eversource Energy	George Wegh
Hydro-One, Inc.	Ajay Garg - Alternate
Long Island Power Authority	Anie Philip
National Grid USA	Abhinav Rawat
New Brunswick Power Corporation	Randy MacDonald
New York Power Authority	(proxy to Salvatore Spagnolo)
New York State Electric & Gas Corporation	(proxy to Dave Bradt)
Nova Scotia Power, Inc.	Chris Milligan - Alternate
Orange & Rockland Utilities, Inc.	Nick Kowalczyk
Rochester Gas & Electric Corporation	(proxy to Dave Bradt)
The United Illuminating Company	Dave Bradt
Vermont Transco	Hantz Presume

Sector 2 – Reliability Coordinators

Hydro-Québec TransÉnergie	Maxime Nadeau
ISO New England, Inc.	James Helton
New Brunswick Power Corporation	Scott Brown
New York ISO	Zach Smith
	Kevin DePugh - Alternate
Ontario IESO	Gabriel Adam

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

Consolidated Edison Company of New York, Inc.	Lincoln Burton - Alternate
Eversource Energy	Trevor Tessin
Hydro-Quebec Distribution	Abdelhakim Sennoun - Alternate
Long Island Power Authority	(proxy to Anie Philip)
National Grid	Mike Jones
New York Power Authority	(proxy to Salvatore Spagnolo)



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

Sector 4 Generation Owners

Consolidated Edison Company of New York, Inc.	Helen Wang - Alternate
Dominion Energy, Inc.	Sean Bodkin
Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Salvatore Spagnolo - Alternate
NextEra Energy Resources	Rigoberto Milla
Ontario Power Generation, Inc.	David Kwan - Alternate
Vistra Energy Corporation	Ken Stell

Sector 5 – Marketers, Brokers, and Aggregators

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	(proxy to Salvatore Spagnolo)
Utility Services of Vermont, LLC	Brian Robinson - Alternate

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

Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Shivaz Chopra
	Robert Knowlton - Alternate
New York State Department of Public Service	Humayun Kabir - Alternate

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

New York State Reliability Council, LLC	Roger Clayton
RLC Engineering, PLLC	David Conroy

NPCC Staff

Brian Hogue	Information Systems & Security Management
Michael Lombardi	Director, Reliability Assessments
Jessica Hala	Vice President, Finance
Scott Nied	Vice President, Compliance
Andrey Oks	Director of Operations Coordination
Andreas Klaube	Manager, Probabilistic Assessment
Neeraj Lal	Manager, System Studies
Quoc Le	Manager, System Planning
Rafael Sahiholamal	Manager, System Protection
Ruida Shu	Manager, Reliability Standards
Ryan McSherry	Senior Engineer, Operations

Guests

Andrew Wilcox	New Brunswick Power Corporation
Dan Schwarting	ISO-New England, Inc.
Edward Roedel	Chair, Task Force on Coordination of Planning
Isen Widjaja	Independent Electricity System Operator
John Babu	Chair, Task Force on System Protection
John Charlton	Nova Scotia Power, Inc.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

Joy Brake	Chair, Task Force on System Studies
Ovidiu Vasilachi	Chair, Task Force on System Protection
Peter Huynh	Nova Scotia Power, Inc.
Steve Gould	Vice-Chair, Task Force on Coordination of Operation
William Vesely	Chair, Task Force on Infrastructure Security & Technology

Quorum Statement

Mr. Lombardi indicated that a quorum had been achieved, by member attendance, proxy, or alternate designation.

Antitrust Guidelines for NPCC Meetings

Mr. Hogue read the NPCC Antitrust Guidelines provided in the Agenda package.

Safety Message

Mr. Klaube provided a safety message that identifying the heat stroke risk factors, symptoms, and actions to avoid and/or mitigate heat stroke events.

NPCC 2023 Business Plan & Budget Update

ERO Enterprise (NERC and Regional Entities) 2023 Budgets

Ms. Hala provided an overview of both the NPCC 2023 Business Plan and Budget and the ERO Enterprise 2023 Business Plan and Budget. A presentation was provided in the Agenda package. Ms. Hala identified the NPCC 2023 focus areas and the 2023 initiatives that are key drivers which require increases in NPCC resources. Ms. Hala reviewed the 2023 Business Plan and Budget development process and noted that following today's RCC meeting that she will be meeting with the FERC to review the ERO Enterprise draft #1 budgets. The development process is scheduled to conclude the end of August when NERC submits the ERO budget filing to the FERC and the Canadian Provincial Authorities.

Chair Report

Agenda

Mr. Adam reviewed the Agenda provided in the Agenda package. The November 30, 2021 and the December 10, 2021 RCC Meeting Minutes, respectively, were not made available for review and approval prior to the RCC meeting. Therefore, the two items for the 2021 meeting minutes were removed from the Consent Agenda.

An additional change was made to the Consent Agenda to include an update to the Task Force/Working Group Roster Changes for IST-5 Physical Security Working Group. Specifically:

IST-5 Physical Security WG

- ✓ Devin Heeney of NY Transco to serve as the representative.
- ✓ Andrew Welch of NY Transco to serve as an alternate.
- ✓ David Burns of National Grid USA to succeed Matt Probst as the representative.

The RCC approved the Agenda with these changes.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

May 12, 2022 NPCC DER/VER Forum

Mr. Shu noted that the NPCC DER/VER Forum is part of the NPCC's Strategic Corporate Plan and reflect the direction provided by the NPCC Board of Directors to continue outreach efforts with all of our stakeholders. Three forums are planned for this year.

The May 12 forum was focused on electric vehicle charging and the impact on the planning, forecasting, and modeling of the Bulk Power System. Presentations on this topic were received from Hydro Québec Trans Énergie, Eversource, National Grid, and NERC.

The remaining two DER/VER forums are planned for August 11, 2022 and October 13, 2022. The forums will be focused on various decarbonization topics, such as: building electrification.

WebEx Control Hub / Microsoft Teams

Mr. Hogue reported that WebEx is in the midst of changing its software which raises the possibility that NPCC may need to transition to another meeting software, such as: Microsoft Teams. To determine if the RCC membership can transition away from WebEx, if required, Mr. Hogue indicated that a survey will be sent to the RCC membership.

Consent Agenda

The Reliability Coordinating Committee unanimously approved the following Consent Agenda Items:

March 2, 2022 Meeting Minutes

The minutes were approved, as provided in the Agenda package, with editorial/grammatical changes/corrections noted at the meeting.

RCC Membership Changes

The following change to the RCC membership was approved:

Sector 4 – Generation Owners

Rigoberto Milla to replace Al Schriver as the representative for NextEra Energy.

Task Force/Working Group Roster Changes

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

Task Force on Coordination of Planning

- ✓ Steve Blackburn of Hydro-Quebec TransÉnergie to serve as an alternate.

Task Force on System Protection

- ✓ Eric Loiselle of Hydro-Quebec TransÉnergie to succeed Charif Moukarzel as the representative.

Task Force on Infrastructure Security & Technology

- ✓ Michael Russell of Massachusetts Municipal Wholesale Electric Company to serve as the representative.
- ✓ Michael Marciano of Utility Services of Vermont, LLC to succeed Jeff Sykes as an alternate.
- ✓ Anthony Pearce of Utility Services of Vermont, LLC to succeed Shreya Patil as an alternate.
- ✓ Carver Powers of Utility Services of Vermont, LLC to serve as an alternate.
- ✓ Collins Tazoh of Utility Services of Vermont, LLC to serve as an alternate.
- ✓ Jen McCabe of Utility Services of Vermont, LLC to serve as an alternate.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

- ✓ Sean Randles of Utility Services of Vermont, LLC to serve as an alternate.
- ✓ Jodi Crozzoli of the New York ISO to no longer serve as an alternate.
- ✓ Tom O'Neill of Hydro-Quebec TransÉnergie to no longer serve as an alternate.
- ✓ Tony McMullen of PSEG Fossil LLC to no longer serve as an alternate.
- ✓ Suzanne Black of Network & Security Technologies, Inc. to no longer serve as an alternate.
- ✓ Richard Ristaneo of Rochester Gas & Electric to serve as an alternate.

CO-2 System Operator Training Working Group

- ✓ Marie-Josée Darcy of Hydro-Québec to succeed Diane Laferriere as the representative.
- ✓ Josh Jacobi of the New York ISO to succeed Bob Perreault as the representative.
- ✓ Jason Marshall of the New Brunswick Power Corporation to succeed Justin Shumaker of ISO-New England, Inc. as the Vice Chair.
- ✓ Tom Turgeon of ISO-New England, Inc. to serve as an alternate.

CO-8 Systems Operations Managers Working Group

- ✓ Matt Vos of the Ontario IESO to serve as an alternate.

CO-10 System Operational Tools Working Group

- ✓ Maxime Nadeau of Hydro-Quebec TransÉnergie to no longer serve as an alternate.
- ✓ Allen Gao of the Ontario IESO to succeed Jennifer Tsai as an alternate.
- ✓ Pablo Gutierrez of the Ontario IESO to no longer serve as an alternate.
- ✓ Osman Bileya of ISO-New England, Inc. to serve as an alternate.

CO-11 Restoration Working Group

- ✓ Abishek Penti of the New York ISO to serve as an alternate.
- ✓ Jason Marshall of the New Brunswick Power Corporation to serve as an alternate.
- ✓ Tim Hicks of the New Brunswick Power Corporation to serve as an alternate.
- ✓ Mark Townsend of Hydro One Inc. to succeed Rick Johnson as the representative.
- ✓ Simon Crank of Hydro One Inc. to succeed Mark Townsend as the representative.
- ✓ Mark Townsend of Hydro One Inc. to succeed Rick Johnson as an alternate.

CO-14 Operations Load Forecast Working Group

- ✓ Joe Gredder of National Grid to succeed Trevor Brudz as the representative.
- ✓ Trevor Brudz of National Grid to serve as an alternate.

CP-8 Working Group

- ✓ Andreas Klaube of NPCC to succeed Phil Fedora of NPCC as Chair; Phil Fedora to serve as an alternate.
- ✓ Laura Popa of the New York ISO to serve as the representative.
- ✓ Yvonne Huang of the New York ISO to serve as the alternate.

SP-7 Protection Systems Misoperation Review Working Group

- ✓ Ed Chen of the Consolidated Edison Company of New York, Inc. to serve as an alternate.

SS-37 Base Case Development Working Group

- ✓ Junjie Zhu of ISO-New England, Inc. to serve as an alternate
- ✓ Nathan Durnaik-Ouellette of Hydro-Quebec TransÉnergie to succeeds Mathieu Péroquin as the representative.
- ✓ Mathieu Péroquin of Hydro-Quebec TransÉnergie to succeed Nathan Durnaik-Ouellette as an alternate.

SS-38 Inter-Area Dynamic Analysis Working Group

- ✓ Zeeshan Ahmed of ISO-New England, Inc. to succeed Kaushal Kumar as an alternate.

IST-5 Physical Security WG

- ✓ Devin Heeney of NY Transco to serve as the representative.
- ✓ Andrew Welch of NY Transco to serve as an alternate.
- ✓ David Burns of National Grid USA to succeed Matt Probst as the representative.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

2021 Ontario Intermediate Area Transmission Review

Approved as provided in the Agenda package.

Approval Items

2021 New England Comprehensive Transmission Review

Mr. Schwarting presented the 2021 New England Comprehensive Transmission Review provided in the Agenda package. The New England Comprehensive Transmission Review assessed the reliability of the New England Area Bulk Power System by examining the impact of changes in forecasted system conditions and planned facilities. The New England comprehensive transmission assessment concluded that “The New England transmission system, as planned through 2026, remains in conformance with NPCC Directory No. 1.”

The ISO New England presented the 2021 New England Comprehensive Area Transmission Review report to the Task Force on System Studies (TFSS) at the March 2022 TFSS meeting. TFSS agreed that the Bulk Power System planned for New England is in conformance with NPCC Directory No. 1.

The ISO New England presented the 2021 New England Comprehensive Area Transmission Review report to the Task Force on Coordination of Planning (TFCP) at the May 10-11, 2022 TFCP meeting. Based on its review, TFCP recommended the RCC approval of the 2021 New England Comprehensive Area Transmission Review report.

The RCC then unanimously approved the 2021 New England Comprehensive Area Transmission Review provided in the Agenda package.

2021 Maritimes Area Comprehensive Transmission Review

Mr. Charlton presented the Nova Scotia portion and Mr. Wilcox presented the New Brunswick portion of the 2021 Maritimes Comprehensive Transmission Review provided in the Agenda package. The Maritimes Comprehensive Transmission Review assessed the reliability of the Nova Scotia and New Brunswick Bulk Power Systems by examining the impact of changes in forecasted system conditions and planned facilities. The conclusion for the Nova Scotia portion of the Maritimes Comprehensive Transmission Review is “the Nova Scotia Bulk Power System for the study year 2026 conforms to the NPCC Directory No. 1.” The conclusion for the New Brunswick portion of the Maritimes comprehensive transmission assessment is “the NB BPS as designed and studied for the year 2026 is in conformance with the NPCC Regional Reliability Reference Directory No. 1.”

Both Nova Scotia Power and New Brunswick Power presented their portion of 2021 Maritimes Comprehensive Area Transmission Review report to the Task Force on System Studies (TFSS) at the March 2022 TFSS meeting. TFSS agreed that the Bulk Power System planned for the Maritimes is in conformance with NPCC Directory No. 1.

Nova Scotia Power Inc. and New Brunswick Power representatives presented their portion of the 2021 Maritimes Comprehensive Area Transmission Review report to the Task Force on Coordination of Planning (TFCP) at the May 10-11, 2022 TFCP meeting. Based on its review of



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

the Nova Scotia portion and the New Brunswick portion, TFCP recommended the RCC approval of the 2021 the Maritimes Comprehensive Area Transmission Review report.

The RCC then unanimously approved the 2021 Maritimes Comprehensive Area Transmission Review provided in the Agenda package.

Items for Endorsement

Goal IA-4 – Present Scope and Goals Proposal for a Manual Load Shedding Tabletop Exercise

NPCC 2021 Corporate Goal IA-4 specifies the development of a manual load shedding tabletop exercise for NPCC system operators and load shedding entities responsible for determining/designing load shedding programs.

At its May 11-12, 2022 meeting, the Task Force on Coordination of Operation (TFCO) reviewed the proposed scope and goals for a manual load shedding tabletop exercise for NPCC system operators and load shedding entities responsible for determining/designing load shedding programs. To conduct a thorough execution and comprehensive evaluation of the manual load shedding tabletop exercise, each of the TFCO members and participants were asked to provide their respective input on the scope, topics, and goals of the exercise they believe would benefit the overall goal effort. NPCC staff coordinated with each of the TFCO members individually and consolidated their feedback into the presented scope and goals for the tabletop exercise. The TFCO recommendation is for the RCC endorsement of the scope and goals proposal for the manual load shedding tabletop exercise.

Mr. Oks presented the scope and goals proposal for the tabletop exercise, as provided in the Agenda package, for RCC endorsement.

The RCC then unanimously endorsed the scope and goals proposal for the tabletop exercise provided in the Agenda package.

Policy Discussion

May 4, 2022 NPCC Board Meeting

Mr. Lombardi noted that Ms. Hala presented draft one of the NPCC 2023 Business Plan and Budget. As presented earlier in this meeting, Ms. Hala identified the NPCC 2023 focus areas and the 2023 initiatives that are key drivers which require increases in NPCC resources.

Mr. Lombardi reported that the NPCC Board was presented with the results of the NPCC 2022 Summer Reliability Assessment which forecasts the NPCC Region will have an adequate supply of electricity this summer. Mr. Lombardi indicated that the NPCC media release, “Summer Reliability Assessment Forecasts Adequate Electricity Supplies,” was published following the NPCC Board meeting.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

May 19, 2022 NERC Energy Reliability Assessment Task Force Informational Webinar

Mr. Lombardi reported that the Energy Reliability Assessment Task Force (ERATF) created two SARs (i.e., Planning and Operations/Operational Planning) to enabling stakeholders to identify energy deficit risks from energy-constrained resources and develop mitigations. The May 19, 2022 informational webinar was held to provide details on the new Planning and the Operations/Operational Planning SARs, and also to answer questions that industry has concerning the revisions. Links to the ERATF webpage and the webinar Q&A are provided in the Agenda package.

May 11-12, 2022 NERC Members Representative Committee / Board of Trustees Meeting(s)

Mr. Lombardi reported that the NERC MRC meeting was held on May 11, 2022 and focused on industry actions to address emerging risk. Particularly, the NERC Board had requested MRC policy input on:

1. How can the ERO Enterprise and industry work together to address fast emerging risks to the reliable operation of the BPS with more effective and certain outcomes across North America?
2. Specifically for the inverter-based resource challenges, what other actions should the ERO Enterprise take to ensure known reliability gaps with BPS-connected inverter-based resource performance are addressed?

Mr. Clayton indicated that the New York is very interested in the inverter-based resource challenges and the actions planned to address this risk. Specifically, what standards do we have in place to interconnect IBR resources? IEEE Standard 2800 was approved earlier this year. The New York State Reliability Council is working with the NYISO to adopt IEEE Standard 2800 as a mandatory interconnection requirement. Mr. Clayton concluded that time is of the essence, and we need interconnections that are meeting a consistent standard.

Mr. Lombardi reported that the NERC Board of Trustees meeting was held on May 12, 2022 and focused on resources, agility to address emerging risks; previews summer assessment, and the State of Reliability report.

Mr. Robb noted, at the NERC Board of Trustees meeting, that emerging risks are coming at us faster and with more frequency than ever before. Mr. Robb stated that to enhance the NERC proactive approach to address emerging risks, NERC has developed a three-year plan to:

- ✓ Make needed investments today where we can most influence change; influence change falls across four areas of focus: energy, security, agility, and sustainability.
- ✓ Be responsive to what NERC is hearing from industry – leverage technology in a powerful way and continues to drive efficiency and effectiveness, while embedding risk-informed thinking into our programs and processes.

Mr. Lombardi reported additional activities at the NERC Board of Trustees meeting included reports on the 2023 Business Plan and Budget, the NERC 2022 Summer Reliability Assessment, and the NERC 2022 State of Reliability report. The budget report given earlier in this meeting highlights the information provided in the budget report at the NERC Board of Trustees meeting.

Mr. Lombardi indicated that the NERC 2022 Summer Reliability Assessment did not identify any reliability risks in the NPCC region. The summer assessment focuses on the unprecedented



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

conditions that are challenging grid resilience; most notably: the above-normal temperatures and drought conditions over the western United States and Canada and the resulting elevated or high risk of energy shortfalls. The 2022 Summer Reliability Assessment was released May 18, 2022.

Mr. Lombardi reported that the preliminary findings of the NERC 2022 State of Reliability report were previewed at the NERC Board of Trustees meeting; despite unprecedented challenges to BES reliability in 2021, grid operators were able to maintain reliability with one notable exception being the February 2021 cold weather outages in Texas and the south central United States. The NERC staff and NERC Performance Analysis Subcommittee are conducting an informational webinar on June 16, 2022 and the 2022 State of Reliability report is scheduled to be released in mid-July.

June 8-9, 2022 NERC Reliability and Security Technical Committee Meeting(s)

Mr. Oks noted that the two Standard Authorization Requests created by the Energy Reliability Assessments Task Force were covered previously in this meeting and then led a discussion of the following agenda topics scheduled for consideration at the June 8-9, 2022 NERC Reliability and Security Technical Committee (RSTC) Meeting:

White Paper: BPS Reliability Perspectives for Distributed Energy Resource (DER) Aggregators – the NERC System Planning Impacts from Distributed Energy Resources Working Group (SPIDERWG) created this White Paper to provide bulk power system reliability perspectives and considerations regarding distributed energy resource aggregation considering Federal Energy Regulatory Commission (FERC) Order No. 2222, which introduces the concept of DER aggregation in wholesale electricity markets. At the June 8, 2022 RSTC meeting, the SPIDERWG is seeking RSTC approval of the White Paper.

White Paper: Recommendations for Simulation Improvement and Techniques Related to DER Planning – the NERC System Planning Impacts from Distributed Energy Resources Working Group has evaluated the current body of NERC Reliability Standards and the requirements within those standards for their applicability and effectiveness to remain relevant with increasing levels of DERs. This White Paper details the findings of the SPIDERWG review and makes recommendations for actions that should be taken to address identified issues. At the June 8, 2022 RSTC meeting, the SPIDERWG is seeking RSTC approval of the White Paper.

Standard Authorization Request (SAR): EMT Models in NERC MOD, TPL, and FAC Standards – the rapid transformation towards high penetrations of inverter-based resources has Transmission Planners and Planning Coordinators concerned about the lack of accurate modeling data and the need to perform electromagnetic transient (EMT) studies during the interconnection process and long-term planning horizon. This SAR proposes including EMT models and studies in planning-related NERC Standards to:

- ✓ Address the reliability-related need and benefit by ensuring TPs and PCs have accurate models necessary to adequately conduct reliability assessments under increasing levels of inverter-based resources.
- ✓ Require the collection of EMT models by applicable entities and TPs and PCs to conduct EMT studies where needed.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

The need for EMT models is based on NERC analyzing widespread solar loss events for many years dating back to the Blue Cut Fire disturbance in 2016. At the June 8, 2022 RSTC meeting, IRPS is seeking RSTC endorsement to submit the SAR to the NERC Standards Committee.

Ms. Philip reinforced that the EMT studies are critical for the reliable integration of non-synchronous resources. However, EMT studies require specialized technical expertise and require a longer time to perform than traditional studies. Therefore, the requirements and process for the use of EMT studies need to be well thought out.

Discussion Items

Goal IB-1 – Assess gas-electric interdependencies

Mr. Oks reported that this effort, which builds on the 2021 activities to develop a gas-electric model and analytical approach for NPCC gas-electric risk assessment, enhances the NPCC assessment of gas-electric interdependencies through cross sector and cross functional team input into “assumptions to use, model development and validation as well as contingency development and results”, with the target goal of identifying future gas-electric interdependencies with recommendations for mitigating actions.

Mr. Oks indicated that NPCC is currently populating a technical committee, consisting of members of the gas transmission and distribution community as well as the electric utility industry, to identify future NPCC Regional gas-electric interdependency risks.

NPCC Goal II-1 Develop Future Revisions to NPCC Directory No. 1

Mr. Shu noted that NPCC Corporate Goal II-1 requires the development of future revisions to NPCC Directory No. 1 to address reliability contributions and challenges of changing technologies and load characteristics for RCC and Regional Standards Committee (RSC) endorsement by 12/22.

Mr. Shu indicated that an initial draft whitepaper addressing this goal will be presented to the TFCP and the TFCO for review and comment by the end of June. The draft will identify emerging reliability issues, including resource adequacy, energy adequacy during all hours, fuel supply, and essential reliability services to inform recommendations to guide a future Task Force review of the Directory No. 1 criteria.

After the Task Force review, the first draft of the report will be presented to the RCC and the Regional Standards Committee for a 30-day comment period and a final draft will be submitted to the RCC and the RSC for consideration at their December 2022 meetings.

NPCC Goal II-2 State and Provincial Regulator Outreach - Quarterly Status Report

Mr. Shu noted that NPCC Corporate Goal II-2 calls for the completion of three briefings with State and Provincial Regulators on NERC and NPCC reliability assessments to promote awareness of effective regional transmission planning in the face of the changing resource mix and also the completion of a fourth briefing to identify specific Northeast emerging reliability risks.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

Mr. Shu reported that two briefings have been completed:

- ✓ February 25, 2022 – a forum was conducted which presented NERC’s 2021 Long-Term Reliability Assessment along with NPCC’s Reliability Assessment and Performance activities.
- ✓ April 22, 2022 – an outreach session focused on Automatic Underfrequency Load Shedding (UFLS) and the impact of Distributed Energy Resources (DER) on the design and operation of UFLS in the Northeast was conducted.

Mr. Shu reported that the third briefing is scheduled for June 10, 2022, to present the findings of the NERC 2022 Summer Reliability Assessment and the NPCC 2022 Regional Summer Assessment activities.

NPCC Task Force 2022-2023 Work Plan Overview

Mr. Adam asked each Task Force Chair to highlight their respective activities. He noted that additional information can be found in the Agenda package, which contains all the individual Task Force updates.

Task Force on Coordination of Planning (TFCP)

Mr. Roedel highlighted the following TFCP activities:

- ✓ A Joint TFCP/TFCO Working Group is reviewing Directory No. 1. The Joint Working Group is making progress and is expected to continue meeting through 2022. The significant activities include:
 - Streamlining of Directory No. 1, considering recent NERC reliability standard revisions;
 - Addition of inverter-based resource requirements;
 - Addressing modifications to limit impact Remedial Action Schemes;
 - Contingency testing of live-tank breakers.

Mr. Smith raised the concern that conducting Area Transmission Reviews could be burdensome and duplicate other assessments and asked if there is any discussion about revising the Area Transmission Review requirement in Directory No. 1 regarding this issue. Mr. Roedel indicated that TFCP does recognize that other studies are being conducted that may satisfy the Area Transmission Review requirements of Directory No. 1 and that TFCP is looking into methods to credit other studies to satisfy the Directory No. 1 Area Transmission Review requirement. Mr. Roedel provided a reminder that the Directory No. 1 changes will have at least one comment period before the changes are finalized. Mr. Roedel encouraged attendees to provide their review and comments during the future comment period(s).

Mr. Helton asked about the status of contingency testing of live-tank breakers prior to the official comment period for Directory No. 1. Mr. Roedel indicated that the current plan is to solicit interim comments on the contingency testing of live-tank breakers prior to the official comment period for Directory No. 1.

Task Force on Coordination of Operation (TFCO)

Mr. Gould highlighted the following TFCO activities:

- ✓ Based on the triannual review of Directory No. 8, System Restoration, the proposed TFCO revisions have been posted to the NPCC Open Process for a forty-five day comment period through July 19, 2022.
- ✓ Based on a Request for Criteria Clarification on the reliability criteria within NPCC Directory No. 5, Reserve, the proposed TFCO response to provide clarification in conjunction with



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

Requirement R6 has been posting to the NPCC Open Process for a forty-five day comment period through July 17, 2022.

- ✓ The TFCO is reviewing the cold weather report and its recommendations to perform a gap analysis for each entity to complete regarding applicability and completion of the recommendations, as necessary.

Task Force on Infrastructure Security and Technology (TFIST)

Mr. Vesely highlighted the following upcoming standard activities:

- ✓ CIP-012-1, *Cyber Security, Communications between Control Centers*, becomes effective July 1, 2022 and reminder that there is an NPCC TFIST whitepaper for CIP-012-1 posted to the NPCC web site.
- ✓ Supply chain – updates to CIP-005, CIP-010 and CIP-013 become effective October 1, 2022 with expanded scope adding Electronic Access Control or Monitoring System and Physical Access Control System.
- ✓ Supply Chain Low Impact Revisions – the Industry did not approve second posting; TFIST is expecting the NERC Standards Drafting Team to reach out.
- ✓ An additional ballot period for NERC Project 2016-02, Modifications to CIP Standards, regarding Virtualization is expected to be posted later this summer.

Mr. Adam referred the RCC to the TFIST activities included in the Agenda package.

Task Force on System Protection (TFSP)

Mr. Vasilachi highlighted the following TFSP activities:

- ✓ Review completion for twenty-two proposed modified and new protection Systems plus 3 Type I Remedial Action Schemes.
- ✓ Review of the draft Standard Authorization Request for PRC-004, *Protection System Misoperation Identification and Correction*, to address gaps in the lack of analysis, identification, and corrective action plans for Misoperations at inverter-based resource facilities.
- ✓ Analysis of protection system misoperation reports, follow up on resulting trends, recognition of best practices and identification of lessons learned.

Task Force on System Studies (TFSS)

Ms. Brake highlighted the following TFSS activities:

- ✓ Retired the UVLS list after a review into the requirements for the list concluded that there are no standards or compliance requirement to maintain a list; the NPCC UVLS list has no entries at this time.
- ✓ Reviewing the effects of NERC Reliability Standard FAC-014-3, *Establish and Communicate System Operating Limits*, in preparation of its April 1, 2024 effective date due to concerns of Requirements 6 and 7.

Informational Items

Mr. Adam referred the RCC to the Informational Items materials provided in the Agenda package and called for questions, if any.

Mr. Helton inquired if there was more information from the SP-7 Working Group on Protection System regarding the six reported Remedial Action Scheme operations in Q4 2021, the three reported misoperations on Limited Impact Remedial Action Schemes and the one misoperation on Type I Remedial Action Scheme. Mr. Vasilachi responded that only limited information was



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

available at the time of the RCC meeting report and that the SP-7 Working Group will provide Mr. Helton detailed information following this RCC meeting.

Future RCC Meeting

Mr. Adam indicated that an additional meeting has been tentatively added to facilitate wrap up the end of the year activities (such as Corporate Goals), if needed.

Additionally, Mr. Adam noted that like today's RCC meeting, the September 14, 2022 and December 6, 2022 RCC meeting are scheduled to overlap with the NERC Reliability and Security Technical Committee (RSTC) meetings. Mr. Adam indicated he will work with NPCC staff to look at scheduling RCC meetings to avoid an overlap with the NERC RSTC and other meetings.

Mr. Helton asked when the RCC meeting will return to in-person meetings. Mr. Adam indicated that currently there are not any plans to participate in-person; however, Mr. Adam is in favor of a survey to determine if the RCC members desire to meet in-person for one of the December meetings. Mr. Oks indicated it would also be helpful logistically to know if a member's facility is capable of and willing to hosting an RCC meeting.

Next RCC Meeting Date	Location
September 14, 2022	[WebEx meeting]

Future RCC Meeting Dates	Location
December 6, 2022	[WebEx meeting]
December 16, 2022	[WebEx meeting]

Other Matters

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



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
June 8, 2022

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

and,

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

La Régie de L’Énergie – Christian Garneau

Ontario Energy Board – Catherine Ethier

United States Department of Energy – TBD

New Brunswick Department of Energy and Mines – David Sallows

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



January 7, 2023

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 14, 2022 RCC Meeting

Sir / Madam:

Attached are the Minutes of the September 14, 2022 meeting of the NPCC Reliability Coordinating Committee as approved at the December 6, 2022 RCC meeting.

Sincerely,

Gerard J. Dunbar
Director, Reliability Standards and Criteria

cc: NPCC Staff



Mr. Adam called the meeting of the Reliability Coordinating Committee (RCC), held by WebEx to order at 10:00 am.

Attendance

Officers of the Reliability Coordinating Committee

Gabriel Adam, Chair

Anie Philip, Co-Vice Chair

Michael Jones, Co-Vice Chair

Ontario IESO

Long Island Power Authority

National Grid

Sector 1 - Transmission Owners

Central Hudson Gas & Electric Corporation

Central Maine Power Company

Consolidated Edison Company of New York, Inc.

Eversource Energy

Hydro-One, Inc.

Long Island Power Authority

National Grid USA

New Brunswick Power Corporation

New York State Electric & Gas Corporation

Nova Scotia Power, Inc.

Rochester Gas & Electric Corporation

The United Illuminating Company

Vermont Electric Power Company, Inc.

Damian Interrante - Alternate
(via written proxy)

Martin Paszek

George Wegh

Ajay Garg - Alternate

Anie Philip

Abhinav Rawat

Randy MacDonald

(via written proxy)

Chris Milligan - Alternate

(via written proxy)

(via written proxy)

Hantz Presume

Sector 2 – Reliability Coordinators

Hydro-Québec TransÉnergie

ISO New England, Inc.

New Brunswick Power Corporation

New York ISO

Ontario IESO

Maxime Nadeau

James Helton

Scott Brown

Zach Smith

Gabriel Adam

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

Entities

Consolidated Edison Company of New York, Inc.

Eversource Energy

National Grid

Lincoln Burton

Trevor Tessin

Mike Jones

Sector 4 Generation Owners

Dominion Energy, Inc.

New York Power Authority

NextEra Energy Resources

Ontario Power Generation

Vistra Corporation

Sean Bodkin

Salvatore Spagnolo - Alternate

Rigoberto Milla - Alternate

David Kwan - Alternate

Dan Roethemeyer



Sector 5 – Marketers, Brokers, and Aggregators

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
Utility Services of Vermont, LLC	Brian Robinson - Alternate

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

New York State Department of Public Service	Humayun Kabir
New York Power Authority	Shivaz Chopra

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

New York State Reliability Council, LLC	Roger Clayton
RLC Engineering	David Conroy

NPCC Staff

Charles Dickerson	President & Chief Executive Officer
Brian Hogue	Information Systems & Security Management
Scott Nied	Vice President, Compliance
Andrey Oks	Director of Operations Coordination
Quoc Le	Manager, System Planning
Rafael Sahiholamal	Manager, System Protection
Andreas Klaube	Senior Engineer, Operations Planning
Neeraj Lal	Manager, System Studies
Shayan Rizvi	Senior Reliability and Performance Analysis Engineer
Ryan Mc Sherry	Senior Engineer, Operations
Douglas Vitale	Manager, Security Outreach Situation Awareness
Gerry Dunbar	Director, Reliability Standards and Criteria

Guests

Consolidated Edison Company	William Vesely Chair, TF on Infrastructure Security and Technology
Eversource Energy	John Babu Chair, Task Force System Protection
Hydro Quebec Distribution	Sylvie Gicquel
Hydro-Quebec TransEnergie	Jeannette Gauthier
Hydro-Quebec TransEnergie	Marc Morissette, Vice Chair Task Force on System Studies
ISO-New England, Inc.	Steve Gould
New Brunswick Power Corporation	Jonathan Pollock Chair, Task Force Coordination of Operation
New York Power Authority	Robert Knowlton
New York State Electric & Gas	Muhammad Hussain
Nova Scotia Power Inc.	Joy Brake
Orange and Rockland Utilities Inc	Calvin Curry Vice Chair, TF Infrastructure Security and Technology
The United Illuminating Company	Bill Temple
The United Illuminating Company	Edward Roedel Chair, Task Force Coordination of Planning



Quorum Statement

Mr. Hogue indicated that a quorum had been achieved, by Member attendance, proxy, or alternate designation. Mr. Dunbar also indicated having received the following written proxies:

Sector 1 – Transmission Owners

Matt Saddler - Central Maine Power Company
Tim Lynch - New York State Electric & Gas Corp.
David Kimiecik - Rochester Gas & Electric
David Bradt - The United Illuminating Company

Sector 4 – Generator Owners

Dan Roethemeyer – Vistra Energy Corporation

Antitrust Guidelines for NPCC Meetings

Mr. Dunbar read the NPCC Antitrust Guidelines provided in the Agenda package.

Safety Message

Mr. Dunbar provided a safety message on remaining safe and alert while using public transportation.

President & CEO Report

NPCC Working Draft Strategic Plan:

Mr. Dickerson reported that the NPCC Board of Directors has affirmed the strategic initiatives within the updated *NPCC Working Draft Strategic Plan* including NPCC’s role to coordinate and communicate in order to reliably integrate the resources brought forward by societal decarbonization. Mr. Dickerson highlighted NPCC’s strategic focus on physical and cyber security and energy security.

Mr. Dickerson also noted that NPCC will be enhancing its outreach and engagement activities in order to raise the organization’s profile as a non-biased influencer among industry stakeholders and he highlighted his recent participation as a panelist on the FERC sponsored New England Gas -Electric Forum.

NPCC Chairman of the Board:

Mr. Dickerson reported that Mr. Harvey Reed will be retiring as the NPCC Chairman of the Board and Mr. Milo Blair has been elected by the Board of Directors as the new NPCC Chairman of the Board.



Chair Report

Agenda

Mr. Adam reviewed the agenda provided in the meeting package and noted that Agenda Item 5.1 *Review of Draft for Approval November 30, 2021, RCC Meeting Minutes* will be removed since those minutes were not made available for review prior to the RCC meeting. Additionally, Item 5.2 *Review of Draft for Approval December 10, 2021, RCC Meeting Minutes* will be an approval item rather than a Consent item since an extended period of time has elapsed since that meeting.

RCC Nominating Committee

Mr. Adam noted that his term as Chairperson of the RCC will expire after the December 2022 RCC meeting and Ms. Anie Phillip will ascend to the role of Chairperson in 2023. Mr. Adam noted that Mr. Michael Jones would remain as a Vice Chair and a nominating committee will be formed to identify candidates to fill the role of a second Vice Chair of the RCC. Mr. Adam encouraged RCC Members who would like to participate on the nominating committee to submit their name to Mr. Dunbar during the meeting.

Development of 2023-2024 Task Force/RCC Work Plans

Mr. Adam asked the Task Force Chairpersons to review the updated NPCC Strategic Plan and develop their respective 2023-2024 Task Force Work Plans with the Strategic Plan in mind. Task Forces should present their draft 2023-2024 Work Plans to the RCC for approval at the December RCC meeting.

2023 RCC Scope and Work Plan

Approved 2023-2024 Task Force Work Plans will inform the development of the 2023 RCC Work Plan submitted to the NPCC Board of Directors for approval in early 2023.

Proposed 2023 Meeting Dates

Mr. Adam reviewed the proposed RCC meeting dates for 2023. The proposed dates were included in the meeting package and include meeting dates in March, June, September, and December with an additional date in December to address end of year endorsement items. Mr. Adam noted that the meetings have been tentatively scheduled as remote WEBEX meetings. However, he expressed a desire to conduct at least some of the 2023 meetings in person. Furthermore, he noted certain logistical challenges to conducting meetings at NPCC and stated that a survey would be circulated among RCC members to gauge their desire to meet in person and also to solicit information on each members willingness to host an in-person meeting. Mr. Adam stated that the results of the survey will be available at the December 2022 RCC meeting.

August 11th NPCC DER/VER Forum

Mr. Dunbar provided a summary of the August 11th DER/VER Forum. The Forum topic was building electrification and its impact on the design and operation of the BPS. Mr. Dunbar reported that attendees of the August 11th Forum received presentations from representatives of Consolidated Edison, San Diego Gas and Electric, Ontario Power Generation and National Renewable Electric Laboratory. Mr. Dunbar noted that NPCC will be conducting its next Forum on October 13, 2022, and the October Forum will be focused on transmission integration. Mr. Dunbar also highlighted that the recordings of all DER/VER Forums conducted are available on the NPCC website.



Consent Agenda

The Reliability Coordinating Committee unanimously approved the following Consent Agenda Items (all written proxies in favor):

June 8, 2022 RCC Draft for Approval Meeting Minutes

Approved as provided in the agenda package.

RCC Roster Changes

Approved as provided in the agenda package.

Task Force Working Group Roster Changes

Approved as provided in the agenda package

Directory No. 1 Implementation Plan

Approved as provided in the agenda package

NPCC Directory No. 5 – Reserve, Request for Criteria Clarification

Approved as provided in the agenda package

Approval Items

December 10, 2021, RCC Draft for Approval Meeting Minutes

The RCC unanimously approved the December 10, 2021, RCC Meeting minutes. (All written proxies in favor).

2021 CCEP Assessment Report

Mr. Nied provided background on the NPCC Criteria Compliance Enforcement Program (CCEP) and highlighted issues of non-compliance on Directory No.4 *System Protection Criteria* and Directory No. 11 *Disturbance Monitoring Equipment Criteria*.

Ms. Gauthier of HQT provided a summary of a Directory No.4 non-compliance along with the status of HQT's mitigation plan.

Ms. Gauthier of HQT also provided a summary of a Directory No.11 non -compliance along with the status of HQT's mitigation plan.

Mr. Muhammad Hussain of New York State Gas and Electric (NYSEG) representing the Avangrid companies of NYSEG, Rochester Gas and Electric and Central Maine Power provided a summary on three instances of Directory No. 11 non-compliance and the status of Avangrid's mitigation plan.

After discussion, the RCC then unanimously approved the 2021 CCEP Assessment Report provided in the agenda package (all written proxies in favor).



Policy Discussion

August 17, 18, 2022, NERC MRC/BOT Meeting(s)

Mr. Dunbar provided an update on the subject meetings. He noted that the August 2022 NERC BOT meetings were the first held in person since February 2020. Mr. Dunbar highlighted the key actions from the August 2022 meetings including approval of the NERC 2023 Business Plan and Budget (BP&B), and a report on the status of revisions to EOP-11 and EOP-12. (Cold Weather recommendations)

Sept 7, 2022, NPCC BOD Strategy Session

Mr. Nied provided a summary of the recent strategy session conducted by the NPCC BOD. He noted that in their strategic discussions the Board affirmed the existing focus areas of the NPCC Working Draft Strategic Plan, including energy sufficiency, reliably integrating resources brought forward by decarbonization and cyber and physical security. Mr. Nied noted that although the document is being updated those three central strategic focus area will remain. Additionally he highlighted the development of the 2023 NPCC Corporate Goals which will be informed by the updated Strategic Plan.

Sept 13, 14, 2022, NERC Reliability and Security Technical Committee Meeting(s)

Mr. Rizvi reported on the System Planning Impacts from Distributed Energy Resources (SPIDER) WG items submitted to the RSTC. He highlighted RSTC approval of a whitepaper on the review of NERC Standards considering increasing amounts of DER, a whitepaper on DER Impacts on Under Voltage Load Shedding Program design, and a technical report on Positive Sequence RMS Simulations for High Penetration of DER. Mr. Rizvi also noted the RSTC was requested to provide reviewers for a fourth whitepaper on Battery Energy Storage and Multiple Types of DER Modeling.

Mr. Sahiholamal provided an update on the NERC Rules of Procedure Section 1600 Data Request. He highlighted changes to the Generator Availability Data (GADs) to accommodate solar reporting.



Items for Discussion

Goal IB-1 Report the Results of the NPCC Regional gas-electric review

Mr. Mc Sherry provided an informational update on the subject goal. He highlighted the formation of a technical committee to identify gas -electric interdependencies and the risks that they present. A final report which addresses future gas-electric interdependencies with recommendations for mitigating actions will be presented to the RCC in December 2022.

Goal IB-2 Summary status of resource adequacy scenario definition guidelines in support of regional energy sufficiency and reliability objectives

Mr. Klaube provided an update on Corporate Goal 1B-2 to develop recommendations for resource adequacy metrics for energy sufficiency assessments. He noted that NPCC has been actively participating in the EPRI Resource Adequacy for a Decarbonized Future Project which has focused on resource adequacy metrics, scenarios, models, data, and assessment tools. Mr. Klaube highlighted an EPRI Whitepaper that examines resource adequacy challenges and provides recommendations on metrics that measure frequency, duration, and magnitude. Mr. Klaube noted a report will be developed containing regional recommendations which will be presented to the RCC for endorsement in December 2022.

Goal IB-3 Present identified potential energy resource limitations such as caused by weather events, common mode failure scenarios caused by interdependencies and transmission constraints.

Mr. Klaube provided an update on Corporate Goal 1B-3 which will examine potential energy resource limitations. Mr. Klaube noted that NPCC Staff has been actively participating in the US Atlantic Offshore Wind Study Team (AOWST), which is evaluating coordinated transmission solutions to enable offshore wind deployment along the Atlantic coast. He highlighted potential energy limitations including, topology (points of interconnection, siting, cable routing), short circuit contribution and extreme weather. Mr. Rizvi provided additional background on short circuit considerations. Mr. Klaube reported that regional recommendations for both resource adequacy and energy sufficiency assessments will be presented to the RCC in December.

Goal II-2 – Enhance outreach to states, provinces, planning authorities and other stakeholders to establish a higher degree of coordination and transparency during the energy transition brought forward by societal de-carbonization objectives - Quarterly Status Report

Mr. Dunbar provided a brief update on the status of NPCC's outreach activities with regional State and Provincial Regulators. He noted that NPCC has conducted three such outreach sessions this far 2022 including presentations on NERC's Long Term Reliability Assessment and Summer 2022 Assessment, and the impact of DER proliferation on regional UFLS programs. Mr. Dunbar noted that one additional outreach session will be conducted in 2022 in the 2022 -2023 Winter Reliability Assessment.



Summary Task Force 2022-2023 Work Plan progress

The Task Force Chairperson's provided the following updates:

Task Force on Coordination of Planning

Mr. Ed Roedel of Avangrid, Chairperson of the TFCP, provided an update on recent TFCP activities. Mr. Roedel reported that TFCP has developed clarifying footnotes for Directory #1 performance testing and posted those additional footnotes to the Open Process. He also updated the RCC on the work of a Joint Planning and Operations Working Group presently reviewing Directory #1 and highlighted the Remedial Action Schemes (RAS) that the TFCP has reviewed and approved.

Task Force on Coordination of Operation

Mr. Jonathan Pollock of New Brunswick Power, Chairperson of the TFCO, provided an update on recent TFCO activities. Mr. Pollock highlighted ongoing Directory reviews including Directory #1 by a Joint Planning and Operations Working Group, Directory #2, and Directory #8 by TFCO Working Groups. Mr. Pollock also summarized the TFCO's recent clarification of the sustainability criteria for reserve within Directory #5 and a gap analysis among TFCO's Members based on the recommendations of the Joint NERC, FERC, Regional Entity Cold Weather Task Force.

Task Force on Infrastructure and Technology

Mr. William Vesely of Con Edison, Chairperson of TFIST, provided an update on recent TFIST activities. Mr. Vesely highlighted upcoming events including the TFIST Cyber Security Workshop on October 5, GridSecCon on October 18 and 19, and the enforcement dates and Project Development status of various CIP Standards. Mr. Vesely also noted the TFIST work on NPCC Security Bulletins.

Task Force on System Protection

Mr. John Babu of Eversource, Chairperson of the TFSP provided, an update on recent TFSP activity. Mr. Babu highlighted TFSP's review of facility presentations in accordance with Directory #4 and Directory #7 and noted that the Task Force is currently averaging around 9 or 10 reviews per meeting. Mr. Babu also noted TFSP's review of SP 7 misoperation data and noted that TFSP is developing corrective action recommendations to further reduce NPCC misoperations. Mr. Babu also provided an update on two items from the last RCC meeting including more detail on the reported RAS operations and a Members under reporting of total operations which will have a positive impact on the NPCC misoperation rate.

Task Force on System Studies

Mr. Marc Morrisette of Hydro Quebec provided and update on recent TFSS activity. Mr. Morrisette highlighted the TFSS midyear update of the NPCC RAS list and the approval of three new RASs in Ontario.



Other Items

Mr. Roger Clayton of the New York State Reliability Council reported on a recent NYRSC hosted IEEE 2800 IBR Forum. Mr. Clayton thanked several RCC Members and NPCC Staff for their presentations and noted that all material from the Forum is available on the NYSRC website.

Informational Items

Mr. Adam then referred the RCC to the Informational Items materials provided in the agenda package.

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

Next RCC Meeting Date

December 6, 2022
December 16, 2022

Location

[WebEx meeting]
[WebEx meeting]



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

and,

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

La Régie de L’Énergie – Christian Garneau

Ontario Energy Board – Catherine Ethier

United States Department of Energy – David Meyer

New Brunswick Department of Energy and Mines – David Sollows

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



March 3, 2023

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 6, 2022 RCC Meeting

Sir / Madam:

Attached are the Minutes of the December 6, 2022 meeting of the NPCC Reliability Coordinating Committee, as approved at the March 1, 2023 RCC meeting.

Sincerely,

Michael R. Lombardi

Michael R. Lombardi
Director, Reliability Assessments

cc: NPCC Staff



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

Mr. Adam called the meeting of the Reliability Coordinating Committee (RCC), held by WebEx to order at 10:00 am.

Attendance

Officers of the Reliability Coordinating Committee

Gabriel Adam, Chair	Ontario IESO
Anie Philip, Co-Vice Chair	Long Island Power Authority
Michael Jones, Co-Vice Chair	National Grid USA

Sector 1 - Transmission Owners

Central Hudson Gas & Electric Corporation	Michael E. Ridolfino
Central Maine Power Company	Damian Interrante - Alternate (proxy to Tim Lynch)
Consolidated Edison Company of New York, Inc.	Martin Paszek - Alternate
Eversource Energy	George Wegh
Hydro-One, Inc.	Ajay Garg - Alternate
Long Island Power Authority	Anie Philip
National Grid USA	Abhinav Rawat
New Brunswick Power Corporation	Randy MacDonald
New York Power Authority	(proxy to Frank Ronci)
New York State Electric & Gas Corporation	Timothy Lynch
Nova Scotia Power, Inc.	Chris Milligan
Orange & Rockland Utilities, Inc.	(proxy to Martin Paszek)
Rochester Gas & Electric Corporation	(proxy to Tim Lynch)
The United Illuminating Company	(proxy to Tim Lynch)
Vermont Electric Power Company, Inc.	Hantz Presume

Sector 2 – Reliability Coordinators

Hydro-Québec TransÉnergie	Maxime Nadeau
ISO New England, Inc.	James Helton
New Brunswick Power Corporation	Scott Brown
New York ISO	Kevin DePugh - Alternate
Ontario IESO	Gabriel Adam

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

Entities

Consolidated Edison Company of New York, Inc.	Lincoln Burton - Alternate
Eversource Energy	Trevor Tessin
Hydro-Quebec Distribution	Grégory Émiel
Long Island Power Authority	Hakim Sennoun - Alternate (proxy to Anie Philip)
National Grid USA	Mike Jones
New York Power Authority	(proxy to Frank Ronci)



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

Sector 4 Generation Owners

Consolidated Edison Company of New York, Inc.	(proxy to Martin Paszek)
Dominion Energy, Inc.	Sean Bodkin
Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Frank Ronci
	Salvatore Spagnolo - Alternate
NextEra Energy Resources	Rigoberto Milla
Ontario Power Generation	David Kwan - Alternate
Talen Energy Marketing	(via written proxy)
Vistra Energy Corporation	Ken Stell
	Dan Roethemeyer - Alternate

Sector 5 – Marketers, Brokers, and Aggregators

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
Long Island Power Authority	(proxy to Anie Philip)
Utility Services of Vermont, LLC	(proxy to John Helme)

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

Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Shivaz Chopra
	Robert Knowlton - Alternate
New York State Department of Public Service	Humayun Kabir - Alternate

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

New York State Reliability Council, LLC	Roger Clayton
RLC Engineering	David Conroy

NPCC Staff

Charles Dickerson	President & Chief Executive Officer
Scott Nied	Vice President, Compliance
Andrey Oks	Director of Operations Coordination
Gerry Dunbar	Director, Reliability Standards and Criteria
Michael Lombardi	Director, Reliability Assessments
Hai Le	Manager, System Planning
Neeraj Lal	Manager, System Studies
Rafael Sahiholamal	Manager, System Protection
Andreas Klaube	Senior Engineer, Operations Planning
Brian Hogue	Information Systems & Security Management
Brian Robinson	Senior Entity Risk Assessment Analyst
Matthew Forrest	Senior O&P Entity Risk Analyst
Ryan McSherry	Senior Engineer, Operations
Shayan Rizvi	Senior Reliability and Performance Analysis Engineer
Thomas Buhler	Senior Entity Risk Assessment Analyst



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

Guests

Edward Davidian	Chair, SS-40 Working Group on Load Modeling
Edward Roedel	Chair, Task Force on Coordination of Planning
Frank Peng	Chair, CO-12 Operations Planning Working Group
John Babu	Chair, Task Force on System Protection
John Helme	Utility Services of Vermont, LLC
Jonathan Pollock	Chair, Task Force on Coordination of Operation
Joy Brake	Chair, Task Force on System Studies
Peter Huynh	Chair, SS-38 Working Group on Inter-Area Dynamic Analysis
William Vesely	Chair, Task Force on Infrastructure Security & Technology

Antitrust Guidelines for NPCC Meetings

Mr. Hogue read the NPCC Antitrust Guidelines provided in the Agenda package.

Safety Message

Mr. Lombardi provided a safety message on the early detection and treatment of skin cancer.

Quorum Statement

Mr. Lombardi indicated that a quorum had been achieved, by member attendance, proxy, or alternate designation. Mr. Lombardi also indicated receiving the following written proxies:

Sector 4 Generation Owners

Scott Etnoyer - Talen Energy Marketing, LLC

President & CEO Report

NPCC Strategic Plan

Mr. Dickerson noted that when he joined NPCC the strategic plan was comprehensive and robust. Through the planning session held this year, the soundness of the strategic plan was reaffirmed. The strategic plan continues to adhere to the guiding principles of 1) Enhancing System Resilience and Assuring Energy Sufficiency; 2) Addressing Cyber and Physical Threats; and 3) Reliably Integrating the Resources Brought Forward by Societal De-carbonization Objectives.

Two slight modifications were made this year to the strategic plan. Consistent with NERC guidelines and the NPCC Task Forces, a concerted effort is to address the challenges associated with inverter performance issues. The second item coming from the NPCC Board is for NPCC not only continue but heighten its ability to be an educator throughout the Region and North America to persuade the various policy makers and legislatures on the realities of what is impact the grid.

Lastly, Mr. Dickerson indicated that the strategic plan publicly posted on the NPCC web site, although approved by the NPCC Board on October 26, 2022, has a slight change pending to



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

replacement of the “influencer” with “educates and promotes” since an influencer has a specific meaning regarding lobbying. Approval of the replacement, educates and promotes, language is on the agenda for tomorrow’s NPCC Board meeting. Following NPCC Board approval, the revised NPCC 2023 – 2026 Strategic Plan will be publicly posted on the NPCC web site.

Chair Report

Agenda

Mr. Adam reviewed the Agenda provided in the Agenda package. The November 30, 2021 RCC meeting minutes, agenda item 5.1, was not made available for review and approval prior to the RCC meeting. The Goal IB-3 - Develop NPCC Regional recommendations for resource adequacy energy sufficiency assessments, agenda item 6.3, is pending discussion and comments from the TFCP. Therefore, the two items were removed from the Agenda.

The RCC approved the Agenda with these changes.

RCC Nominating Committee Report

Mr. Adam reported that a nominating committee was formed at the previous RCC meeting to identify candidate(s) for a Co-Vice Chair position. Maxime Nadeau of Hydro-Québec has been identified as candidate and has expressed his willingness and ability to serve. The vote to approve Mr. Nadeau as an incoming Co-Vice Chair will be conducted under the consent agenda.

Development of 2023-2024 Task Force Work Plans and 2023 RCC Scope and 2023–2024 RCC Work Plan (Chair Report items 3.3 and 3.4, respectively)

Mr. Adam noted that the 2023-2024 Task Force Work Plans, the 2023 RCC scope and the 2023-2024 RCC Work Plan are all included in the meeting materials and will be discussed and voted on under the RCC Approval Items. The documents required only slight incremental changes and are aligned with the strategic plan.

2023 RCC Meeting Dates

Mr. Adam stated there are five RCC meeting dates in 2023. A survey is being conducted amongst the RCC members to determine meeting preferences. Mr. Adam noted that a few responses have been received but more responses are needed for an adequate sample size. Mr. Adam requested that RCC members continue to respond to the survey so that an adequate sample size is represented prior to any determination about future meeting preferences.

October 13th NPCC DER/VER Forum

Mr. Dunbar provided an update on the October 13, 2022 forum which focused on the current trends and future challenges of transmission integration. Presentations on this topic were received from Hydro One Networks, ISO-New England, the Ontario Independent Electricity System Operator, and the Energy Systems Integration Group (ESIG). Mr. Dunbar noted that all DER/VER Forum presentations and recordings are publicly posted and available on the NPCC website.

Lastly, Mr. Dunbar indicated that NPCC anticipates conducting additional DER/VER Forums during 2023 on relevant topics.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

Consent Agenda

The Reliability Coordinating Committee unanimously approved the following Consent Agenda Items:

September 14, 2022 RCC Draft-For-Approval Meeting Minutes

Approved as provided in the agenda package.

RCC 2023 Co-Vice Chair Recommendation

The Nominating Committee recommended Maxime Nadeau of Hydro-Québec for the position of RCC Co-Vice Chair beginning in 2023; he has indicated his willingness and ability to serve. He is a member of Sector 2 (Reliability Coordinators), so there is no conflict with Michael Jones, Co-Vice Chair (Sector 3 – TDUs, Dist. And LSE). Mr. Nadeau biography was provided in the agenda package.

Mr. Nadeau was approved for the position of RCC Co-Vice Chair beginning in 2023.

RCC Roster Changes

There were no RCC membership changes in the agenda package.

Task Force/Working Group Roster Changes

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

Task Force on Coordination of Planning

- ✓ Vincent Fihey of the Hydro-Quebec TransÉnergie to succeed Edward Roedel of the United Illuminating Company as TFCP Chairman

Task Force on Coordination of Operation

- ✓ Jon Sawyer of New York ISO to succeed Aaron Markham as the representative
- ✓ Aaron Markham of New York ISO to succeed Jon Sawyer as an alternate
- ✓ Matthew Antonio of National Grid to succeed Daniel Cammarata as the representative
- ✓ Daniel Cammarata of National Grid to succeed Matthew Antonio as an alternate
- ✓ Steve Gould of ISO New England, Inc. to serve as the Chair
- ✓ Dave Robitaille of Independent Electric System Operator to serve as the Vice Chair

Task Force on System Studies

- ✓ Brian Robinson will no longer serve as the representative for Utility Services
- ✓ Tracy MacNicoll will no longer serve as an alternate for Utility Services

Task Force on System Protection

- ✓ Ben Wu will no longer serve as the representative for Orange and Rockland
- ✓ Alex Echeverria of LND Technical Services to serve as the representative
- ✓ Michael Colby of Narragansett Electric Company d/b/a Rhode Island Electric to serve as the representative
- ✓ Enrique Rodriguez of Narragansett Electric Company d/b/a Rhode Island Electric to serve as an alternate
- ✓ Roman Solomonyuk, Michael Heyer, and Jasminder Madra to serve as an alternate for PSEG Long Island



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

Task Force on Infrastructure Security & Technology

- ✓ Jodi Crozzoli of New York Independent System Operator will no longer serve as an alternate
- ✓ Dorothy Freije of New York State Electric & Gas to serve as the representative
- ✓ Steve Portnoy of New York State Electric & Gas to succeed Dorothy Freije as an alternate
- ✓ Kelsey Settle of Nova Scotia Power, Inc. to serve as the representative
- ✓ Joseph Neglia of PSEG Fossil LLC to serve as the representative
- ✓ Bambi Rivera of Vermont Transco to succeed Deb Ludden as the representative

CO-2 System Operator Training Working Group

- ✓ Dave Downey of Nova Scotia Power, Inc. to succeed Jill Searle as an alternate

CO-8 Systems Operations Managers Working Group

- ✓ Tara Lefevre of New York ISO to succeed Jon Sawyer as the representative
- ✓ Jon Sawyer of New York ISO to serve as an alternate

CO-11 Restoration Working Group

- ✓ Marzuq Ajani of Hydro-Québec TransÉnergie to succeed Robert Golen of New York Independent System Operator as the Chair
- ✓ John Antonakos of Independent Electric System Operator to succeed Marzuq Ajani of Hydro-Québec TransÉnergie as the Vice Chair
- ✓ Saad Ansari of Independent Electric System Operator to succeed David Barrett as an alternate
- ✓ Abishek Penti of New York Independent System Operator to succeed Robert Golen as the representative
- ✓ Declan Cahil of New York Independent System Operator to succeed Adam Hargrave as an alternate
- ✓ David Beckles of Consolidated Edison Company of New York, Inc. to succeed Maximus Rizk as the representative
- ✓ Matt Antonio of National Grid will no longer serve as the representative
- ✓ Daniel Cammarata of National Grid will no longer serve as an alternate

CO-14 Operations Load Forecast Working Group

- ✓ Steve Huang of Consolidated Edison Company of New York, Inc. to succeed Tim Schlauraff as the representative
- ✓ Mark Taylor of New York Independent System Operator to succeed Riaz Kahn as an alternate
- ✓ Christopher Healey of National Grid USA to serve as an alternate

CP-8 Working Group on the Review of Resource and Transmission Adequacy

- ✓ Brian Little of Nova Scotia Power, Inc. to succeed Kamala Rangaswamy as the representative
- ✓ Kamala Rangaswamy of Nova Scotia Power, Inc. to succeed Brian Little as an alternate
- ✓ Ryan McSheffery of New Brunswick Power Corporation to succeed Prathamesh Kumthekar as the representative
- ✓ Prathamesh Kumthekar of New Brunswick Power Corporation to succeed Ryan McSheffery as an alternate
- ✓ John Delatto of PSEG-LI to succeed Phillip Moy as an alternate
- ✓ Phillip Moy of PSEG-LI to serve as an observer
- ✓ Kristina Duong of New York ISO to serve as an observer

IST-5 Physical Security Working Group

- ✓ Earl Anderson of PSEG LI will no longer serve as the representative
- ✓ Ken Bergstrom of Independent Electric System Operator to succeed Alex Kollar as the representative



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

SP-7 Protection Systems Misoperation Review Working Group

- ✓ Kathryn O'Toole of NYPA to serve as an alternate

SS-37 Base Case Development Working Group

- ✓ Jeff Wai of Independent Electricity System Operator to succeed Susan Alexander as an alternate

SS-39 Geomagnetic Disturbances Working Group

- ✓ Neeraj Lal of NPCC to succeed Greg Young-Morris of New Brunswick Power Corporation as the Chair
- ✓ Greg Young-Morris of New Brunswick Power Corporation to serve as the representative
- ✓ Sandra Gorgey of Nova Scotia Power, Inc. to serve as the representative

SS-40 Working Group on Load Modeling

- ✓ Meenakshi Saravanan of ISO New England to succeed Abhinav Singh as an alternate

2022 New York Interim Area Transmission Review

Approved as provided in the Agenda package.

2022 Interim Area Reviews of Resource Adequacy

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

2022 Long Range Adequacy Overview / NERC Probabilistic Assessment

Approved as provided in the Agenda package.

Mr. Adam noticed that there seems to be an overlap between the NPCC LRAO and the Areas' resource adequacy reviews. He suggested NPCC staff and TFCP discuss and evaluate if there are opportunities for efficiencies and avoid duplication of work.

2023 NPCC Criteria Compliance Enforcement Program Implementation Plan

Approved as provided in the Agenda package.

2023 RCC Scope

Approved as provided in the Agenda package.

TFSP Review of Mitigations for BPS Risk Reduction Implementation

Approved as provided in the Agenda package.

Task Force on Coordination of Operation Scope & Terms of Reference - Triennial Review

Approved as provided in the Agenda package.

Task Force on System Studies Scope

Approved as provided in the Agenda package.

Task Force on Infrastructure Security and Technology Scope

Approved as provided in the Agenda package.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

2023 RCC Roster

Mr. Lombardi noted that Trevor Tessin, the Sector 3 Representative for Eversource Energy, was inadvertently left off the 2023 RCC Roster.

The 2023 RCC roster was approved as provided in the Agenda package along with the noted addition of Trevor Tessin as the Sector 3 Representative for Eversource Energy.

Approval Items

2022 Maritimes Area Comprehensive Review of Resource Adequacy

Mr. Brown presented the *2022 Maritimes Area Comprehensive Review of Resource Adequacy* provided in the Agenda package.

The Review, covering the period from January 2023 through December 2027, 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 Area complies with the NPCC resource adequacy reliability criterion and recommended RCC approval of the *2022 Maritimes Area Comprehensive Review of Resource Adequacy* provided in the Agenda package.

The RCC then unanimously approved the *2022 Maritimes Area Comprehensive Review of Resource Adequacy* provided in the Agenda package.

NPCC 2022 – 2023 Winter Reliability Assessment

Messrs. Klaube and Peng presented the *NPCC 2022-2023 Winter Reliability Assessment* provided in the Agenda package. The *NPCC 2022-2023 Winter Reliability Assessment* was approved by the Task Force on Coordination of Operation on November 17, 2022. The corresponding, *NPCC 2022-2023 Winter Multi-Area Probabilistic Assessment* was approved by the Task Force on Coordination of Planning on November 21, 2022 and is included as Appendix VIII.

The RCC then unanimously approved the *NPCC 2022-2023 Winter Reliability Assessment* provided in the Agenda package.

2023 - 2024 Task Force Work Plans

The Task Force chairs highlighted their respective 2023 - 2024 Task Force Work Plans provided in the Agenda package.

The RCC then unanimously approved the 2023 - 2024 Task Force Work Plans as provided in the Agenda package.

Reliability Coordinating Committee Work Plan for Calendar Years 2023–2024

Following the review and approval of the NPCC Task Forces' respective 2023 - 2024 Work Plans, the RCC reviewed its corresponding 2023 – 2024 Work Plan.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

Mr. Adam provided an overview of the *Reliability Coordinating Committee Work Plan for Calendar Years 2023–2024* noting that the changes are incremental updates to the current applicable dates.

A proposed recommendation was made to revise RCC Work Plan Section 2. *Support the Development of New Standards and Guidelines* to identify an RCC action to review NPCC finding and recommendations and propose applicable changes for implementation.

The RCC then unanimously recommended that the Reliability Coordinating Committee Work Plan for Calendar Years 2023–2024, as provided in the Agenda package along with incorporating the proposed recommendation, be submitted for NPCC Board approval.

Directory No.1 Live-Tank Footnote Addition to Tables No.1, No.2 and No.3

Mr. Roedel provided an overview of the redlined version of Directory No. 1 *Design and Operation of the Bulk Power System* which has been revised to include new footnotes in Table No. 1, Table No. 2, and Table No. 3.

The Task Force on Coordination of Planning proposed the new footnotes to clarify how testing required by Tables No. 1, No. 2, and No. 3 of Directory No. 1 should be performed in locations where free standing or column-type current transformers (CT) are provided on only one side of a live tank circuit breaker protecting a transmission element.

The RCC then unanimously approved the new footnotes in Table No. 1, Table No. 2, and Table No. 3 of Directory No. 1 *Design and Operation of the Bulk Power System* as provided in the Agenda package.

Directory No. 8 System Restoration

Mr. McSherry presented the changes to Directory No. 8 based on the collaborative review by the Task Force on Coordination of Operation, the Task Force on System Protection, and the CO-11 Restoration Working Group. The review considered the impact of the evolving ERO Standards on the Criteria, emerging industry technologies and the recommendations contained in the *2018 Strategic Review of the NPCC Criteria*.

In accordance with the NPCC Directory Development and Revision Manual, the revised document was posted to the Open Process for a 45-day comment period on June 6, 2022 through July 19, 2022. Accordingly, the Task Force on Coordination of Operation has responded to all comments received and, recommends RCC approval of the revised criteria in Directory No. 8.

The RCC then unanimously approved the changes to Directory No. 8 *System Restoration* as provided in the Agenda package for ballot by the NPCC full membership.

Endorsement Items

Goal IA-4 - Report “lessons learned” and any NPCC Reliability Criteria revision recommendations



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

Mr. McSherry presented the lessons learned and the NPCC Reliability Criteria revision recommendations provided in the Agenda package. The presentation recaps the findings from the manual load shedding tabletop exercise conducted by NPCC staff with participants from Nova Scotia Power, Inc., New Brunswick Power Corporation, Hydro One Networks, National Grid USA, Eversource Energy, ISO-New England, New York ISO, Consolidated Edison Company of New York, Inc., Ontario Independent Electricity System Operator, Hydro-One, Inc.

After discussion, the RCC then endorsed the Goal IA-4 lessons learned and recommendations provided in the Agenda package for consideration by the NPCC Board.

Goal IB-1 - Develop a report with addressing the identified future gas-electric interdependencies with recommendations for mitigating actions

Mr. McSherry presented the final report addressing the identified future gas-electric interdependencies with recommendations for mitigating actions provided in the Agenda package.

Following outreach conducted by NPCC Staff, the Technical Review Committee (TRC) was formed comprised of gas and electric industry subject matter experts from ISO-New England Inc, New York Independent System Operator, Independent Electricity System Operator, Iroquois Pipeline Operating Company, Kinder Morgan, Eversource Gas, National Grid USA, PJM, Consolidated Edison Company of New York Inc, Rochester Gas & Electric, Central Hudson Gas & Electric Corporation, and Northeast Gas Association. The TRC finalized the Scope document used for identifying future NPCC Regional gas-electric interdependency risk(s) and guiding the development of associated mitigating actions.

The TRC identified and reviewed eight gas-electric system interdependencies and associated risks. The TRC developed a report addressing the identified future gas-electric interdependency risks with recommendations for mitigating actions. After the TRC accepted the report, the Task Force on Coordination of Operation completed its review and recommended RCC endorsement.

After discussion, the RCC then endorsed the Goal IB-1 final report provided in the Agenda package for consideration by the NPCC Board.

Goal II-1 - Develop future revisions to NPCC Directory No. 1 to address reliability contributions and challenges of changing technologies and load characteristics

Mr. Dunbar presented the Roadmap to Implement Future Revisions to Directory No.1 *Design and Operation of the Bulk Power System* provided in the Agenda package. The roadmap was developed to initiate a reliability discussion and provide a path forward to the appropriate NPCC technical groups and committees.

The roadmap examines the current issues confronting the industry (Energy Adequacy (all hours), Resource Adequacy Metrics, Essential Reliability Services, Electrification Load Forecasting Issues) and highlights specific portions of Directory No. 1 that should be considered for revision to address these challenges.

The initial version of the roadmap was provided to the Task Force on Coordination of Planning (TFCP) and the Task Force on Coordination of Operation (TFCO) for review and comment. An



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

additional comment period for the RCC and the Regional Standards Committee (RSC) was conducted, and comments were incorporated into the draft as applicable.

After discussion, the RCC then endorsed the Goal II-1 roadmap document provided in the Agenda package for consideration by the NPCC Board.

Goal II-1 – Enhanced DER/VER Guideline Document

Mr. Dunbar presented the NPCC DER/VER Guidance document provided in the Agenda package. The NPCC DER/VER Guidance document was developed to provide regional guidance and information for voluntary use by NPCC Members and stakeholders.

The DER/VER Guidance document has been enhanced based on DER/VER Forums conducted during 2022, including forums on electric vehicle charging and building electrification. These topics have informed the development of a new Appendix, entitled Impact of Transportation Electrification and Building (Heat) Electrification, which has been added to the Guidance document as Appendix J.

The revised Guidance document was posted to the NPCC Open Process to receive comments on Appendix J and all comments have been addressed.

On November 23, 2022, the revised Guidance document containing the new Appendix J was endorsed by the Regional Standards Committee (RSC).

After discussion, the RCC then endorsed the Goal II-1 guidance document provided in the Agenda package for consideration by the NPCC Board.

Discussion Items

Goal IB-2 – Summary status report of resource adequacy scenario definition guidelines in support of regional energy sufficiency and reliability objectives

Mr. Klaube presented the NPCC regional recommendations addressing identified gaps in commercial reliability adequacy assessment tools and suggested areas new metric, model, and algorithm improvements.

Recommendations were presented at the November 18, 2022 CP-8 meeting by NPCC staff. A presentation is also planned for the NPCC Task Force on Coordination of Planning December 12, 2022 meeting.

Presentation given is included in the Agenda package.

Goal II-2 – Enhance outreach to states, provinces, planning authorities and other stakeholders to establish a higher degree of coordination and transparency during the energy transition brought forward by societal de-carbonization objectives

Mr. Dunbar presented on NPCC's enhance outreach to State and Provincial Regulators. NPCC has conducted three separate briefings with its regional State and Provincial Regulators in 2022. The briefings are intended to promote awareness of regional planning and operational issues and



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

the impact of Distributed Energy Resources (DER) and Variable Energy Resources (VER) on the operability of the Bulk Power System (BPS).

On February 25, 2022, an outreach briefing was conducted which focused on the NERC 2021 Long Term Reliability Assessment (LTRA) and associated NPCC reliability activities.

On April 22, 2022, a briefing was conducted that identified issues associated with DER and its impact on the design and operation of regional Underfrequency Load Shedding (UFLS) systems.

Additionally, on June 10, 2022, NPCC conducted a third session focused on the NERC and NPCC 2022 Summer Reliability Assessments.

NPCC plans a final 2022 outreach session with its State and Provincial Regulators on Dec. 15, 2022, which will focus on the NERC 2022-2023 Winter Reliability Assessment, NERC's 2022 Long Term Reliability Assessment and NPCC's 2022-2023 winter assessment activities.

NPCC Task Force 2022-2023 Work Plan Overview

Mr. Adam asked each Task Force Chair to highlight their respective activities. He noted that additional information can be found in the Agenda package, which contains all the individual Task Force updates.

Task Force on Coordination of Planning (TFCP)

Mr. Roedel highlighted the following TFCP activities:

- ✓ Remedial Action Scheme (RAS) updates from the last TFCP meeting:
 - Reviewed and approved modifications to a Type I RAS and a Limited Impact RAS
 - Retired of a Type I RAS
- ✓ At the suggestion of the Ontario IESO, beginning next week:
 - TFCP will have formal discussions of each Areas Decarbonization Goals (i.e., statutory goals) focusing on how best to coordinate planning activities and lessons learned from each of the different areas

Task Force on Coordination of Operation (TFCO)

Messrs. Oks and Pollock highlighted the following TFCO activities:

- ✓ Directory No. 8, *System Restoration*
 - Review and update of the directory has been completed and at this meeting the RCC approved it going for a full member ballot
- ✓ Cold Weather Report
 - Continuing the review of the report recommendations that pertain to the TFCO activities and the identification of gaps that could be addressed by NPCC without duplicating NERC or industry activities
- ✓ Directory No. 1, *Design and Operation of the Bulk Power System*
 - The CO-7 Working group is jointly working with CP-11 Working Group on the Directory No. 1 Triannual Review

Task Force on Infrastructure Security & Technology (TFIST)

Mr. Vesely highlighted the following TFIST activities:

- ✓ Operational Technology Workshop



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

- Workshop was conducted in October 2022
- Presentation from the U.S. Department of Energy (DOE) highlighted the Cyber Security Maturity Model
- Presentation from the Idaho, National Laboratory, a DOE national laboratory, highlighted the initiative called Cybersecurity for the Operational Technology Environment (CyOTE) “CyOTE” which is has created a cyber threat detection method for energy sector companies
- Presentations were also given on incident handling which focused on knowing your insurance, procedures, and legal requirements; performance goals, and CIP standards

Task Force System Protection (TFSP)

Mr. Babu highlighted the following TFSP activities:

- ✓ Reviews of facility presentations has been a major undertaking for the majority of 2022
- ✓ The last three TFSP meeting have been in-person which has led to vigorous discussions about issues such as the interconnect of inverter based resources (IBRs), the potential impacts of IBRs to the BPS, and the need to update Directory No. 4 Bulk Power System Protection Criteria

Task Force on System Studies (TFSS)

Ms. Brake highlighted the following TFSS activities:

- ✓ Historically, the focus includes activities such as the Transmission Reviews, Remedial Action Scheme type reviews, and annual update of the BPS list
- ✓ Looking ahead, continued and/or increased focus will include:
 - Dynamic Load Modeling
 - High penetration of inverter based resources and distributed energy resources during light load scenarios

Policy Discussion

Mr. Adam referred the RCC to the Policy Discussion materials provided in the Agenda package and indicated RCC members should reach out to the NPCC staff with questions they may have.

Informational Items

Mr. Adam referred the RCC to the Informational Items materials provided in the Agenda package.

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

Next RCC Meeting Date	Location
December 16, 2022	[WebEx meeting]

Future RCC Meeting Dates	Location
March 1, 2023	TBD
June 7, 2023	TBD
September 12, 2023	TBD
December 5, 2023	TBD
December 15, 2023	[WebEx meeting]



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 6, 2022

Distribution of Approved Minutes

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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

and,

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

La Régie de L’Énergie – Christian Garneau

Ontario Energy Board – Catherine Ethier

United States Department of Energy – *TBD*

New Brunswick Department of Energy and Mines – David Sollows

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



March 3, 2023

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 16, 2022 RCC Meeting

Sir / Madam:

Attached are the Minutes of the December 16, 2022 meeting of the NPCC Reliability Coordinating Committee, as approved at the March 1, 2023 RCC meeting.

Sincerely,

Michael R. Lombardi

Michael R. Lombardi
Director, Reliability Assessments

cc: NPCC Staff



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 16, 2022

Mr. Adam called the meeting of the Reliability Coordinating Committee (RCC), held by WebEx to order at 10:00 am.

Attendance

Officers of the Reliability Coordinating Committee

Gabriel Adam, Chair	Ontario IESO
Anie Philip, Co-Vice Chair	Long Island Power Authority
Michael Jones, Co-Vice Chair	National Grid USA

Sector 1 - Transmission Owners

Central Hudson Gas & Electric Corporation	Michael E. Ridolfino
Central Maine Power Company	Damian Interrante - Alternate (proxy to David Bradt)
Eversource Energy	George Wegh
Hydro-One, Inc.	Ajay Garg - Alternate
Long Island Power Authority	Anie Philip
National Grid USA	Abhinav Rawat
New Brunswick Power Corporation	Randy MacDonald (proxy to Shivaz Chopra)
New York Power Authority	(proxy to David Bradt)
New York State Electric & Gas Corporation	Chris Milligan (proxy to Aleksandra Gofman)
Nova Scotia Power, Inc.	(proxy to David Bradt)
Orange & Rockland Utilities, Inc.	David Bradt
Rochester Gas & Electric Corporation	Hantz Presume
The United Illuminating Company	
Vermont Electric Power Company, Inc.	

Sector 2 – Reliability Coordinators

Hydro-Québec TransÉnergie	Maxime Nadeau
ISO New England, Inc.	James Helton
New Brunswick Power Corporation	(proxy to Randy MacDonald)
New York ISO	Kevin DePugh - Alternate
Ontario IESO	Gabriel Adam

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

Consolidated Edison Company of New York, Inc.	Dermot Smyth
Eversource Energy	Trevor Tessin
Hydro-Quebec Distribution	Hakim Sennoun - Alternate
Long Island Power Authority	Robert Eisenhuth
National Grid USA	Mike Jones
New York Power Authority	(proxy to Shivaz Chopra)



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 16, 2022

Sector 4 Generation Owners

Consolidated Edison Company of New York, Inc.	Helen Wang
Dominion Energy, Inc.	Sean Bodkin
Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	(proxy to Shivaz Chopra)
NextEra Energy Resources	Rigoberto Milla
Ontario Power Generation	David Kwan - Alternate
Talen Energy Marketing	(via written proxy)
Vistra Energy Corporation	Ken Stell

Sector 5 – Marketers, Brokers, and Aggregators

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
Long Island Power Authority	(proxy to Anie Philip)

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

Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Shivaz Chopra
	Robert Knowlton - Alternate

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

New York State Reliability Council, LLC	Roger Clayton
RLC Engineering	David Conroy

NPCC Staff

Michael Lombardi	Director, Reliability Assessments
Hai (Quoc) Le	Manager, System Planning
Neeraj Lal	Manager, System Studies
Rafael Sahiholamal	Manager, System Protection
Andreas Klaube	Senior Engineer, Operations Planning
Brian Hogue	Information Systems & Security Management
Ryan McSherry	Senior Engineer, Operations
Shayan Rizvi	Senior Reliability and Performance Analysis Engineer
Quintin Lee	Manager, Event Analysis

Guests

Edward Roedel	Chair, Task Force on Coordination of Planning
John Babu	Chair, Task Force on System Protection
Joy Brake	Chair, Task Force on System Studies

Antitrust Guidelines for NPCC Meetings

Mr. Hogue read the NPCC Antitrust Guidelines provided in the Agenda package.

Safety Message

Mr. Rizvi provided a safety message on the health benefits of a good night’s sleep.



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 16, 2022

Quorum Statement

Mr. Lombardi indicated that a quorum had been achieved, by member attendance, proxy, or alternate designation. Mr. Lombardi also indicated receiving the following written proxies:

Sector 4 Generation Owners

Scott Etnoyer - Talen Energy Marketing, LLC

Chair Report

Agenda

Mr. Adam reviewed the Agenda provided in the Agenda package.

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

RCC Meeting Survey Results and 2023 RCC Meeting Dates and Locations

Messrs. Adam and Hogue reviewed the RCC Meeting Survey Results which identified the top three preferred in-person meeting dates as June 7, 2023, September 12, 2023, and December 5, 2023. Although September 12, 2023 had slight support over the June and December dates, Mr. Adam proposed the in-person meeting dates be June 7, 2023 and December 5, 2023. The December 5, 2023 in-person meeting would coincide with the in-person *Annual Meeting of the Members*, and the June 7, 2023 meeting would allow time in between the in-person meetings, i.e.: June – December rather than September – December.

After discussion, the in-person RCC 2023 Meeting were slated for June 7, 2023 and December 5, 2023 at a location “To Be Determined” in New York, NY.

Updated 2023–2024 RCC Work Plan

Mr. Adam indicated that the updated *2023–2024 RCC Work Plan* is provided in the Agenda package. The updated work plan incorporated the incremental changes to a couple of reference materials’ dates, as presented at the December 6, 2022 meeting, and incorporated the approved recommendation, from the December 6, 2022 meeting, to revise RCC Work Plan Section 2. *Support the Development of New Standards and Guidelines* to add an RCC action to “Review the findings and recommendations resulting from NPCC 2022 Corporate Reliability Goals and propose applicable reliability criteria changes for implementation.”

Mr. Adam stated that the update *2023–2024 RCC Work Plan*, provided in the Agenda package, will be submitted to the NPCC Board of Directors for approval at its first meeting in 2023.

Review and Prioritization of Recommendations

Mr. Adam noted that this is a follow up item resulting from the new RCC action added to the *2023–2024 RCC Work Plan*, as discussed above, to “Review the findings and recommendations resulting from NPCC 2022 Corporate Reliability Goals and propose applicable reliability criteria changes for implementation.”



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 16, 2022

Mr. Adam proposed that the NPCC Task Force Leadership with the NPCC RCC Leadership triage the subject findings and recommendation to direct the appropriate Task Force(s) to take the necessary action. Included in the proposal is that the NPCC Task Force Leadership with the NPCC RCC Leadership will hold a dedicated meeting in 2023 to triage the findings and recommendation and prioritize resulting actions.

Consent Agenda

The Reliability Coordinating Committee unanimously approved the following Consent Agenda Items:

RCC Roster Changes

The following changes to the RCC membership were approved:

Sector 1 – Transmission Owners

- David Kimiecik to no longer serve as the representative for the Rochester Gas and Electric Corporation

Sector 2 - Reliability Coordinators

- Stéphane Desbiens to replace François Brassard as the Hydro-Québec TransÉnergie alternate.

Updated 2023 RCC Roster

The updated 2023 RCC Roster was provided in the Agenda package.

Task Force/Working Group Roster Changes

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

Task Force on Coordination of Operation

- Gaetan Benoit of New Brunswick Power, to succeed Kim McKinley as an alternate

Task Force on Coordination of Planning

- Robert Eisenhuth of PSEG Long Island to succeed Vincent Fihey of the Hydro-Quebec TransÉnergie as the Vice Chair
- Marianne Perben of ISO New England to succeed Peter Wong as an alternate
- Mark Gaines of the United Illuminating Company to serve as an alternate

Task Force on Infrastructure Security & Technology

- Gianfranco Cataudella of Orange and Rockland Utilities Inc to serve as an alternate
- George Iamarino of Orange and Rockland Utilities Inc to serve as an alternate
- Jeff Sykes of Utility Services of Vermont, LLC to succeed Sean Randles as an alternate
- John Ne Ville of Utility Services of Vermont, LLC to serve as an alternate
- Michael Marciano of Utility Services of Vermont, LLC to serve as an alternate
- Ryan Lebel of Utility Services of Vermont, LLC to serve as an alternate

CO-11 Working Group on Restoration

- John Pearson of ISO New England to succeed Judianne O'Brien as an alternate
- Saad Ansari of Independent Electric System Operator to succeed John Antonakos as the Vice Chair



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 16, 2022

- Saad Ansari of Independent Electric System Operator to succeed John Antonakos as the representative
- John Antonakos of Independent Electric System Operator to succeed Saad Ansari as an alternate
- Martin Paszek of Consolidated Edison Company of New York, Inc to succeed Michael Mullin as an alternate

CO-12 Working Group on Operations Planning

- Connor Corsi of ISO New England to succeed Tim Hicks of New Brunswick Power as the Vice Chair

Approval Items

November 30, 2021, RCC Draft-For-Approval Meeting Minutes

The RCC unanimously approved the November 30, 2021, RCC Meeting minutes as provided in the Agenda package.

Endorsement Items

Goal IB-3 - Develop NPCC Regional recommendations for resource adequacy energy sufficiency assessments

Messrs. Lombardi, Klaube and Rizvi presented the NPCC regional recommendations developed for the resource adequacy energy sufficiency assessments provided in the Agenda package, along with TFCO recommendation for endorsement and TFCP discussion.

The TFCO reviewed the findings at its meeting on December 2, 2022, and recommended RCC endorsement of the developed recommendations on December 7, 2022.

On December 15, 2022, the TFCP concluded (with one vote against) a consensus for support of the developed recommendations was not achieved. Feedback included that some of the developed recommendations were too high level, not substantiated, or not applicable. Some TFCP members who abstained stated they would change their vote to support endorsement if the following developed recommendations were removed:

- Incorporate Goal IB-3 Threshold findings;
- Granularity of resource behavior during stressed or abnormal system conditions/weather events; and,
- Reliability implication of offshore wind interconnection schemes/topologies.

After discussion, the RCC voted to not endorse the developed recommendations at this time and asked the NPCC staff to provide additional background information supporting the developed recommendations for Goal IB-3.

Discussion Items

NPCC 2023 – 2026 Strategic Plan

Mr. Lombardi reported that the NPCC Board of Directors held its Board Strategy Session on September 7, 2022 and subsequently approved the *NPCC 2023 – 2026 Strategic Plan* on October 26, 2022. The strategic plan is a continuation of the previous strategic plan and continues to adhere to the guiding principles of 1) Enhancing System Resilience and Assuring Energy



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 16, 2022

Sufficiency; 2) Addressing Cyber and Physical Threats; and 3) Reliably Integrating the Resources Brought Forward by Societal De-carbonization Objectives.

Mr. Lombardi indicated the *NPCC 2023 – 2026 Strategic Plan* is available on the NPCC web site. Mr. Adam concluded that the strategic plan is a continuation of the previous strategic plan and reinforces that the NPCC has a strong strategic plan.

Future RCC Meetings

Mr. Adam, under the Chair Report, reviewed and discussed the RCC Meeting Survey Results and 2023 RCC Meeting Dates and Locations. As discussed, the future RCC meetings were determined as:

- Wednesday March 1, 2023 – [WebEx meeting] (10:00 am – 3:00 pm)
- Wednesday June 7, 2023 – TBD (10:00 am – 3:00 pm)
- Tuesday September 12, 2023 – [WebEx meeting] (10:00 am – 3:00 pm)
- Tuesday December 5, 2023 – New York, NY (10:00 am – 3:00 pm)
- Friday December 15, 2023 – [WebEx meeting, if needed] (10:00 am – 1:00 pm)

Informational Items

NERC 2022 Long Term Reliability Assessment

Mr. Lombardi noted that the NERC 2022 Long Term Reliability Assessment (LTRA) was posted yesterday by NERC and is provided in the Agenda package. The infographic from the 2022 LTRA was displayed which reported that Ontario has a potential high risk shortfall which may occur at normal peak condition and ISO-NE has a potential elevated risk shortfall which may occur in severe conditions.

Mr. Adam indicated that the 2022 LTRA findings were expected, it is a good report and raises the appropriate issues commensurate with the evolution of the grid. Mr. Adam encouraged the RCC to review the report provided in the Agenda package.

Mr. Klaube concluded that the NERC LTRA is consistent with the findings from the NPCC *CP-8, Working Group on the Review of Resource and Transmission Adequacy*, and the most recent long range adequacy overview.

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

Next RCC Meeting Date	Location
March 1, 2023	[WebEx meeting]
 Future RCC Meeting Dates	 Location
June 7, 2023	TBD
September 12, 2023	[WebEx meeting]
December 5, 2023	New York, NY
December 15, 2023	[WebEx meeting]



NORTHEAST POWER COORDINATING COUNCIL
Reliability Coordinating Committee Minutes
December 16, 2022

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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

and,

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

La Régie de L’Énergie – Christian Garneau

Ontario Energy Board – Catherine Ethier

United States Department of Energy – *TBD*

New Brunswick Department of Energy and Mines – David Sollows

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

Annexe D

**Liste des unités sous l'autorité
du Coordonnateur de la fiabilité
et celles réalisant des tâches
reliées au rôle du
Coordonnateur de la fiabilité et
description des rôles et
responsabilités**

Liste des unités sous l'autorité du Coordonnateur de la fiabilité et celles réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité décrivant leurs rôles et responsabilités

Suite à la nouvelle structure organisationnelle en vigueur depuis le 28 février 2022, le Coordonnateur présente, dans son rapport annuel 2022, le tableau 2 contenant la liste des unités sous l'autorité du Coordonnateur de la fiabilité et celles réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité et leur direction d'appartenance, suivant les organigrammes d'Hydro-Québec de l'annexe A du présent rapport annuel, et présentant les rôles et responsabilités de chacune des unités.

Tableau 2

Unités sous l'autorité du Coordonnateur de la fiabilité et celles réalisant des tâches reliées au rôle du Coordonnateur de la fiabilité et description des rôles et responsabilités

Groupe Exploitation et expérience client	
Direction principale – Contrôle des mouvements d'énergie et exploitation des réseaux	
Unité – Stratégies, performance & projets d'affaires	
Rôles et responsabilités	<ul style="list-style-type: none"> • Assurer l'alignement stratégique au sein de la direction principale • Supporter les directions en matière de suivi de la performance et d'information de gestion • Réaliser la gestion de projets d'affaires et supporter leurs livraisons
Direction – Conformité et fiabilité	
Unités - Affaires réglementaires du Coordonnateur de la fiabilité et conformité	
Rôles et responsabilités	<ul style="list-style-type: none"> • Assurer la gouvernance de la conformité, sa surveillance et son rendre compte • Agir à titre de représentant du Coordonnateur de la fiabilité de l'Interconnexion Québec • Fournir le soutien technique aux entités visées lors des consultations publiques

Unités – Expertise et conformité des normes de fiabilité	
Rôles et responsabilités	<ul style="list-style-type: none"> • Établir les stratégies d’entreprise en matière de déploiement et d’application des normes de fiabilité • Coordonner les efforts de l’entreprise relativement aux audits de conformité aux normes de fiabilité
Direction – Stratégie de conduite du système énergétique	
Unité - Stratégies d’exploitation & d’intégration des réseaux	
Rôles et responsabilités	<ul style="list-style-type: none"> • Assurer les stratégies de l’exploitation, la gestion des encadrements, le soutien opérationnel et l’intégration dans les pratiques des équipes d’exploitants
Unité - Stratégies projets d’évolution du système énergétique	
Rôles et responsabilités	<ul style="list-style-type: none"> • Assurer une cohérence entre les besoins opérationnels et les projets d’évolution • Définir les besoins dans l’évolution des systèmes
Unité - Stratégies système énergétique	
Rôles et responsabilités	<ul style="list-style-type: none"> • Émettre des recommandations sur la gestion du réseau • Définir les besoins dans l’évolution des systèmes
Direction – Contrôle du système énergétique	
Unité - Programmation et contrôle du réseau	
Rôles et responsabilités	<ul style="list-style-type: none"> • Produire les programmes intégrés de production, de transport et d’échanges pour la zone d’équilibrage du Québec • Gérer les services complémentaires de transport (programmation de réserve, contrôle de tension etc.) • Maintenir les transits, la tension, les réserves d’exploitation, la fréquence, le temps du réseau selon les critères de fiabilité • Fournir un bilan offre/demande et les capacités de transport à court terme • Coordonner les activités de contrôle et d’échanges avec les centres de contrôle des réseaux voisins

Unité - Coordination des mesures d'urgence	
Rôles et responsabilités	<ul style="list-style-type: none"> • Coordonner et appliquer les mesures d'urgence opérationnelles
Unité - Coordination du réseau	
Rôles et responsabilités	<ul style="list-style-type: none"> • Surveiller et assurer la disponibilité et la fiabilité du système énergétique
Direction – Planification de la conduite du système énergétique	
Unité - Prévision & optimisation de la conduite du système énergétique	
Rôles et responsabilités	<ul style="list-style-type: none"> • Assurer une conduite optimale du système énergétique, incluant la prévision de la demande en temps réel, l'optimisation des approvisionnements court terme, la planification de la pointe, les prévisions météo et éolienne
Unité - Planification du système énergétique	
Rôles et responsabilités	<ul style="list-style-type: none"> • Soutenir la prévision stratégique de la gestion de toutes les sources d'énergie incluant la gestion hydrique et le bilan court terme
Unité - Gestion intégrée des retraits	
Rôles et responsabilités	<ul style="list-style-type: none"> • Optimiser la planification et la gestion des retraits, de manière intégrée et sur un horizon court, moyen et long terme
Direction – Exploitation des réseaux	
Unité - Exploitation des réseaux – Centre	
Rôles et responsabilités	<p>Pour la région Centre :</p> <ul style="list-style-type: none"> • Rédiger les plans de manœuvre • Produire les régimes de travail (uniquement pour les activités de distribution) • Exécuter les activités d'exploitation • Traiter les appels d'urgence et le rétablissement du service (Opérateurs CER, Répartiteur CER, Opérateurs CED)

Unité - Exploitation des réseaux – Est	
Rôles et responsabilités	<p>Pour la région Est :</p> <ul style="list-style-type: none"> • Rédiger les plans de manœuvre • Produire les régimes de travail (uniquement pour les activités de distribution) • Exécuter les activités d'exploitation • Traiter les appels d'urgence et le rétablissement du service (Opérateurs CER, Répartiteur CER, Opérateurs CED)
Unité - Exploitation des réseaux – Nord-Ouest	
Rôles et responsabilités	<p>Pour la région Nord-Ouest :</p> <ul style="list-style-type: none"> • Rédiger les plans de manœuvre • Produire les régimes de travail (uniquement pour les activités de distribution) • Exécuter les activités d'exploitation • Traiter les appels d'urgence et le rétablissement du service (Opérateurs CER, Répartiteur CER, Opérateurs CED)
Unité - Exploitation des réseaux – Sud-Ouest	
Rôles et responsabilités	<p>Pour la région Sud-Ouest :</p> <ul style="list-style-type: none"> • Rédiger les plans de manœuvre • Produire les régimes de travail (uniquement pour les activités de distribution) • Exécuter les activités d'exploitation • Traiter les appels d'urgence et le rétablissement du service (Opérateurs CER, Répartiteur CER, Opérateurs CED)
Direction - Exploitation des mobiles	
Unité - Exploitation réseaux Secteur MTL/Nord-Ouest	
Rôles et responsabilités	<p>Pour le secteur MTL/Nord-Ouest :</p> <ul style="list-style-type: none"> • Agir à titre de premier intervenant sur les réseaux • Réaliser les inspections • Rédiger les plans de manœuvre et les exécuter (Opérateurs mobiles, centrale et régional)

Unité - Exploitation réseaux Secteur Centre – Est	
Rôles et responsabilités	Pour le secteur Centre - Est : <ul style="list-style-type: none"> • Agir à titre de premier intervenant sur les réseaux • Réaliser les inspections • Rédiger les plans de manœuvre et les exécuter (Opérateurs mobiles, centrale et régional)
Unité - Exploitation réseaux Secteur Sud – Ouest	
Rôles et responsabilités	Pour le secteur Sud - Ouest : <ul style="list-style-type: none"> • Agir à titre de premier intervenant sur les réseaux • Réaliser les inspections • Rédiger les plans de manœuvre et les exécuter (Opérateurs mobiles, centrale et régional)
Unité - Exploitation réseaux Secteur Nord – Est	
Rôles et responsabilités	Pour le secteur Nord - Est : <ul style="list-style-type: none"> • Agir à titre de premier intervenant sur les réseaux • Réaliser les inspections • Rédiger les plans de manœuvre et les exécuter (Opérateurs mobiles, centrale et régional)

Vice-présidence – Conception intégrée du système énergétique et projets technologiques	
Direction - Conception intégrée et optimale du système énergétique	
Unité - Stratégie capacité et optimisation du système énergétique	
Rôles et responsabilités	<ul style="list-style-type: none"> • Évaluer et analyser le comportement du système énergétique afin d'établir les solutions intégrées en matière de stratégies, de critères et d'exigences d'exploitation, ainsi que de réglages de systèmes de régulation et d'automatismes de réseau • Établir les capacités de transit du réseau et des interconnexions afin d'optimiser l'exploitation du système énergétique tout en favorisant la continuité et la qualité de service dans le respect des normes de fiabilité (NERC, NPCC, Régie de l'énergie)
Direction - Évolution de la conduite du système énergétique	
Unité - Évolution des systèmes de conduite du réseau (Fonctions conduite)	
Rôles et responsabilités	<ul style="list-style-type: none"> • Diriger le projet MSCR qui vise à moderniser les systèmes de conduite du système énergétique de l'entreprise et assumer les responsabilités en matière de portée, de coûts, d'échéanciers et de qualité
Unité - Évolution des systèmes de conduite du réseau (Fonctions fiabilité et contrôle)	
Rôles et responsabilités	<ul style="list-style-type: none"> • Diriger le projet MSCR qui vise à moderniser les systèmes de conduite du système énergétique de l'entreprise et assumer les responsabilités en matière de portée, de coûts, d'échéanciers et de qualité
Unité - Évolution des systèmes de conduite du réseau (Orientation technique et fonctionnelle)	
Rôles et responsabilités	<ul style="list-style-type: none"> • Fournir les orientations et positionnements techniques et fonctionnelles aux équipes de livraison MSCR et assurer les arrimages transversaux entre les différentes parties prenantes du projet

Unité - Évolution projets technologiques du système énergétique	
Rôles et responsabilités	<ul style="list-style-type: none"> • En collaboration avec les unités opérationnelles assumant le leadership de l'évolution de l'exploitation, assurer l'évolution de l'organisation et des processus de conduite du système énergétique
Unité - Évolution des systèmes de conduite du réseau (Fonctions distribution et intégration des RED)	
Rôles et responsabilités	<ul style="list-style-type: none"> • Assurer l'évolution des fonctions d'affaires des domaines de la conduite suivants: fiabilité des réseaux de transport, contrôle des installations de production, programmation des échanges avec les réseaux voisins, réseau de distribution, gestion des événements et interruptions affectant le service aux clients ainsi que de l'intégration des RED au système énergétique

Vice-présidence - Technologies de l'Information et des communications	
Direction - Cybersécurité d'entreprise	
Unité - Opérations de cybersécurité	
Rôles et responsabilités	<ul style="list-style-type: none"> • Gérer les points de contrôle de cybersécurité • Assurer une surveillance 24/7 des actifs • Assurer le respect des normes d'entreprise et cadres réglementaires en matière de cybersécurité
Direction - Exploitation technologies numériques (TN)	
Unité - Évolution & support exploit. des opérations TN	
Rôles et responsabilités	<ul style="list-style-type: none"> • Assurer des services d'exploitation 24/7 • Mettre en place, configurer et déployer des actifs TN
Unité - Gestion de l'exploitation TN	
Rôles et responsabilités	<ul style="list-style-type: none"> • Entretien et maintenir les actifs TN
Unité - Tour de contrôle Énergie	
Rôles et responsabilités	<ul style="list-style-type: none"> • Gérer, exploiter et assurer la disponibilité et la stabilité des actifs TN en lien avec la conduite du réseau
Unité - Tour de contrôle infra. & corpo.	
Rôles et responsabilités	<ul style="list-style-type: none"> • Gérer, exploiter et assurer la disponibilité et la stabilité des actifs TN en lien avec les infrastructures corporatives
Direction principale - Télécommunications	
Unité - Gestion du réseau de télécommunications	
Rôles et responsabilités	<ul style="list-style-type: none"> • Gérer les télécommunications requises pour la conduite du réseau