



# **Rapport annuel 2021 sur l'application du Code de conduite du Coordonnateur de la fiabilité**

Déposé à la Régie de l'énergie

30 juin 2022

## Rapport annuel de 2021 sur l'application du *Code de conduite du Coordonnateur de la fiabilité au Québec*

Le 30 juin 2022

Le *Code de conduite du Coordonnateur de la fiabilité au Québec* (le « *Code de conduite* ») adopté par la Régie de l'énergie (la « Régie ») prévoit à son article 5.4 qu'un rapport annuel sur l'application du *Code de conduite* effectué auprès de la présidente d'Hydro-Québec TransÉnergie<sup>1</sup> doit être déposé auprès de la Régie et publié sur le site Internet du Coordonnateur de la fiabilité. 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. L'attestation de conformité accompagnant ce rapport fait suite à une vérification interne de l'application du *Code de conduite* au sein des directions visées d'Hydro-Québec TransÉnergie.

### **Application du *Code de conduite du Coordonnateur de la fiabilité au Québec* en 2021**

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

La gestion a soutenu tout au cours de l'année les employés de la direction principale 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 2021, la direction principale n'a apporté aucune modification au site du Coordonnateur de la fiabilité concernant le *Code de conduite*.

Au cours de l'année 2021, la direction principale ne rapporte aucune allégation de dérogations au *Code de conduite* à la section plainte sur le site du Coordonnateur.

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

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<sup>1</sup> Pour les fins de ce rapport portant sur l'année 2021, il est fait abstraction des ajustements organisationnels annoncés le 24 février 2022 pour les appellations des unités et des groupes concernés.

- Annexe A : illustration des organigrammes du groupe Hydro-Québec TransÉnergie et équipement, et du groupe Technologies de l'information et des communications 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 de la fiabilité et celles réalisant des tâches reliées au rôle de Coordonnateur de la fiabilité.
- Annexe C : sommaire des représentations d'Hydro-Québec TransÉnergie aux réunions du NPCC pour l'année 2021.

Depuis sa décision D-2021-064 du 18 mai 2021, la Régie demande au Coordonnateur de tenir compte de tout le personnel sous l'autorité du Coordonnateur, qu'ils exercent des tâches reliées au rôle du Coordonnateur de la fiabilité ou non, ainsi que le personnel des autres directions du Transporteur ou d'Hydro-Québec effectuant des tâches reliées au rôle du Coordonnateur de la fiabilité. Le Coordonnateur tient compte de cette demande dans le présent dépôt du rapport annuel.

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 2021.

### **Conclusion**

À titre de directrice principale Contrôle des mouvements d'énergie et exploitation des réseaux, je suis responsable de produire le présent rapport et d'en assurer le suivi. En 2021 le *Code de conduite* a été appliqué de façon conforme, et aucune dérogation, plainte ou problématique n'ont été portées à l'attention du directeur principal.

**Maryse Dalpé**

Directrice principale  
Contrôle des mouvements d'énergie  
et exploitation des réseaux

**Attestation de conformité**  
**Application du Code de conduite du Coordonnateur de la fiabilité**  
**Année 2021**

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

Pour 2021, l'attestation de conformité au Code est signée conjointement par la Cheffe – Conformité de la direction - Conformité et par le directeur – Planification financière et partenariat d'affaires.

La responsabilité de l'application des règles énoncées dans le Code incombe à la directrice principale – Contrôle des mouvements d'énergie et exploitation des réseaux qui vous soumettra un rapport annuel pour l'année 2021. Selon l'article 5.4 du Code, notre responsabilité consiste à attester de la conformité de l'application des règles.

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

Un engagement écrit sur le respect du Code a été reçu de la part des responsables de toutes les structures visées par le Code. Compte tenu de ce qui précède, nous attestons que le *Code de conduite du Coordonnateur de la fiabilité* a été appliqué de façon satisfaisante tout au long de l'année 2021.

 2022-06-07

Caroline Dupuis  
Cheffe – Conformité  
Affaires corporatives, juridiques, réglementaires et gouvernance

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Marco Vézina  
Directeur – Planification financière et partenariat d'affaires  
Direction financière

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Date	30 juin 2022	N°
		(Code de classement)
Destinataire	<b>Claudine Bouchard*</b> Vice-Présidente Exécutive Cheffe des infrastructures et du système énergétique (* À titre de Vice-Présidente Exécutive HQ TransÉnergie et équipement au 31 décembre 2021)	Expéditeur <b>Maryse Dalpé</b> Directrice principale Contrôle des mouvements d'énergie et exploitation des réseaux

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Objet **Rapport annuel 2021 sur l'application du Code de conduite du Coordonnateur de la fiabilité au Québec (le « Code de conduite »)**

Tel que prévu à l'article 5.4 du Code de conduite, vous trouverez ci-joint le rapport annuel 2021 sur l'application du Code de conduite accompagné de l'attestation de conformité signée par le contrôleur de HQT.

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

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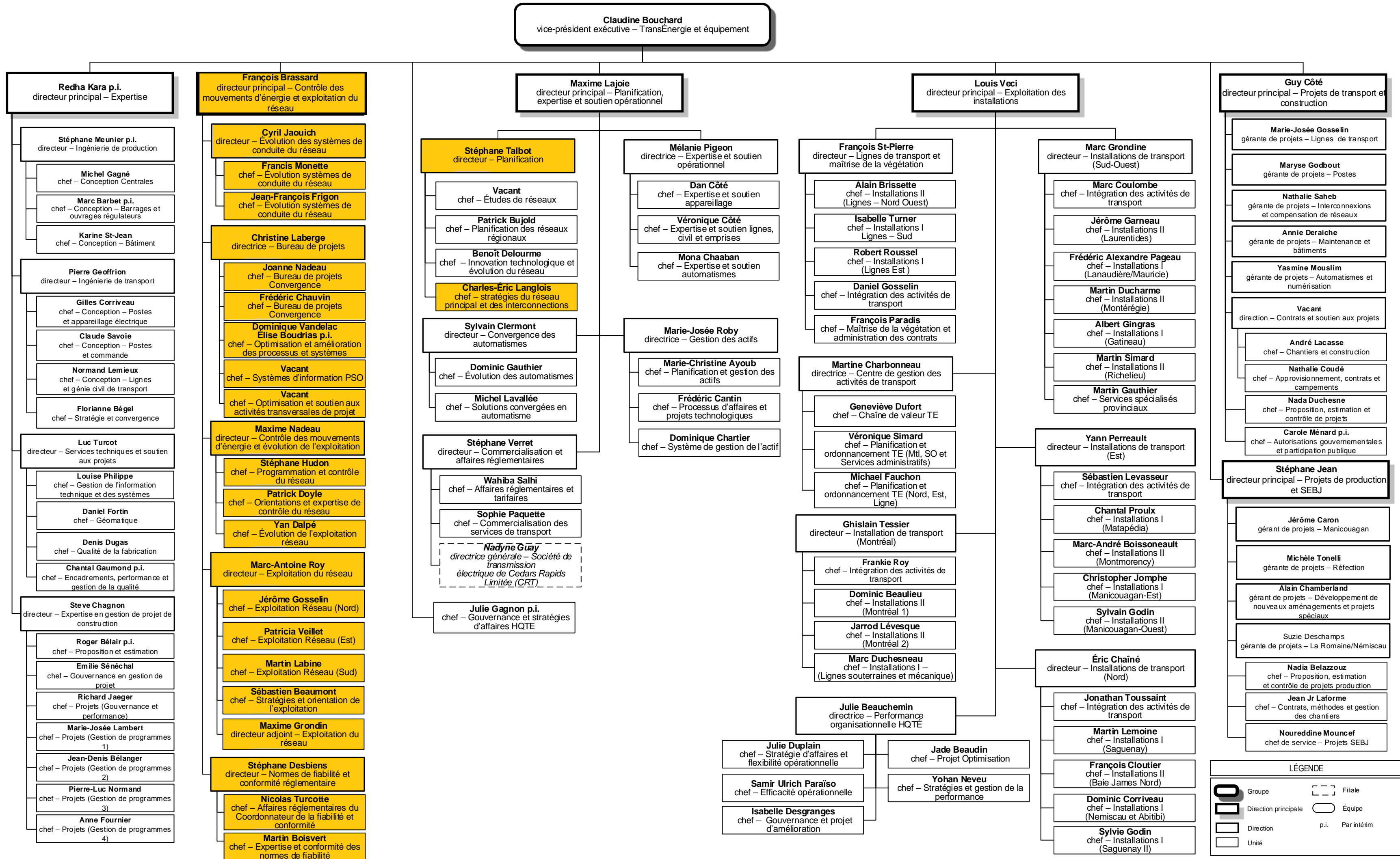
Maryse Dalpé  
Directrice principale - Contrôle des mouvements  
d'énergie et exploitation des réseaux

c. c. Stéphane Desbiens, directeur– Normes de fiabilité et conformité réglementaire



## **Annexe A**

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



**Jean-François Morin**  
vice-président – Technologies de l'information et des communications

**Claude Jasmin**  
directeur principal – Produits affaires (domaine électrique)

**Guy Labelle**  
directeur – Produits affaires (domaine électrique)

**Mario Aussant**  
chef – Produits (Planification, analytique et simulation)

**Nachida Bellahouel**  
chef – Produits (Automatisme du réseau et outils de télécom.)

**Benoît Darche**  
chef – Produits (Systèmes opérationnels – HQT)

**Mireille Elkeslassy**  
chef – Produits (Télécommunications et équipement)

**Stéphane Gagnon**  
directeur – Produits affaires (conduite du réseau)

**Jocelyn Brouillard**  
chef – Produits (Progiciel et interfaces SCR)

**Yves Gagné**  
chef – Produits (Conduite du réseau, patrimoine HQT et conformité)

**Brigitte Dion**  
chef – Produits (Essais SCR)

**Pierre Truong**  
chef – Produits (Infrastructures SCR et CED)

**Annie Rousseau p.i.**  
chef – Centre de compétence II (Projets, architecture et solutions applicatives)

**Nathalie Lamy**  
chef – Centre de compétence II (Projets, architecture et solutions applicatives – Conduite du réseau)

**Jean-Guy Deschênes**  
chef – Produits (Exploitation TI)

**Gisèle Collette**  
chef – Relations d'affaires produits électriques

**Vacant**  
direction principale – Produits affaires (d'entreprise)

**Josée Monfette**  
directrice – Produits SAP

**Johanne Brunelle**  
chef – Produits et architecture SAP

**Marylène Proulx**  
chef – Produits et maintenance SAP

**Dominique Jobin**  
chef – Bureau de projets SAP

**Julie Ducharme**  
chef – Produit SAP, approvisionnement et CSP

**Carole Jouy Bouchard**  
chef – Centre compétences II (SAP)

**Laila Bouali**  
chef – Produit (Produit SAP – RH)

**Benoît Darche**  
chef – Produit (Produit SAP)

**Louise Bérubé**  
directrice – Produits affaires GDASP

**Mireille Audet p.i.**  
chef – Produits (Approvisionnement et services partagés)

**Chantal Gervais**  
chef – Produits (Clientèle)

**Mathieu Lévesque**  
chef – Produits (Réseau)

**Marie-Élaine Tremblay**  
chef – Produits (Mesurage)

**David Desjardins**  
chef – Produits (Exploitation des TI)

**Vickie Montpetit**  
chef – Produits (Infrastructure)

**Mario Tanguay**  
directeur – Produits affaires (GPSSE, Corpo et BI)

**Céline Massereau**  
chef – Produits (EEAS-RH)

**Claire Peyrache-Degueldre**  
chef – Produits (Production)

**Steve Doyon**  
chef – Produits (Intelligence d'affaires (BI))

**François Deschamps**  
chef – Produits (Analytique-Applicative 1)

**Stéphane Landry**  
chef – Produits (Analytique-Applicative 2)

**Martin Dion**  
chef – Produits (Finances, Risques - Innovation)

**Laurent Masounave**  
chef – Produits (Finances et gestion des risques)

**Éric Auclair**  
chef – Centre de compétences II

**Pascal Richard**  
chef – Relations d'affaires et performance

**Étienne Avon p.i.**  
chef – Centre de compétences II

**Moshe Toledano**  
directeur – Cybersécurité d'entreprise

**Alain Vallières**  
chef – Évolution de la cybersécurité

**Émilie Roy**  
chef – Innovation, planification et évolution de cybersécurité d'entreprise

**Alexandra St-Hilaire**  
chef – Opérations de cybersécurité

**Éric Robin**  
chef – Produits de cybersécurité (domaine électrique)

**Richard Beaudry**  
chef – Produits de cybersécurité (domaine entreprise)

**Guy Comtois p.i.**  
chef – Produits de cybersécurité (domaine télécoms et technologies)

**Vincent Cantin**  
chef – Produits de cybersécurité (produits transversaux)

**Mario Graveline**  
directeur – Ingénierie et solutions de télécommunications

**Sophie Roy**  
chef – Conception des télécommunications

**Nadia Aktouf**  
chef – Programme télécommunications (Distribution et projets stratégiques)

**Martine LaLancette**  
chef – Architecture du réseau de télécommunications

**Kathleen Melançon**  
chef – Programme télécommunications (Transport)

**Vianney Boisrond**  
chef – Programme de télécommunications – HQP, HQÉ et services

**Claudia Pageau**  
directrice – Gestion de l'actif et planification des télécommunication

**Valérie Boilard**  
chef – Centre de gestion des actifs et activités transversales de télécommunications (CGAATT)

**Sophie Desgagnés**  
chef – Efficacité opérationnelle de télécommunications

**Simon Alami**  
chef – Centre de compétences projets de télécommunications II

**André Denommé**  
directeur principal – Télécommunications

**Jocelyn Ducharme**  
directeur – Maintenance télécommunications

**Guy Arbour**  
chef – Gestion de chantiers et construction - télécommunications

**Sébastien Riendeau**  
chef – Territoire TIC (Nord-Ouest)

**Gino Caron**  
chef – Territoire TIC (Est)

**Patrice Munger**  
chef – Territoire TIC (Sud-Centre)

**Pierre El-Soueidi**  
directeur – Exploitation des télécommunications

**Éric Hameil**  
chef – Exploitation et conduite du réseau de télécommunications

**Philippe Murret-Labarthe**  
chef – Évolution, expertise et stratégies opérationnelles de télécommunications

**Bernard Delisle**  
chef – Stratégies opérationnelles de télécommunications

**Alexandre Caya**  
chef – Architecture intégrée de produits

**Pascale Bouchard**  
chef – Relations d'affaires et optimisation

**Geneviève Lafleur**  
chef – Projets, architecture et solutions applicatives

**André Denommé p.i.**  
directeur principal – Produits Technologiques

**Chantal Henrie**  
directrice – Produits technologiques (Produits et environnements numériques)

**Luc Taillon**  
chef – Produits (Collaboration et productivité)

**Bassem Ben Hassouna**  
chef – Produits (Plateformes de développement et projets)

**Mélanie Di Stefano**  
chef – Produits (Gestion des services (ESM-ITS/AM/OM))

**Daniel Cyr**  
chef – Produits (Gestion des flux app. et robotisation)

**Mario Dugas**  
chef – Produits (Collaboration et dispositifs de travail)

**Sonia Ouellet**  
directrice – Produits technologiques (Fondations technologiques)

**Jean-François Fortier**  
chef – Produits (Info usagier privé)

**David Bralette**  
chef – Produits (Info usagier public et Conteneurisation)

**Nathalie Bonin**  
chef – Produits (CMP et transformation patrimoine)

**Sophie Poisson**  
chef – Produits (Centre de données)

**Louise Bérubé p.i.**  
directrice – Opérations TI

**Pierre-Etienne Boucher**  
chef – Centre de compétences II (Centre de service et expérience utilisateurs A)

**Karine Boisjoli**  
chef – Centre de compétences II (Centre de services et expérience utilisateurs B)

**Karl Meilleur**  
chef – Produits (Patrimoine I)

**Christian Descôteaux**  
chef – Produits (Patrimoine 2)

**Patrick Poulin**  
chef – Gestion des opérations TIC II

**Jocelyn Rondeau**  
chef – Produits Opérations

**Vacant**  
direction principale – Gouvernance, planification et architecture des TIC

**Yohan Larochelle**  
directeur – Gouvernance TIC

**Paula Achcar Moukarzel**  
chef – Gestion de contrats TIC

**Hassan Ibrahim**  
chef – Gestion de contrats TIC

**Hélène Gagnon p.i.**  
chef – Amélioration continue et conformité des opérations

**Radosveta Ilieva**  
chef – Pratiques

**Mario Turcotte**  
chef – Produit (Services gérés)

**Alain Pinsonneault**  
chef – Planification stratégique et transformation TIC

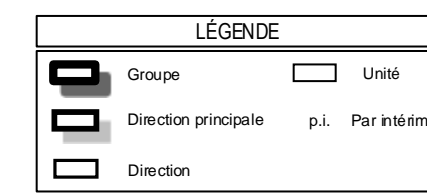
**Luc Rochette**  
directeur – Architecture TIC

**Éric Desjardins**  
chef – Architecture d'entreprise TIC

**Louis-Paul David**  
chef – Architecture de solutions TIC

**Martin-Pierre Dumouchel**  
chef – Architecture de données TIC

**Vacant**  
chef – Pratiques de développement TIC





## **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 liées 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 liées 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 liées au rôle du Coordonnateur de la fiabilité 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 liées au rôle du Coordonnateur de la fiabilité**

Hydro-Québec TransÉnergie et Équipement							
Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> <li>• Évolution des systèmes de conduite du réseau</li> <li>• Évolution des systèmes de conduite du réseau – Fonctions de base</li> <li>• Évolution des systèmes de conduite du réseau – Fonctions avancées</li> </ul>	Évolution des systèmes de conduite du réseau	Évolution des systèmes de conduite du réseau		X			

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> <li>Affaires réglementaires du Coordonnateur de la fiabilité, analyse et encadrements</li> <li>Mise en conformité</li> </ul>	Affaires réglementaires du Coordonnateur de la fiabilité et conformité	Normes de fiabilité et conformité réglementaire	X				
<ul style="list-style-type: none"> <li>Bureau de conformité</li> </ul>	Expertise et conformité des normes de fiabilité						
<ul style="list-style-type: none"> <li>Centre de contrôle du réseau</li> <li>Programmation et statistiques de contrôle du réseau</li> </ul>	Programmation et contrôle du réseau	Contrôle des mouvements d'énergie et évolution de l'exploitation					
<ul style="list-style-type: none"> <li>Prévisions de contrôle du réseau</li> <li>Expertise de contrôle du réseau</li> </ul>	Orientation et expertise de contrôle du réseau						
<ul style="list-style-type: none"> <li>Évolution de l'exploitation du réseau</li> </ul>	Évolution de l'exploitation du réseau						
<ul style="list-style-type: none"> <li>Stratégie du réseau principal et des interconnexions</li> </ul>	Planification et stratégies du réseau principal	Planification	X				

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> <li>• Bureau de projets – Convergence</li> <li>• Optimisation et amélioration des processus et systèmes</li> <li>• Systèmes d'information PSO</li> <li>• Optimisation et soutien aux activités transversales de projet</li> </ul>	Bureau de projets	Bureau de projets					X
<ul style="list-style-type: none"> <li>• CT – Rouyn-Noranda (Rép.)</li> <li>• CT – Rouyn-Noranda (Opé.)</li> <li>• CT – Chicoutimi (Rép.)</li> <li>• CT – Chicoutimi (Opé.)</li> <li>• Exploitation Abitibi</li> <li>• Exploitation Saguenay</li> <li>• Exploitation Baie-James</li> </ul>	Exploitation du réseau – Nord	Exploitation du réseau			X	X	
<ul style="list-style-type: none"> <li>• CT – Trois-Rivières (Rép.)</li> <li>• CT – Trois-Rivières (Opé.)</li> <li>• CT – Québec (Rép.)</li> <li>• CT – Québec (Opé.)</li> <li>• CT – Baie-Comeau (Rép.)</li> <li>• CT – Baie-Comeau (Opé.)</li> </ul>	Exploitation du réseau – Est						

Unités	Unités intermédiaires	Direction	Continue	Ponctuelle	Exceptionnelle	Cas d'urgence	Non applicable
<ul style="list-style-type: none"> <li>• CT – St-Jérôme (Rép.)</li> <li>• CT – St-Jérôme (Opé.)</li> <li>• CT – Montréal (Rép.)</li> <li>• CT – Montréal (Opé.)</li> </ul>	Exploitation du réseau – Sud	Exploitation du réseau					
<ul style="list-style-type: none"> <li>• Exploitation Manicouagan</li> <li>• Exploitation Rive-Nord de Montréal</li> <li>• Exploitation Rive-Nord de Québec</li> <li>• Exploitation Rive-Sud de Québec</li> <li>• Exploitation Ouest de Montréal et Laval</li> <li>• Exploitation Outaouais</li> <li>• Exploitation Montréal Est</li> <li>• Exploitation Montérégie Est</li> <li>• Exploitation Montérégie Ouest</li> <li>• Exploitation Mauricie</li> </ul>	Exploitation du réseau				X	X	
<ul style="list-style-type: none"> <li>• Planification des retraits Nord-Est</li> <li>• Planification des retraits Sud-Ouest</li> <li>• Planification et coordination des activités</li> </ul>	Planification et coordination des activités	Soutien à l'exploitation du réseau	X				
<ul style="list-style-type: none"> <li>• Stratégies de l'exploitation</li> <li>• Stratégies &amp; encadrements provinciaux</li> </ul>	Stratégies et orientation de l'exploitation	Soutien à l'exploitation du réseau	X				

<b>Vice-présidence - Technologies de l'Information et des communications</b>							
<b>Unités</b>	<b>Unités intermédiaires</b>	<b>Direction</b>	<b>Continue</b>	<b>Ponctuelle</b>	<b>Exceptionnelle</b>	<b>Cas d'urgence</b>	<b>Non applicable</b>
<ul style="list-style-type: none"> <li>• Opérations de Cyber-Sécurité</li> <li>• Centre de surveillance de sécurité</li> </ul>	Opérations de cybersécurité	Cybersécurité d'entreprise	<b>X</b>				
<ul style="list-style-type: none"> <li>• Gestion des opérations TIC II</li> <li>• Gestion des opérations TIC II</li> </ul>	Opérations TI	DP-Produits technologiques	<b>X</b>				
<ul style="list-style-type: none"> <li>• Exploitation TI</li> <li>• Centre de compétence II</li> <li>• Produits (Progiciel et interfaces SCR)</li> <li>• Produits (Conduite du réseau, patrimoine HQT et conformité)</li> <li>• Produits (Essais SCR)</li> <li>• Produits (Infrastructures SCR et CED)</li> </ul>	Produits affaires (Conduite du réseau)	DP-Produits affaires (Domaine électrique)	<b>X</b>				
<ul style="list-style-type: none"> <li>• Exploitation et conduite du réseau de télécommunication</li> </ul>	Exploitation des télécommunications	DP-Télécommunication	<b>X</b>				



## **Annexe C**

# **Représentation de TransÉnergie dans le cadre des rencontres 2021 au RCC du NPCC**

## **Représentations de 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 de TransÉnergie au RCC du NPCC

Date	Dossiers à l'ordre du jour approuvés par le RCC	Commentaires
24 février 2021		Aucune approbation de dossier.
26 mai 2021	2021 BPS List – Mid-Cycle Update	Le RCC approuve la recommandation.
	SP-9 Working Group Report – telecommunications report for Bulk Power System Protection	Le RCC approuve la recommandation.
8 septembre 2021	Directory 12 - Retirement	Suite à l'adoption de la PRC-006-NPCC-02 dans chacun des territoires du NPCC, il est recommandé de retirer la Directory 12. Le RCC approuve la recommandation.
30 novembre 2021		Compte rendu indisponible en date du 30 juin 2022.



**Comptes-rendus des réunions  
dans le cadre des rencontres  
2021 du RCC du NPCC**



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

June 2, 2021

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 February 24, 2021 RCC Meeting

Sir / Madam:

Attached are the Minutes of the February 24, 2021 meeting of the NPCC Reliability Coordinating Committee, as approved at the May 26, 2021 RCC Meeting.

Sincerely,

*Phil Fedora*

Philip A. Fedora  
Vice President, Reliability Services and  
Chief Engineer

cc: NPCC Staff



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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	Frank Pace
Central Maine Power Company	Edward Mulholland
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 York State Electric & Gas Corp.	(proxy to David Bradt)
Nova Scotia Power, Inc.	(proxy to Chris Milligan)
Orange & Rockland Utilities, Inc.	Nick Kowalecyk
Rochester Gas & Electric Corporation	(proxy to David Bradt)
The United Illuminating Company	David Bradt
Vermont Electric Power Company, Inc.	Hantz Presume

**Sector 2 – Reliability Coordinators**

Hydro-Quebec TransEnergie	Maxime Nadeau
ISO New England, Inc.	Rich Kowalski
New Brunswick Power Corporation	Alan MacNaughton
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	Barry Bruun
Hydro-Quebec Distribution	Hakim Sennoun - Alternate
Long Island Power Authority	(proxy to Anie Philip)
National Grid	Mike Jones



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New York Power Authority (proxy to Frank Ronci)  
Orange & Rockland Utilities, Inc. Ben Wu

**Sector 4 Generation Owners**

Consolidated Edison Company of New York, Inc.	Peter Yost
Dominion Energy, Inc.	Helen Wang - Alternate
Long Island Power Authority	Sean Bodkin
New York Power Authority	(proxy to Anie Philip)
	Frank Ronci
	Salvatore Spagnolo - Alternate
NextEra Energy Resources	Allen Schriver
Ontario Power Generation	Mike Cooke
	David Kwan - Alternate
Talen Energy Marketing	Scott Etnoyer
Vistra Energy Corp.	Ken Stell

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

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
Consolidated Edison Energy, Inc.	(via written proxy)
Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Jenny Liu
Utility Services, Inc.	Brian Evans-Mongeon

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

Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Shivaz Chopra
	Saul Rojas (Alternate)
New York State DPS	Humayun Kabir

**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**

Gerard Dunbar	Manager, Reliability Criteria
Franco Elmi	Senior Compliance Engineer
Phil Fedora	Vice President, Reliability Services and Chief Engineer
Jessica Hala	Director, Finance and Accounting
Damase Hebert	Director, Enforcement and Compliance Attorney



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Brian Hogue	Information Systems & Security Management
Andreas Klaube	Senior Engineer, Operations Planning
Neeraj Lal	Senior Reliability Engineer
Quoc Le	Manager, System Planning
Michael Lombardi	Director, Reliability Assessments
Jennifer Budd Mattiello	Senior Vice President and COO
Ryan McSherry	Senior Engineer Operations Coordination
Scott Nied	Assistant Vice President, Compliance
Andrey Oks	Director of Operations Coordination
Shayan Rizvi	Senior Reliability and Performance Analysis Engineer
Ralph Rufrano	Manager, Events Analysis
Rafael Sahiholamal	Manager, System Protection
Peter Scalici	Manager, Security Outreach Programs
Edward Schwerdt	President & CEO
Guy Zito	Assistant Vice President of Standards

**Guests**

Carl Benker	Vice Chair, Task Force on System Studies
Calvin Curry	Vice Chair, Task Force on Infrastructure Security & Technology
George Fatu	Chair, Task Force on System Studies
Chris Milligan	Nova Scotia Power, Inc.
Anthony Napikoski	Chair, Task Force on System Protection
Edward Roedel	Vice Chair, Task Force on Coordination of Planning
William Vesely	Chair, Task Force on Infrastructure Security & Technology

**Quorum Statement**

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

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

Norman Mah - New York State Reliability Council, LLC.



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**Antitrust Guidelines for NPCC Meetings**

Mr. Fedora reviewed the NPCC Antitrust Guidelines in the Agenda package, and suggested contacting NPCC Inc.'s General Counsel and Corporate Secretary, Kristin McKeown, Esq. at (646) 581-0148 for further information.

**President & CEO Report**

Mr. Adam reported that the NPCC Board has announced that Mr. Dickerson will succeed Mr. Schwerdt in March; this is Mr. Schwerdt's last RCC meeting as the President and CEO of NPCC.

On behalf of the RCC, Mr. Adam congratulated Mr. Schwerdt on his outstanding career and expressed appreciation for his 46 years of service and leadership to the industry. On a personal level, Mr. Adam said it has been a pleasure working with him over the last seven years or so. He also acknowledged with gratitude the strong support and advice Mr. Schwerdt provided over the years and wished him a healthy and happy retirement.

**Overview of NPCC 2021 Reliability Initiatives**

Mr. Schwerdt indicated his appreciation for the acknowledgement and that he will respond at the end of his report. He then reported that on December 18, 2020, the RCC met in a special session to review and comment on the NPCC staff's initial suggestions for reliability initiatives for 2021. Those initiatives were intentionally developed to address the recommendations that were contained in the 2020 NERC Long Term Reliability Assessment (LTRA) Report. The LTRA suggested reliability risk priorities for the industry and the ERO Enterprise that align with the reliability focus areas that the NPCC Board affirmed during its September 2020 Strategic Session. Those reliability focus areas include enhancing system resilience and assuring energy sufficiency; reliably integrating resources supporting de-carbonization objectives, including DER; and addressing cyber and physical security threats. After incorporating the input from the RCC and a subsequent January meeting of the Board's Management Development and Compensation Committee, the NPCC 2021 Corporate Reliability Goals were accepted by the Board during its January 27, 2021 meeting.

He briefly highlighted some examples of how NPCC's reliability initiatives interlace with the LTRA recommendations. A copy of those corporate reliability goals is included in the Agenda package. A part of its commitment to the vision of a highly reliable and secure bulk power system, NPCC's mission is to assure the effective and efficient reduction of existing and emerging risks to the international BPS within Northeastern North America, and the corporate reliability goals are intended to advance that critical objective.

The first example he cited was NPCC's 2021 Goal IB-1 to expand assessment of Loss of Load Hours and Expected Unserved Energy impacts in the evaluation of the NPCC Balancing Authority Area resource adequacy plans to address societal de-carbonization objectives. This goal aligns with the LTRA recommendation that the ERO should enhance



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the reliability assessment process by evaluating energy adequacy risks in seasonal reliability assessments to help inform stakeholders of reliability needs and identify potential solutions in the short-term.

A second example he cited was NPCC's 2021 Goal IB-2 that involves enhancing modeling for aggregated DER, Energy Limited Resources, such as energy storage, and Variable Energy Resources in NPCC probabilistic resource adequacy assessments. This goal addresses portions of the LTRA recommendations to enhance inverter-based resource models used for steady state and dynamic power systems analyses and aggregate DER data needs for transmission planning and operational studies.

As a final example, NPCC 2021 Corporate Reliability Goal IB-3 includes assessing the future reliability risks to the BPS of significant gas contingencies during periods of increased reliance on natural gas, including electrical non-peak/shoulder months periods. This goal was established to address the Northeastern implications in the LTRA recommendation to better identify fuel supply risks during planning to identify design-basis fuel supply scenarios for normal and extreme events.

Additional NPCC corporate reliability goals related to assessing resilience, critical cross-sector interdependencies, increasing cyber and physical threats, and completely transforming NPCC's compliance and enforcement program, as the ongoing monitoring continues, were approved by the Board.

Lastly, Mr. Schwerdt acknowledged that this was his last RCC meeting. With the announced appointment of Mr. Dickerson as his successor, effective March 8, 2021, he indicated he would become President Emeritus of NPCC during transition toward his April 30, 2021 retirement date. He stated it has been an honor to serve as NPCC's President and CEO and offered his heartfelt thanks to the RCC and their companies for the ongoing commitment and tireless efforts on behalf of international, interconnected bulk power system reliability in Northeastern North America. Those thanks also go to the dedicated NPCC staff, who both support and lead, as required, the significant reliability initiatives throughout the year; to the subject matter expert volunteers on this WebEx who work so effectively on NPCC committees, task forces and working groups; and to the management within the Member companies for making these individual's time and talent available for NPCC's ongoing and essential electricity reliability mission. In closing, he wished all a safe, healthy, and reliable future.

RCC members then personally acknowledged Mr. Schwerdt's experience, background, and knowledge, particularly noting his friendliness and welcoming professional attitude. The RCC wished him all the best going forward and an enjoyable retirement.





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**Preliminary 2022 NPCC Budget Development**

Ms. Hala, NPCC's Director of Finance and Accounting then referred the RCC to the NPCC 2022 Business Plan and Budget development schedule included in the Agenda package. Draft 1 of NPCC's 2022 Business Plan and Budget will be presented to the RCC at its meeting on May 26, 2021.

**Chair Report**

**Agenda**

Mr. Adam reviewed the Agenda provided in the Agenda package. He asked the Task Force Chairs provide an overview of their respective key activities (including the cyber security update) under the Discussion Items.

**The RCC then approved the Agenda provided in the Agenda package with that change.**

**December 18, 2020 RCC Informational Webinar**

Mr. Fedora noted that the RCC reviewed the NPCC Working Draft Strategic Plan 2021 – 2024 on December 18, 2020, providing input regarding NPCC staff's initial suggestions for the NPCC 2021 Corporate Reliability Goals:

- ✓ Goal I - Enhancing System Resilience and Assuring Energy Sufficiency
  - Support enhancing system resilience and assuring energy sufficiency within Northeastern North America.
- ✓ Goal II - Reliably Integrating the Resources brought forward by Societal Decarbonization Objectives, including Distributed Energy Resources
  - Assess and support the operational coordination of reliably integrating resources brought forward by societal de-carbonization objectives, including distributed and variable energy resources, and facilitate the integrated planning of those resources to assure Bulk Power System reliability within Northeastern North America.
- ✓ Goal III - Addressing Cyber and Physical Threats
  - Support addressing cyber and physical threats within Northeastern North America.

**Approved RCC Scope**

Mr. Adam reported that the NPCC Board approved the RCC Scope of Work, included in the Agenda package, at their January 27, 2021 meeting.

**Approved RCC 2021-2022 Work Plan**

Mr. Adam reported that the NPCC Board approved the 2021-2022 RCC Work Plan, included in the Agenda package, at their January 27, 2021 meeting. He stated his preference would be to change the structure of the work plan to be more specific to indicate exactly the items the RCC is planning to undertake as opposed to having a high-level generalized work plan.

He said he would be discussing the development of the 2022-2023 RCC Work Plan and its structure with the Task Force Chairs later this year.



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**February 11, 2021 NPCC Distributed Energy Resources (DER) Forum**

Mr. Zito summarized the February 11, 2021 NPCC DER Forum Agenda items included in the Agenda package. He highlighted the following discussions:

- ✓ Offshore Wind Protection System Philosophy;
- ✓ Advanced inverter functions presentation by NREL;
- ✓ Blackstart considerations using inverter based resources; and,
- ✓ Harmonics and power quality presentation from EnerNex.

**NPCC Website Update**

Mr. Hogue provided an overview of the new NPCC Website features (login, profile edit features and logout procedures) provided in the Agenda package.

**Policy Discussion**

**January 27, 2021 NPCC Board Meeting**

Mr. Adam reported that NPCC 2021 Corporate Reliability Goals included in the Agenda package were accepted by the NPCC Board at their January 27, 2021 meeting and acknowledged the more important role the RCC and the NPCC Task Forces will have in providing oversight and support of those goals. Mr. Fedora reviewed the following goals with achievement levels requiring RCC endorsement:

- ✓ IA-1 Utilize the North American Transmission Forum's Transmission Resilience Maturity Model within NPCC to enhance the resilience of the Northeastern North America transmission system;
- ✓ IA-3 Assess critical telecommunication infrastructure interdependency risks, and identify mitigation opportunities to enhance system resilience;
- ✓ IB-1 Expand NPCC's assessment of Loss of Load Hours (hours/year) and Expected Unserved Energy (MWh/year) impacts in the evaluation of the NPCC Balancing Authority Area resource adequacy plans to address societal decarbonization objectives;
- ✓ IB-2 Enhance modeling for aggregated DER, Energy Limited Resources (ELR) (such as energy storage) and Variable Energy Resources (VER) in NPCC probabilistic resource adequacy assessments;
- ✓ IB-3 Assess the future reliability risk to the Bulk Power System (BPS) of a significant gas contingency during periods of increased reliance on natural gas, including electrical non-peak/shoulder months periods;
- ✓ II-1 Expand the DER Forum topics to include reliable integration of VER on the BPS (e.g. Offshore Wind). Review NPCC documents for any potential revisions in the context of a decarbonized future. Identify any emerging reliability risk areas for VER and DER deployment not already actively being addressed by the ERO Enterprise;
- ✓ 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;
- ✓ III-1 Advance best currently available approaches to mitigating entities' security risks/threats, including strengthening interactions between critical infrastructure sectors; and,



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- ✓ III-3 Expand interaction with the E-ISAC to identify and raise registered entity awareness of cybersecurity threats to the Northeastern North America.

Mr. Fedora explained that RCC endorsement means that the RCC agrees with the content of the document or action and recommends the deliverable for the approving authority to act on. Some goal achievement levels are just RCC status reports; they don't require RCC endorsement.

Mr. Adam noted that some of the goals have deliverables outside of the November RCC meeting; some are due by October, for instance. Additional RCC meetings may need to be scheduled to accommodate.

**February 4, 2021 NERC Member Representatives Committee/Board of Trustees Meeting(s)**

Mr. Adam reviewed the NERC Member Representatives Committee/Board of Trustees February 4, 2021 meeting Agenda items included in the Agenda package. He summarized the NERC policy input, related to the future approaches to the stakeholder engagement.

The rhythm of NERC meetings is a topic of discussion for this year, and for 2022; decisions need to be informed considering the current situation with the pandemic, regarding whether people will be able to travel or not.

A hybrid meeting policy could allow people to participate virtually as well as in person and to be flexible, depending on how the situation turns out. New virtual meetings technologies can be used to provide more interaction between people; the NERC Board of Trustees understands the importance of personal Interaction in building relationships and providing the opportunity for discussions outside of the meeting.

NERC is reevaluating their need for meeting space, trying to decide if they have the right space; should they move to a more work at home type of a model for most of the employees and keep the existing office space for small and medium sized meetings. It appears that the larger scale meetings, like the NERC Board of Trustees meetings will require a hotel or a larger venue, to accommodate all the observers and participants. Many of the hotels now are providing for more virtual access.

**March 2-3, 2021 NERC Reliability and Security Technical Committee Meeting**

Mr. Adam asked Mr. Oks to lead a discussion of the following Agenda topics scheduled for consideration at the March 2-3, 2021 NERC Reliability and Security Technical Committee (RSTC) Meeting:

**RSTC Work Plan**

The RSTC subgroup work plans have been consolidated and updated into a single work plan. The RSTC Executive Committee (EC) is seeking approval of the work plan.



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Security and Reliability Training Working Group

The RSTC EC reviewed the draft scope and deliverables of the Security and Reliability Training Working Group. and noted that much of the proposed scope involved work that is currently being done within other industry groups such as Regional Entities and Forums. The RSTC EC recommends disbanding the Security and Reliability Training Working Group.

Performance Analysis Subcommittee (PAS) Scope

The PAS revised their scope document as part of the RSTC transition planning activities. A redline is included in the Agenda package. The PAS is seeking approval of the scope document.

Mr. Oks stated these items that fall into the category of effective and efficient transition to the new RSTC structure.

Energy Reliability Assessment Task Force (ERATF)

Mr. Lombardi stated at the December 2020 RSTC meeting, information was presented regarding the NERC/IRC Whitepaper on Ensuring Energy Adequacy which made several recommendations for mitigating risks to energy adequacy. A small group of RSTC members and industry experts reviewed the issues and are recommending that the Energy Reliability Assessment Task Force be formed to provide oversight and address the eleven issues identified in the report. He highlighted the following topics that the ERATF will evaluate and recommend solutions:

- ✓ What flexibility is required to balance volatility in resource and load uncertainty through multiple operating horizons and seasons of the year?
- ✓ Does there need to be common practices on how Effective Load Carrying Capability (ELCC) or other useful metrics are determined?
- ✓ How should gas pipeline disruption scenarios be modeled, realizing that individual gas pipeline design and gas generators interconnections vary, which result in different impacts to the generator and the Bulk Power System?

He added that the ERATF membership will be comprised of those RSTC members and observers appointed by the RSTC Chair; observers may include additional NERC or Regional Entity staff, as well as other RSTC members. Observers may actively participate in the discussion and ERATF deliverables.

Special Assessment: NERC Energy Management System Performance Special Assessment (2018-2029)

Mr. Rufrano reported that that loss of situational awareness is one of ten risks identified in the 2019 ERO Reliability Risk Priorities Report. Loss or degradation of situational



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awareness poses BPS challenges as it affects the ability of personnel or automatic control systems to perceive and anticipate degradation of system reliability and take pre-emptive action. To gain a better resolution on the contribution of Energy Management System (EMS) outages to the loss of situational awareness risk and the effect of EOP-004-4, the NERC Energy Management System Working Group conducted an assessment as an interim activity between recurring updates to its EMS reference document using 2018–2019 EMS events reported through the ERO Event Analysis Process. This document includes assessments for three factors (outage duration, EMS functions, and entity reliability functions), examining associated trends, event root causes, and contributing causes identified through the ERO Cause Code Assignment Process for the 2018–2019 period. The RSTC will be asked to endorse the special assessment.

Geomagnetic Disturbance (GMD) Research Work Plan

Mr. Lal reported that over the period of 2018-2020, the Electric Power Research Institute led a research program with industry and research partners to address objectives related to Reliability Standard TPL-007 (GMD Vulnerability Assessments). The research plan was developed by NERC with input from the GMD Task Force and NERC Planning Committee to address research directives in FERC Order No. 830. The GMD Task Force leadership will inform the RSTC leadership of the research results summary and ERO recommendations. The Chair will make a formal request to disband the GMD Task Force as they have completed their work.

Data Collections Technical Reference Document-Approaches for Probabilistic Assessments

Mr. Klaube explained that this reference document report was prepared by the NERC Probabilistic Assessment Working Group and describes demand, resource, environmental, and system data as they can be applied to resource adequacy probabilistic studies, along with sources and processes for obtaining data. The document will benefit reliability by providing a reference of data practices for industry planners to draw from as probabilistic studies become increasingly important to studying the resource adequacy in many parts of North America. The RSTC will request reviewers; following their review, their comments will be incorporated into the document for approval at the next RSTC meeting.

2020 Probabilistic Assessment - Regional Risk Scenario Sensitivity Case Report

Mr. Klaube reported that the draft report was prepared by the NERC Probabilistic Assessment Working Group during the 2020 Probabilistic Assessment (ProbA) cycle with inputs from the six Regional Entities and 20 Assessment Areas. The Assessment Areas developed tailored risk scenarios and assessed the effect that the scenarios would have on the probabilistic indices reported in the 2020 ProbA Base Case. This scenario analysis provides insights into area-specific reliability risk using probabilistic methods. The RSTC will request reviewers; following their review, their comments will be incorporated in the report for approval at the next RSTC meeting.



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White Paper: Possible Misunderstandings of the Term “Load Loss”

Mr. Oks explained that the System Analysis and Modeling Subcommittee developed a white paper to address possible misunderstandings of the term “Load Loss”. The subcommittee received input from the Operating and Planning Committees and requested input from RSTC members in October. The comments received have been addressed by an ad hoc team and conforming revisions made to the white paper. The team is seeking approval of the revised white paper. The white paper focuses on the different interpretation of the “Load Lost” term and its utilization in different disciplines (for example, operations planning, ) and how that misunderstanding or different use can impact certain applications within those disciplines.

Security Working Group Draft Scope

Mr. Hogue explained that the Security Working Group was formed by the RSTC by expanding the scope of the Compliance Input Working Group. The Security Working Group has developed a draft scope document to reflect its expanded scope and is requesting RSTC approval of the scope document. The notable change is more of an emphasis on cyber security and less emphasis on compliance input; compliance input has been shifted to the evidence request tool.

Standing Committees Coordinating Group Scope

Mr. Oks reported that the Standing Committees Coordinating Group has been in existence for several years as an informal means for the standing committees reporting to the Board to coordinate their work plans. The group is formalizing their scope and activities and are seeking RSTC endorsement of their scope document. The scope formalizes the coordination of standing committee common activities by the standing committee chairs.

Reliability Guideline: Model Verification of Aggregate DER Models used in Planning studies

Mr. Rizvi explained that the Reliability Guideline was posted for a 45-day comment period and the NERC System Planning Impacts from Distributed Energy Resources Working Group (SPIDERWG) has responded to comments and made conforming revisions to the Guideline. A consensus was reached on the responses to the comments received. They are seeking RSTC approval of the Reliability Guideline. The guideline focuses on enhancing DER model fidelity through a collaborative effort. The guidelines include metrics and associated support of technical evaluation reviews.

Battery Energy Storage Systems and Hybrid Power plant Modeling and Performance Guideline

Mr. Lombardi explained that the guideline was posted for a 45-day comment period and the Inverter-Based Resource Performance Working Group has responded to comments and made conforming revisions to the Guideline. Just over 50 comments were received from across the



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industry. They are seeking RSTC approval of the guideline. There's still a lot of work to be done regarding the integration of battery storage; this guideline serves more of an introduction, to ensure that there's a uniformity in specifying performance and modeling these resources.

Standards Authorization Request (SAR) to revise TPL-001-5.1

Mr. Rizvi explained considering current trends, the SPIDERWG and NERC Inverter-Based Resource Performance (IRP) Working Group independently undertook review of the TPL-001 standard for considering DERs and BPS-connected inverter-based resources, respectively. These reviews are captured in the following RSTC approved white papers:

- SPIDERWG: Assessment of DER impacts on NERC Reliability Standard TPL-001; and,
- IRP Task Force Review of NERC Reliability Standards – March 2020.

This SAR updates TPL-001-5.1 to address the issues identified in both white papers. The SPIDERWG is seeking RSTC endorsement of the SAR. TPL-001-5.1 does not currently have requirements for planning coordinators and transmission planners. The purpose of the SAR is to revise the requirements for clarity, and in some cases, even expand the scope of the requirements to ensure the accuracy of transmission system planning assessments.

Reliability Guideline Metrics

Mr. Oks explained the RSTC will receive a brief overview of Federal Energy Regulatory Commission approved process to review the effectiveness and efficiency of the NERC Reliability Guidelines., to assess the reliability benefit they provide. He referred the RCC to the materials in the Agenda package for the specific metrics being considered.

Supply Chain Compromise Presentation

Mr. Hogue explained that security issues with a significant impact on critical infrastructures are unfortunately becoming more common. The E-ISAC's collaboration with its members and partners has provided a unique perspective on these recent developments. The planned RSTC presentation will provide an update on activities related to the supply chain compromise, the recent attack on a Florida water utility, and other relevant issues. The water industry uses a system like the electric industry; if there's a cyber incident in one industry, it raises potential concerns for other industries. Regarding this situation, somebody remotely accessed the human machine interface and changed some of the settings on the water treatment facility. That's clearly a concern. The electric industry has standard requirements in-place to avoid this type of situation.

Mr. Adam thanked Mr. Oks for leading the discussion and NPCC staff for highlighting and summarizing the items scheduled for consideration at the March 2-3, 2021 NERC RSTC meeting. He encouraged the RCC to further review the materials provided in the Agenda package, if interested in more details.



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**Consent Agenda**

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

**December 1, 2020 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 changes to Task Force and Working Group memberships were approved:

**Sector 1 – Transmission Owners**

- ✓ Chris Milligan to replace Joy Brake as the alternate representative for Nova Scotia Power, Inc.

**Task Force Roster Changes**

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

**Task Force on Coordination of Planning**

- ✓ Edward Roedel of United Illuminating Company succeeds Joy Brake of Nova Scotia Power, Inc. as Chair.
- ✓ Vincent Fihey of Hydro-Quebec TransEnergie succeeds Edward Roedel of United Illuminating Company as Vice Chair.
- ✓ John Charlton succeeds Joy Brake as the Nova Scotia Power, Inc. member.
- ✓ Chris Milligan succeeds John Charlton as the Nova Scotia Power, Inc. alternate.
- ✓ Haretha Alao succeeds Abdelhakim Sennoun as the Hydro Quebec Distribution alternate.

**Task Force on System Protection**

- ✓ Andrew Schorn of New Brunswick Power to serve as alternate.

**Task Force on System Studies**

- ✓ Hamid Hamadani of Hydro One Networks to no longer serve as alternate.

**Task Force on Infrastructure Security & Technology**

- ✓ Christopher McKinnon of Eversource Energy to serve as alternate.
- ✓ Dick Brooks of Reliable Energy Analytics LLC to serve as representative.
- ✓ Gerald Mannarino of New York Power Authority to no longer serve as alternate.
- ✓ Jacqueline Ryan succeeds Brenda Driscoll as the National Grid USA alternate.

**CO-2 Working Group on System Operator Training**

- ✓ Joy Brake to no longer serve as the Nova Scotia Power Inc. alternate.

**CO-7 Operational Review, Coordination and Assessment Working Group**

All current member of the Working Group will be replaced. The following members will serve on the CO-7 Working Group:





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- ✓ Jonathan Pollock to serve as New Brunswick Power member.
- ✓ Dave Hussey to serve as the ISO-New England member.
- ✓ Jason Ploof to serve as the ISO-New England alternate.
- ✓ Lacy Skinner to serve as the New York ISO member.
- ✓ Jean-Michaël Bissada to serve as the Hydro-Quebec TransÉnergie member.
- ✓ Pushpendra Singh to serve as the Nova Scotia Power Inc. member.
- ✓ Akram Sohail to serve as the Hydro One member.
- ✓ Andrey Oks to serve as a NPCC representative.
- ✓ Ryan McSherry to serve as a NPCC representative.

**CO-11 Working Group on Restoration**

- ✓ Ron Daigle to replace Glenn Pelkey as the New Brunswick Power member.

**CO-12 Working Group on Operations Planning**

- ✓ Frank Peng of the Ontario IESO to become the Vice Chair, replacing Mathieu Labbe of Hydro-Quebec TransÉnergie.
- ✓ Billy Labelle to serve as a Hydro-Quebec TransÉnergie alternate.

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

- ✓ Swagata Sharma to serve as a New York ISO alternate.
- ✓ Haretha Alao to succeed Sylvie Gicquel as the Hydro Quebec Distribution alternate.

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

- ✓ Shayan Rizvi to replace Neeraj Lal as Chairperson. Neeraj Lal to serve as alternate. Both are NPCC Staff.
- ✓ Eric Madison to replace Shounak Abhyanker as the ISO-New England member. Mr. Shounak Abhyanker to serve as the ISO-New England alternative.

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

- ✓ Bill Li to succeed Lance Black as the Eversource member.

**SS-39 Working Group on Geomagnetic Disturbance**

- ✓ Greg Young-Morris of New Brunswick Power to serve as the Chairperson.

**IST-4 Cyber Security Working Group**

- ✓ Philippe Comperon to serve as the Hydro-Quebec TransÉnergie alternate.

**2020 SPS/RAS, BPS and UVLS List(s)**

Approved as provided in the Agenda package.

**2020 Interim Area Transmission Reviews**

- ✓ Quebec - Approved as provided in the Agenda package.
- ✓ Ontario - Approved as provided in the Agenda package.

**Task Force on System Protection Scope**

Approved as provided in the Agenda package.



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**Discussion Items**

**NPCC 2021 Summer Reliability Assessment**

Mr. Klaube gave an overview of the preliminary results of the 2021 NPCC Summer Reliability Assessment, prepared by the NPCC CO-12 Working Group and included in the Agenda package. Mr. Fedora provided a summary of the NPCC CP-8 Working Group's 2021 Summer NPCC Multi-Area Probabilistic Reliability Assessment, also included in the Agenda package.

The final assessment will be submitted to the Task Force on Coordination of Operation (TFCO), the Task Force on Coordination of Planning (TFCP), and the RCC for comment on April 9, 2021. Following TFCO and TFCP approval, the assessment will be presented to the NPCC Board of Directors at their May 5, 2021 meeting; a Media Event is scheduled for May 6, 2021.

**Cyber Security Update**

Mr. Vesely provided a summary of the virtualization updates from the NERC CIP Standard Drafting Team, follow-up activities related to the US Presidential Order related to the Global Positioning System, and the activities of the NPCC Cyber Security IST-4 Working Group and the Physical Security IST-5 Working Group provided in the Agenda package.

**Transmission Facility Ratings – NPCC Area's Current Practices**

On November 19, 2020, FERC issued a Notice of Proposed Rulemaking (NOPR) RM20-16 Managing Transmission Line Ratings. At the December 1, 2020 RCC meeting a request was made to the Task Force on Coordination of Operation (TFCO) to provide an overview to the RCC of each NPCC Areas' current practices for Transmission Line Ratings management.

The RCC reviewed and discussed of NPCC Areas' Transmission Line Ratings management practices and procedure provided in in the Agenda package in response to the subject FERC NOPR prepared by the TFCO.

Mr., Wegeh pointed out that the reliability impact of dynamically changing line ratings on protection systems setting and operation should be considered, given that protection systems are typically set based on a static transmission line ratings.

**Task Force 2021 – 2022 Work Plan Progress**

Mr. Adam asked each Task Force Chair to highlight their respective activities.

**Task Force on Coordination of Planning**

Mr. Roedel said that the periodic review of NPCC Directory No.1 is the biggest activity for this year and maybe into next year as well. It's a comprehensive review in coordination by a joint working group from TFCP and the TFCO and will encompass everything that's in the



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document. The scope of work is still being finalized, but the highlights include things like review of Directory No. 1:

- ✓ Considering the upcoming changes and recent changes to NERC reliability standards;
- ✓ Identify any required changes based on the increased penetration of DER;
- ✓ Consider any alternatives approaches that achieve the same reliability outcome; and,
- ✓ Review proposed changes to align with those efforts NERC SPIDERWG.

Task Force on System Studies (TFSS)

Mr. Fatu briefly highlighted the activities of the SS-39 Working Group on Geomagnetic Disturbance's development a whitepaper recommending voluntary guidelines for meeting Requirements R3, R4, and R8 of NERC Standard TPL-007. Information has been compiled for three out of the four tasks that need to be addressed in the whitepaper:

- ✓ Development of an acceptable criteria for the steady state voltage performance;
- ✓ Identification of the events that need to be used for the vulnerability assessment; and,
- ✓ Outlining practices required to build the model for the case to develop practices for methodology for applying for those assessments.

The task involving which events to apply for the vulnerability assessment has been determined to be more complex than expected and may require additional resources. The SS-39 Working Group is on track for completion of the whitepaper during Q3 of 2021.

Task Force on Coordination of Operation (TFCO)

Mr. MacNaughton highlighted the following TFCO activities:

- ✓ Monitoring the trends and impacts of the changing resource mix and the effects of the proliferation of the new resources (intermittent, DER, batteries, hybrid resources, etc.) on real-time operations, including energy sufficiency issues, is a standing Agenda item at each meeting. A new working group was formed for review of forecasting challenges associated with the changing resource mixed on our systems; the discussion also considers areas of policy and drivers between the States and different areas as well as the provinces in Canada and reviewing potential impacts to NPCC Directory No. 5.
- ✓ The triannual review of NPCC Directory No. 1 has created the need for a joint (CP-11/CO-7) Working Group review. CO-7 Working Group membership was presented to the RCC for approval at this meeting and are listed in the Agenda package.

Task Force on System Protection (TFSP)

Mr. Napikoski highlighted the following TFSP activities:

- ✓ The SP- 9 Working Group recently completed a report regarding telecommunications circuits used for self-protection and remedial action schemes, providing an update on the technology that has changed considerably in the last 25 years. The report will be coming before the RCC at the next meeting for their approval.
- ✓ A review of NPCC Directory No. 11 – Disturbance Monitoring Equipment Criteria is underway to ensure consistency with the development of the PRC-002-2 NERC standard on Disturbance Monitoring and Reporting Requirements. This would be the first review since its inception a few years ago, but no major changes are anticipated at this time.





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Ontario Energy Board – Veronica Mendes  
United States Department of Energy – David Meyer  
New Brunswick Department of Energy and Mines – David Sallows  
Nova Scotia Utility & Review Board – S. Bruce Outhouse, Q.C.



NORTHEAST POWER COORDINATING COUNCIL, INC.  
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October 14, 2021

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 May 26, 2021 RCC Meeting

Sir / Madam:

Attached are the Minutes of the May 26, 2021 meeting of the NPCC Reliability Coordinating Committee, as approved at the September 8, 2021 RCC Meeting.

Sincerely,

*Phil Fedora*

Philip A. Fedora  
Vice President, Reliability Services and  
Chief Engineer

cc: NPCC Staff



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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	Frank Pace
Central Maine Power Company	Edward Mulholland
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 York Power Authority	(proxy to Frank Ronci)
New York State Electric & Gas Corp.	(proxy to David Bradt)
Nova Scotia Power, Inc.	Chris Milligan
Orange & Rockland Utilities, Inc.	(proxy to Aleksandra Gofman)
Rochester Gas & Electric Corporation	(proxy to David Bradt)
The United Illuminating Company	David Bradt
Vermont Electric Power Company, Inc.	Hantz Presume

**Sector 2 – Reliability Coordinators**

Hydro-Quebec TransEnergie	Maxime Nadeau
ISO New England, Inc.	Rich Kowalski
New Brunswick Power Corporation	Alan MacNaughton
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.	(proxy to Aleksandra Gofman)
Eversource	Barry Bruun
Hydro-Quebec Distribution	Hakim Sennoun - Alternate



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Long Island Power Authority	Robert Eisenhuth
National Grid	Mike Jones
New Brunswick Power Corporation	Randy MacDonald

**Sector 4 Generation Owners**

Consolidated Edison Company of New York, Inc.	Helen Wang - Alternate
Dominion Energy, Inc.	Sean Bodkin
Entergy Nuclear Northeast	Glen Smith
Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Frank Ronci
NextEra Energy Resources	Allen Schriver
Ontario Power Generation	Mike Cooke
Talen Energy Marketing	(via written proxy)
Vistra Energy Corp.	Ken Stell
	Dan Roethemeyer - Alternate

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

Consolidated Edison Company of New York, Inc.	Aleksandra Gofman
Consolidated Edison Energy, Inc.	(via written proxy)
Long Island Power Authority	(proxy to Anie Philip)
Utility Services, Inc.	Brian Evans-Mongeon

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

Long Island Power Authority	(proxy to Anie Philip)
New York Power Authority	Shivaz Chopra
New York State DPS	Humayun Kabir

**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 & CEO
Gerard Dunbar	Director, Reliability Standards & Criteria
Phil Fedora	Vice President, Reliability Services and Chief Engineer
Jessica Hala	Director, Finance and Accounting
Brian Hogue	Information Systems & Security Management
Andreas Klaube	Senior Engineer, Operations Planning
Neeraj Lal	Senior Reliability Engineer





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Quoc Le	Manager, System Planning
Michael Lombardi	Director, Reliability Assessments
Kristin McKeown	General Counsel & Corporate Secretary
Ryan McSherry	Senior Engineer Operations Coordination
Christina Merante	Legal Analyst
Faisal Nahian	Senior Network & Infrastructure Specialist
Scott Nied	Assistant Vice President, Compliance
Andrey Oks	Director of Operations Coordination
Shayan Rizvi	Senior Reliability and Performance Analysis Engineer
Ralph Rufrano	Manager, Events Analysis
Rafael Sahiholamal	Manager, System Protection

**Guests**

Carl Benker	Vice Chair, Task Force on System Studies
John Babu	Eversource
Keith Burrell	New York ISO
Calvin Curry	Vice Chair, Task Force on Infrastructure Security & Technology
George Fatu	Chair, Task Force on System Studies
Anthony Napikoski	Chair, Task Force on System Protection
Edward Roedel	Vice Chair, Task Force on Coordination of Planning
Greg Young-Morris	New Brunswick Power Corporation
William Vesely	Chair, Task Force on Infrastructure Security & Technology

**Quorum Statement**

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

**Sector 4 – Generator Owners**

Nicholas Pouch – Talen Energy Marketing, LLC

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

Norman Mah - Consolidated Edison Energy, Inc.

**Antitrust Guidelines for NPCC Meetings**

The RCC voted to waive the reading of NPCC Antitrust Guidelines provided in the Agenda package.



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**President & CEO Report**

Mr. Adam welcomed Mr. Dickerson, the new President and CEO of NPCC to the RCC.

**Introduction and Overview of Hundred Day Plan Milestones**

Mr. Dickerson said that during the CEO search and selection process, the Search Committee of the NPCC Board asked each potential candidate to submit a 100-day plan. He reported that he has been executing his plan. The plan was designed to ensure one-on-one discussions with each member of the NPCC staff, each member of the NPCC Board, the President, Chair and/or Executive Director (and their desired staff) of each of the State and Provincial Regulatory authorities in New York State, the New England States and the provinces of Quebec, Ontario, New Brunswick and Nova Scotia, the CEOs of the Electric Reliability Organization Enterprise comprised of NERC and the other Regional Entities.

He stated that the first round of discussions with the NPCC staff, members of the NPCC BOD, the ERO Enterprise, and the Canadian regulators has been completed, including one-on-one discussions with various regulators in the Canadian Provinces, Massachusetts, and Rhode Island. He said he would be concluding the remaining series of interviews in the next two or three weeks.

He noted strong consistency along various themes regarding the challenges facing NPCC and the Northeast; he noted the following:

- ✓ Resiliency, not only regarding the physical infrastructure, but also with respect to cyber security attacks;
- ✓ Reliably integrating distributed and variable energy resources on a system that was not originally designed to do so; and,
- ✓ minimizing system impacts and disruptions in reaction to the physics of situation and increasing reliance on digital technology.

**Recent Cyber Issues**

He said that cyber security is a big issue and is going to be a big challenge with respect to future reliability. He thanked and acknowledged Ms. Farrell, NPCC Vice President, IT & Risk Management for the emerging threats update provided in the Agenda package.

He noted the various numbers of challenges that has happened with respect to cyber statistics or number of complaints. A comparison of the the top crime types over that last five years, show that the number of cyber related complaints are extremely high – a number over 240,000 events; these numbers are far greater than the number of crimes that many of us are familiar with. The simple reason is that a lot of the crimes that we're used to hearing about from local law enforcement typically involves individuals associated with the event. The sophistication of the bad actors in orchestrating cyber-attacks are that they can unleash program algorithms (or bots) that keep making attempts at companies all day long, at multiple times, trying to access the system and break in continually.



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He explained the objectives of the Information Technology Security Group, a collaboration of various professionals in the field from the ERO Enterprise and the Regional Entities to help address the issues:

- ✓ Detection and notification that something's going on;
- ✓ Analyzing what's happening to help coordinate the response with the other Regional Entities and the ERO Enterprise to address the problem; and,
- ✓ Getting together and share the lessons learned - What can we learn about what happened? What should we have done differently? What can we do the next time?

He then summarized the ERO Enterprise and NPCC response to:

- ✓ Supply Chain Threats – Solar Winds; and,
- ✓ Ransomware – Colonial Pipeline cyber-attack.

and reviewed the ERO Major Initiatives in this area, with respect to strategies, policies, and data protection, as provided in the Agenda package. He noted that these initiatives have been established to make sure that the information is in front of the right people, so that they are informed of circumstances in a timely manner.

**DER/VER Outlook**

Mr. Dickerson reviewed the decarbonization goals for Connecticut, Massachusetts, Maine, New Hampshire, New York, Rhode Island, and Vermont for the RCC; he stressed that attaining those goals also need to maintain the resilience and reliability of the electric power system.

He closed by stating that concerns over cyber security and Distributed Energy Resources and Variable Energy Resource proliferation remain as part of NPCC's main strategic focus.

**2022 NPCC Business Plan Budget Development**

Ms. Hala, NPCC's Director of Finance and Accounting then provided the RCC with an overview of NPCC's draft 2022 Business Plan and Budget provided in the Agenda package. The full draft is posted on the NPCC website - an email with a link to the draft was also sent to NPCC's Membership on May 5, 2021.

**2022 Business Plan and Budget Overview**

For 2022, NPCC's total operating budget is increasing by 5.6% and total assessments are increasing by 4.6%. Broken down by division, the Regional Entity budget is increasing by 6.2% and assessments are increasing by 5.0%, and the Criteria Services division budget and assessments are decreasing by -5.2%. The 2022 business plan includes a net increase in headcount of 7.75 FTE's.



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Primary 2022 Budget Drivers

- ✓ Improving NPCC's cybersecurity posture, requiring a net increase of 1.3 IT FTEs in 2022 (3.8% of the total budget increase of 5.6% is in IT, representing an increase of 1.3 FTEs (\$230k);
- ✓ An increase in office costs related to infrastructure and security improvements (\$370k) and \$75k in cap ex);
- ✓ Replacing the use of independent contractor compliance auditors with staff auditors. There is a net increase of 5.5 compliance FTEs being added in 2022; the increase in compliance personnel expenses is significantly offset by a corresponding decrease in the compliance contracts budget;
- ✓ In RAPA, One FTE being added to support the ERO Analytical Community of Excellence Initiative regarding data analytics; and,
- ✓ a 25% decrease in meetings and travel expenses across all program areas, (down from the already lower 2021 budget) as meetings are expected to continue in virtual format even post-pandemic; there will be less compliance auditors on-site for compliance engagements, as some will participate virtually (down to 4 on-site from 10); and NPCC plans to host one in-person workshop and two virtual workshops in 2022, compared with two in-person workshops budgeted in prior years. There has been positive feedback and high attendance for the virtual workshops that NPCC has hosted in 2020 and 2021: NPCC will continue to offer those going forward.

NPCC 2022 Focus Areas Budget Drivers

- ✓ The Standards Program Area has initiated Distributed Energy Resources (DER)/Variable Energy Resources (VER) Forums to look at potential benefits and impacts of DERs and VERs on the Bulk Electric System and opportunities to provide coordinated Regional guidance for integrating DERs;
- ✓ The Compliance Program Area implementation of the ERO Enterprise CMEP tool, Align and the Secure Evidence Locker (SEL);
- ✓ The Reliability Assessment and Performance Analysis Program Area assessments of the changing resource composition, enhancing resilience and identifying emerging risks to reliability; and,
- ✓ The Situation Awareness Program Area increasing focus on cyber and physical security outreach.

Key dates for the 2022 Business Plan and Budget development

- ✓ May 5<sup>th</sup> - Draft No. 1 presented to the NPCC Board, submitted to NERC and posted to the NPCC website for comment through May 27<sup>th</sup>;
- ✓ May 26<sup>th</sup> - NERC and the Regions meet with FERC to review their respective Drafts;
- ✓ June 3<sup>rd</sup> – NPCC will meet with the NERC Finance and Audit Committee (FAC);
- ✓ June 15<sup>th</sup> - the NPCC FAC will be asked to endorse the final 2021 Draft;
- ✓ June 23<sup>rd</sup> - FAC endorsed Draft presented to the NPCC Board for approval; and,
- ✓ August 24<sup>th</sup> – the approved NPCC 2022 Business Plan & Budget will be filed with FERC and the Canadian Provincial authorities.

A pie chart representation of the allocation of resources across the program areas within NPCC is included in the Agenda package; the Compliance Program Area has the largest



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percentage of total resources for 2022 of all NPCC program areas, representing 57% of total resources.

A summary comparison of the 2022 draft budgets from NERC and the other Regions is included in the Agenda package. NERC's preliminary estimate is a 7% increase in budget and a 10% increase in assessments, with 2022 initiatives including the continued implementation of the Align and SEL projects. Texas RE's budget increase of 21% includes the costs associated with an office relocation.

**Chair Report**

Mr. Fedora reported the sad news received over this weekend that Mike Henderson, who was a long-time member of the RCC passed away Saturday May 22<sup>nd</sup>. Mike recently retired as Director of Regional Planning and Coordination with ISO New England in April 2020 after more than two decades of service. A notice regarding the arrangements will be sent to the RCC following the meeting.

Mr. Adam reflected that Mike was an engineer's engineer and that it was a privilege to work with him on several occasions and expressed his condolences to his family. The RCC held moment of silence in Mike's memory.

**Agenda**

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

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

**May 5, 2021 NPCC Board Meeting**

Mr. Adam said he attended the May 5, 2021 NPCC Board the meeting; he reviewed the RCC's important role in contributing to the success of the 2021 NPCC Corporate Reliability Goals together, with the corresponding Task Force and Working Group support.

He also provided a summary the NPCC Reliability Assessment for Summer 2021, an update of the RCC's Cyber & Physical Security discussions, as well as the FERC proposed notice of proposed rulemaking related to the implementation of and adjusted ratings for transmission facilities for lines.

**May 13, 2021 NPCC DER/VER Forum**

Mr. Dunbar reviewed the agenda items presented at the May 13, 2021 Distributed Energy Resources (VER) Forum provided in the Agenda package. Resources (DER)/Variable Energy.



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**May 12, 2021 Cybersecurity Executive Order**

Mr. Hogue reviewed the statement from Mr. Cancel, NERC Senior Vice President and CEO of the E-ISAC regarding the recent Executive Order focused on improving the nation's cybersecurity and protecting federal government networks provided in the Agenda package. Although the Executive Order is aimed at the agencies in the US government, he mentioned the following items of RCC interest:

- ✓ removing barriers to sharing threat information to ensure service providers can share information with the government regarding certain breach information;
- ✓ modernizing cyber security - specifically referencing moving towards zero trust architecture enhancing the software supply chain; and.
- ✓ at the federal government level, standardizing the playbook for responding to cyber security vulnerabilities and incidents.

**CEII Access**

Mr. Lal reviewed the NPCC Share file access to CEII materials. He explained that the RCC restricted, share file directory contains new folders that are designated by a year, and sub folders for the approved NPCC Area Transmission Reviews, the NPCC Bulk Power System list, , the NPCC Underfrequency Loadshedding list, the NPCC Overall Transmission Assessments, and the Remedial Action Schemes (f/k/a Special Protection Systems) list.

Mr. Lal asked RCC members to contact him or Mr. Hogue regarding any questions or help in accessing the CEII materials.

**NPCC Website Update**

Mr. Hogue provided an overview of the new NPCC Website features (password change procedures) provided in the Agenda package.

**Consent Agenda**

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

**February 24, 2020 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 changes to Task Force and Working Group memberships were approved:

**Sector 2 – Reliability Coordinators**

- ✓ Jim Helton to replace Richard Kowalski as the ISO New England representative, effective June 1, 2021 (coincident with Rich Kowalski's announced retirement); Al McBride to replace Jim Helton as the ISO New England alternate, also effective June 1, 2021.



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Mr. Fedora noted Mr. Kowalski's announced retirement; he acknowledged his contributions to NPCC over the years as a member of the Task Force on Coordination of Planning and the RCC. Mr. Adam expressed his appreciation for his service to the industry and admiration for his willingness to freely share his technical knowledge, especially noting his kindness and friendship. The RCC joined in wishing Mr. Kowalski continued success in his retirement.

Mr. Kowalski thanked the RCC for the acknowledgement and expressed his appreciation and honor to have had the opportunity to serve NPCC.

**Task Force Roster Changes**

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

**Task Force on Coordination of Planning**

- ✓ Brent Oberlin succeeds Richard Kowalski as a member from ISO-New England, Inc.
- ✓ Carissa Sedlacek succeeds Brent Oberlin as an alternate member from ISO-New England, Inc.
- ✓ Peter Wong to no longer serve as an alternate member from ISO New England, Inc.
- ✓ Al McBride to no longer serve as an alternate member from ISO New England, Inc.

**Task Force on Coordination of Operation**

- ✓ David Downey will serve as Nova Scotia Power Inc. alternate.

**Task Force on System Protection**

- ✓ John Babu of Eversource succeeds Anthony Napikoski of The United Illuminating Company as Chairperson.
- ✓ Ovidiu Vasilachi of Independent Electricity System Operator succeeds John Babu of Eversource Energy as Vice Chairperson.

**Task Force on System Studies**

- ✓ Brian Robinson succeeds Dan Kopin as a member from Utility Services.
- ✓ Rudi Vega to succeed Brent Oberlin as an alternate member from ISO New England, Inc.

**Task Force on Infrastructure Security & Technology**

- ✓ Suzanne Black of ISO-New England, Inc. will no longer serve as alternate.
- ✓ Craig Barlow of Network & Security Technologies, Inc. will serve as alternate.
- ✓ Suzanne Black of Network & Security Technologies, Inc. will serve as alternate.
- ✓ Michael Gazzillo of Network & Security Technologies, Inc. will serve as alternate.
- ✓ Michael Masuk of New York Power Authority will serve as alternate.
- ✓ Greg Goodrich of NextEra Energy Resources will serve as member.
- ✓ Gabe McLean of Vermont Transco will serve as alternate.

**CO-1 Working Group on Control Performance**

- ✓ Zahid Qayyum will no longer serve as a New York Independent System Operator alternate.



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**CO-2 Working Group on System Operator Training**

- ✓ Jill Searle will serve as the Nova Scotia Power Inc. alternate.
- ✓ Marc Theriault will no longer serve as a New Brunswick Power Corporation alternate.
- ✓ Glenn Pelkey will no longer serve as a New Brunswick Power Corporation alternate.

**CO-11 Working Group on Restoration**

- ✓ Edwin Thompson will no longer serve as the Consolidated Edison Company of New York, Inc. representative.

**CO-12 Working Group on Operations Planning**

- ✓ Frank Peng of Independent Electricity System Operator becomes the Vice Chair, replacing Mathieu Labbe of Hydro-Quebec TransEnergie.
- ✓ Billy Labelle will serve as a Hydro-Quebec TransEnergie alternate.

**New CO-14 Operations Load Forecast Working Group**

- ✓ Olivier Milon will serve as Hydro-Quebec TransEnergie member.
- ✓ Trevor Brudz will serve as National Grid USA member.
- ✓ Tim Schlauraff will serve as Consolidated Edison Company of New York, Inc. member.
- ✓ Chuck Alonge will serve as New York Independent System Operator member.
- ✓ Riaz Khan will serve as New York Independent System Operator alternate.
- ✓ Mike Fontaine will serve as ISO-New England, Inc. member.
- ✓ Thomas Knowland will serve as ISO-New England, Inc. alternate.
- ✓ Humphrey Tse will serve as Independent Electricity System Operator member.
- ✓ Kim McKinley will serve as New Brunswick Power Corporation member.
- ✓ Ron MacDougall will serve as Nova Scotia Power Inc. member.
- ✓ Lynda Ozere will serve as Nova Scotia Power Inc. alternate.
- ✓ David Schweizer will serve as PJM Interconnection LLC participant.
- ✓ Elizabeth Anastasio will serve as PJM Interconnection LLC participant.
- ✓ Joe Mulhern will serve as PJM Interconnection LLC participant.

**SP-7 Working Group on Protection System Misoperation Review**

- ✓ Thomas Bozon succeeds Louis-David Côté as an alternate member from Hydro-Quebec TransEnergie.

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

- ✓ Fatouma Bagnan is no longer be an alternate member from Hydro One.
- ✓ Chelsea Zhu no longer a member from National Grid; no replacement has been named.

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

- ✓ Kaushal Kumar succeeds Alex Rost as an alternate member from ISO-New England, Inc.
- ✓ Aravinth Raveendran joins as an alternate member from the Independent Electricity System Operator
- ✓ Raman Somayajulu to serve as the member from National Grid.
- ✓ Arash Sarmadi to serve as the alternate member from National Grid.

**SS38-LMWG Load Model Working Group**

- ✓ Abhinav Singh joins as an alternate member from ISO-New England, Inc.
- ✓ Iman Kiaei joins as an alternate member from New York Power Authority.





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**CO-7 Operational Review, Coordination and Assessment Working Group and CP-11 Working Group on Review of NPCC Basic Criteria**

- ✓ Approved as provided in the Agenda package.

**IST-5 Physical Security Working Group**

- ✓ Paul Lundin of Orange & Rockland Utilities succeeds Peter Scalici of NPCC as Chairperson.
- ✓ Sharon Brown of Ethos Energy succeeds Kathleen Judge of National Grid as Vice-Chairperson.
- ✓ Reynaldo Able of PSEG Long Island succeeds Wendy Wynne of the United Illuminating Company as Secretary.

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

- ✓ Mike Welch to no longer serve as an alternate member from the New York ISO.

**SP-9 Working Group Report – telecommunications report for Bulk Power System Protection**

Approved as provided in the Agenda package.

**2021 BPS List – Mid-Cycle Update**

Approved as provided in the Agenda package.

**Approval Items**

**2020 New York Comprehensive Area Transmission Review**

Mr. Burrell presented the 2020 New York Comprehensive Area Transmission Review provided in the Agenda package. The New York ISO presented the 2020 New York Comprehensive Area Transmission Review to the Task Force on Coordination of Planning (TFCP) at its April 8, 2021 meeting. The New York comprehensive transmission review assessed the reliability of the New York Area Bulk Power System by examining the impact of changes in forecasted system conditions and planned facilities. The Task Force on System Studies (TFSS) conducted a review and accepted the report at its March 2021 meeting.

The Task Force on Coordination of Planning (TFCP) reviewed the attached report and agreed with its conclusion that the planned transmission system for the New York Area as planned through year 2025 conform to the applicable NPCC Regional Reliability Reference Directory No. 1 Requirements and New York State Reliability Council Reliability Rules. The TFCP recommended RCC approval.

**The RCC then unanimously approved the 2020 New York Comprehensive Area Transmission provided in the Agenda package (all written proxies in favor).**



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**Endorsement Items**

**Goal IB-1 – Develop an advanced probabilistic representation of the NPCC system suitable for the resource adequacy assessment of NPCC’s future societal objectives**

NPCC 2021 Corporate Goal IB-1 specifies the development an advanced probabilistic representation of the NPCC system suitable for the resource adequacy assessment of NPCC’s future societal decarbonization objectives.

At the May 12-13, 2021 meeting, the Task Force on Coordination of Planning (TFCP) reviewed the proposed development of an advanced probabilistic representation of the NPCC system suitable for the resource adequacy assessment of NPCC’s future societal decarbonization objectives provided in the Agenda package and agreed that the NPCC CP-8 Working group should coordinate the development of the scenarios of potential impacts associated with the decarbonization objectives across the NPCC region by 2030 as proposed. The TFCP also agreed that the proposed probabilistic model representation should be informed by the forecasts and resources reported in the following:

- IESO Annual Planning Outlook -Ontario’s Electricity System Needs: 2022 – 2040;
- NEPOOL Future Grid Reliability Study;
- New York ISO – The 2020 Reliability Needs Assessment; and,
- NERC - 2021 NERC Long-Term Reliability Assessment Data.

Mr. Roedel said that the TFCP agrees that the development of scenarios by the NPCC CP-8 Working will help ensure that the objectives required by various jurisdictions discussed in the document are considered and coordinated in the overall NPCC assessment of the Loss of Load Hours (LOLH - hours/year) and Expected Unserved Energy (EUE – MWh/year) in the evaluation of NPCC Area resource adequacy. The TFCP recommended RCC endorsement of the proposed development of an advanced probabilistic representation of the NPCC system suitable for the resource adequacy assessment of NPCC’s future societal decarbonization objectives provided in the agenda package.

**After discussion, the RCC unanimously endorsed the proposed Goal IB-1 development of an advanced probabilistic representation of the NPCC system suitable for the resource adequacy assessment of NPCC’s future societal decarbonization objectives provided in the Agenda package (all written proxies in favor).**

**Goal IB-3 – Develop a gas-electric model and analytical approach suitable for the analysis of NPCC winter and off-peak periods**

NPCC Goal IB-3 specifies an Assessment the future reliability risk to the Bulk Power System (BPS) of a significant gas contingency during periods of increased reliance on natural gas, including electrical nonpeak/shoulder months periods.

At the May 12-13, 2021 meeting, the Task Force on Coordination of Planning reviewed the proposal included in the Agenda package and agreed that the proposed gas-electric model and analytical approach will help assess the reliability risk to the NPCC BPS for a significant gas contingency.



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At its May 12-13, 2021 meeting, the Task Force on Coordination of Operation (TFCO) reviewed the proposed phased approach to develop a gas-electric model suitable for the analysis of NPCC winter and off-peak periods. The phased approach quantifies the resilience of the electric grid when gas or electric contingencies occur, both with (Phase 1) and without (Phase 2) the Mystic units and the Distrigas LNG facility.

The TFCO recommended RCC endorsement of the proposed approach as presented, with consideration that Phase 2 be emphasized and prioritized for the reason cited below:

- ✓ Phase 1 – ISO-New England already considers and operates the system for the criteria contingency loss of Mystic units along with the loss of Distrigas facility as a single contingency.
- ✓ Phase 2 - aims to evaluate currently unstudied risk to the electric grid reliability of an additional significant gas contingency without both the Mystic units and the Distrigas facility during periods of increased reliance on natural gas (winter), including electrical non-peak/shoulder months periods. Such contingencies should include the loss of a pipeline or additional LNG facility for an extended duration.

**After discussion, the RCC agreed with the TFCO recommendation for the reasons cited and unanimously endorsed the proposed Goal IB-3 Phase 2 approach included in the Agenda package (all written proxies in favor).**

**Goal III-3 – Develop a cyber threat awareness presentation**

NPCC 2021 Corporate Goal III-3 specifies an expanded interaction with the E-ISAC to identify and raise registered entity awareness of cybersecurity threats to the Northeastern North America.

Mr. Vesely reported that the Task Force on Infrastructure and Security developed the cyber threat awareness presentation provided in the Agenda package and recommended RCC endorsement.

**After discussion, the RCC unanimously endorsed the Goal III-3 the cyber threat awareness presentation provided in the Agenda package (all written proxies in favor).**

**Discussion Items**

**Goal IA-3 – Identify telecommunications system interdependency risks associated with restoration activities**

NPCC 2021 Corporate Goal IA-3 specifies an assessment of critical telecommunication infrastructure interdependency risks and identify mitigation opportunities to enhance system resilience.



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The RCC reviewed the status (provided in the Agenda package) of the identified telecommunication system interdependency risks associated with restoration activities prepared by the NPCC CO-11 “Restoration” Working Group and Task Force on Coordination of Operation to assess critical telecommunication infrastructure interdependencies within Northeastern North America.

**Goal IB-2 – Identify best currently available aggregated DER, ELR and VER advanced modeling practices in NPCC probabilistic resource adequacy assessments**

NPCC 2021 Corporate Goal IB-2 specifies enhanced modeling for aggregated DER, Energy Limited Resources (ELR) (such as energy storage) and Variable Energy Resources (VER) in NPCC probabilistic resource adequacy assessments.

The RCC was presented with the best currently available aggregated DER, ELR and VER advanced modeling practice(s) identified by the NPCC CP-8 Working Group and reviewed by the Task Force on Coordination Planning provided in the Agenda package.

**Task Force 2021-2022 Work Plan Progress**

Mr. Adam referred the RCC to the respective Task Force 2021-2022 Work Plan Progress provided in the Agenda Package. The following highlights were presented.

Task Force on Coordination of Planning

Mr. Roedel reported that the joint CO-7 and CP-11 Working Group on the review of the NPCC Basic Criteria scope has been finalized. He also highlighted on the status of the conversion of NPCC Special Protection Systems to Remedial Action Schemes and approval timelines with respect to the requirements of the NERC PRC-012 standard.

Task Force on Coordination of Operation

Mr. MacNaughton highlighted discussions regarding the future of NPCC operational assessments with respect to the related activities proposed for the newly formed CO-14 Operations Load Forecast Working Group.

Task Force on Infrastructure Security & Technology

Mr. Vesely highlighted the concerns regarding time synchronization security and the need for protecting the integrity of real time monitoring data transmitted between control centers.

Task Force System Protection

Mr. Babu highlighted a DCB whitepaper developed for improving the security for a single component failure, and the progress toward developing a standard procedure on relay system coordination.

Task Force on System Studies

Mr. Wegh highlighted the retirement of Directory No. 12 and the adaptation of new Directory No. 7 requirements.



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**Policy Discussion**

**May 5, 2021 NPCC Board Meeting**

Mr. Adam noted this topic had been previously covered in the President's report and the Chair report earlier in the meeting. Mr. Fedora briefly summarized the NPCC Board's policy input provided to the NERC Board of Trustees included in the Agenda package.

**May 13, 2021 NERC Member Representatives Committee/Board of Trustees**

**Meeting(s)**

Mr. Adam referred the RCC to the materials included in the Agenda package and noted the NERC Board of Trustees focus on Colonial pipeline event and the corresponding need for standards and the importance of cyber security.

Mr. Fedora highlighted the update on the preliminary findings from the 2021 NERC Summer Reliability Assessment, with NERC's particular concerns regarding California and Texas, and to a lesser extent, and New England.

Mr. Fedora also summarized the NERC Member Representatives Committee's discussions regarding ensuring energy adequacy with energy-constrained resources. The NERC Reliability and Security Technical Committee's Energy Reliability Assessments Task Force has been assigned to address the topic.

**June 8-9, 2021 NERC Reliability and Security Technical Committee Meeting**

Mr. Oks discussed the following Agenda topics scheduled for consideration at the June 8-9, 2021 NERC Reliability and Security Technical Committee (RSTC) Meeting:

- ✓ Approval of the Reliability Guideline: Gas and Electrical Operational Coordination Considerations - the Guideline was revised by the Real Time Operating Subcommittee and the Electric Gas Working Group and posted for a 45-day comment period. Conforming revisions were made based on comments received.
- ✓ Approval of the Security Integration and Technology Enablement Subcommittee (SITES) Work Plan - Mr. Hogue noted the similarities of the SITES Work Plan to the previous NERC CIPC Charter.
- ✓ Accept to Post the System Planning Impacts from Distributed Energy Resources Working Group (SPIDERWG) Reliability Guideline: UFLS Studies - for 45-day comment period – Mr. Rizvi explained the NERC SPIDERWG developed a Reliability Guideline to provide guidance on impacts that higher penetration of DER may have on UFLS. The SPIDERWG is requesting RSTC authorization to post the Reliability Guideline for a 45-day industry comment period.



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Mr. Fedora reported that Mr. Zwergel is leaving as Vice Chair of the RSTC - a nominating committee recommendation for a new RSTC Vice Chair will be considered at the June 8-9 RSTC meeting.

Mr. Adam thanked Mr. Oks for leading the discussion and NPCC staff for highlighting and summarizing the items scheduled for consideration at the June 8-9, 2021 NERC RSTC meeting. He encouraged the RCC to review the materials provided in the Agenda package, if interested in further details.

**Informational Items**

Mr. Adam then referred the RCC to the Informational Items materials provided in the Agenda package. Mr. Fedora reminded the RCC that NERC has scheduled a 2021 NERC Summer Reliability Assessment WebEx later this afternoon.

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

**Next RCC Meeting Date**  
September 8, 2021

**Location**  
[WebEx meeting]

**Future RCC Meeting Dates**  
October 22, 2021  
November 30, 2021  
December 10, 2021

**Location**  
[WebEx meeting]  
Halifax, Nova Scotia  
[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



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Ontario Energy Board – Catherine Ethier  
United States Department of Energy – David Meyer  
New Brunswick Department of Energy and Mines – David Sallows  
Nova Scotia Utility & Review Board – S. Bruce Outhouse, Q.C.



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

December 14, 2021

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 8, 2021 RCC Meeting

Sir / Madam:

Attached are the Minutes of the September 8, 2021 meeting of the NPCC Reliability Coordinating Committee, as approved at the November 30, 2021 RCC meeting.

Sincerely,

*Phil Fedora*

Philip A. Fedora  
Vice President, Reliability Services and  
Chief Engineer

cc: NPCC Staff





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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	Frank Pace
Central Maine Power Company	Edward Mulholland
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 York Power Authority	(proxy to Steve Senus)
New York State Electric & Gas Corp.	(proxy to David Bradt)
Nova Scotia Power, Inc.	Chris Milligan
Orange & Rockland Utilities, Inc.	(proxy to Aleksandra Gofman)
Rochester Gas & Electric Corporation	(proxy to David Bradt)
The United Illuminating Company	David Bradt
Vermont Electric Power Company, Inc.	Hantz Presume

**Sector 2 – Reliability Coordinators**

Hydro-Quebec TransEnergie	Maxime Nadeau
ISO New England, Inc.	James Helton
New Brunswick Power Corporation	Alan MacNaughton
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.	Lincoln Burton - Alternate
Eversource	Barry Bruun
Hydro-Quebec Distribution	Hakim Sennoun - Alternate
Long Island Power Authority	(proxy to Anie Philip)



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National Grid Mike Jones  
New Brunswick Power Corporation Randy MacDonald

**Sector 4 Generation Owners**

Consolidated Edison Company of New York, Inc. Peter Yost  
Dominion Energy, Inc. Helen Wang - Alternate  
Long Island Power Authority Sean Bodkin  
New York Power Authority (proxy to Anie Philip)  
Frank Ronci  
Salvatore Spagnoli - Alternate  
NextEra Energy Resources (via written proxy)  
Ontario Power Generation Michael Cooke  
David Kwan - Alternate  
Talen Energy Marketing (proxy to Phil Fedora)  
Vistra Energy Corp. Ken Stell

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

Consolidated Edison Company of New York, Inc. Aleksandra Gofman  
Consolidated Edison Energy, Inc. (via written proxy)  
Long Island Power Authority (proxy to Anie Philip)  
New York Power Authority (proxt to Frank Ronci)  
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 DPS Humayun Kabir

**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 Bilheimer Senior CIP Analyst  
Charles Dickerson President & CEO  
Gerard Dunbar Director, Reliability Standards & Criteria  
Jenifer Farrell Vice President IT & Enterprise Risk Management  
Phil Fedora Vice President, Reliability Services and Chief Engineer  
Damas Hebert Associate General Counsel & Director, Enforcement



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Brian Hogue	Information Systems & Security Management
Neeraj Lal	Senior Reliability Engineer
Quoc Le	Manager, System Planning
Kristin McKeown	General Counsel & Corporate Secretary
Scott Nied	Assistant Vice President, Compliance
Andrey Oks	Director of Operations Coordination
Shayan Rizvi	Senior Reliability and Performance Analysis Engineer
Ralph Rufrano	Manager, Events Analysis

**Guests**

Joseph Adadjo	Eversource Energy
Eric Anderson	New York Power Authority
John Babu	Chair, Task Force on System Protection
Carl Benker	Vice Chair, Task Force on System Studies
Joy Brake	Chair, Task Force on System Studies
Jamie Carnes	North American Transmission Forum
Calvin Curry	Vice Chair, Task Force on Infrastructure Security & Technology
Louis-David Cote	Hydro-Quebec – TransEnergie
Edward Davian	Ontario IESO
Lynna Estep	North American Transmission Forum
Tom Galloway	North American Transmission Forum
Jeannette Gauthier	Hydro-Quebec – TransEnergie
Martin Huang	Hydro One
Ken Keels	North American Transmission Forum
Jacob Lucas	Eversource
Anthony Napikoski	The United Illuminating Company
Edward Roedel	Chair, Task Force on Coordination of Planning
Bill Temple	The United Illuminating Company
William Vesely	Chair, Task Force on Infrastructure Security & Technology

**Quorum Statement**

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



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**Sector 4 – Generator Owners**

Allen Schriver – NextEra Energy Resources

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

Norman Mah - Consolidated Edison Energy, Inc.

**Antitrust Guidelines for NPCC Meetings**

The RCC voted to waive the reading of NPCC Antitrust Guidelines provided in the Agenda package.

**President & CEO Report**

**NPCC Board’s Working Draft Strategic Plan**

Mr. Dickerson reported that the *NPCC Working Draft Strategic Plan - 2022-2025* is being developed based on discussions at the NPCC Board’s September meetings – a draft will be prepared for presentation at the October 27, 2021 NPCC Board meeting.

**Chair Report**

**Agenda**

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

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

**November 30<sup>th</sup> RCC Meeting**

Mr. Fedora reported that the NPCC Board had changed the NPCC December Board and Annual NPCC Members meeting to a virtual format; accordingly, the November 30, 2021 RCC meeting will be held as a WebEx.

**Proposed 2022 RCC Meeting Dates and Locations**

Mr. Fedora presented the following proposed 2022 RCC Meeting Dates and Locations:

- ✓ Wednesday March 2, 2022 – WebEx;
- ✓ Wednesday June 8, 2022 – WebEx;
- ✓ Wednesday September 14, 2022 – WebEx; and,
- ✓ Tuesday December 6, 2022 – Toronto, Ontario (in conjunction with the NPCC 2022 Board/Annual Meeting(s)).

**Development of 2022-23 Task Force/RCC Work Plans**

Mr. Adam reminded the RCC that the development of the RCC’s 2022 -2023 Work Plan follows the RCC approval of the NPCC 2022-2023 Task Force Work Plans at the November 30, 2021 RCC meeting. He indicated that he would be drafting the 2022-23 RCC Work Plan with help from the RCC Co-Vice Chairs, using the input from the proposed Task Force’s 2022-2023 Work Plans. He also said it would also be very helpful having the 2022/2023 NPCC strategic objectives and goals when developing the RCC work plan.

**RCC Scope Update**

Mr. Adam referred to the RCC Scope provided in the Agenda package, which was approved by the NPCC Board at its meeting on January 27, 2021. He asked the RCC to



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review and provide him any comments/changes prior to the November 30, 2021 RCC meeting; following a RCC recommendation for approval, the NPCC Board will consider the RCC Scope at its February 2, 2022 meeting.

**October 14<sup>th</sup> NPCC Distributed/Variable Energy Resources Forum**

Mr. Dunbar described the topics planned to be presented at the October 14, 2021 Distributed /Variable Energy Resources (VER) Forum provided in the Agenda package.

**October 22<sup>nd</sup> RCC Webinar**

Mr. Fedora reported that a RCC Webinar is planned for October 22, 2021 to receive updates on the status of NPCC 2021 Corporate Goals.

**Consent Agenda**

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

**May 26, 2021 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 changes to Task Force and Working Group memberships were approved:

**Sector 1 – Transmission Owners**

- ✓ Steven Senus to replace Michael Parsi as the New York Power Authority alternate.
- ✓ Brian Saez to replace Philip Toia as the New York Power Authority representative.

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

- ✓ Robert Knowlton to replace Saul Rojas as the New York Power Authority alternate.

**Task Force Roster Changes**

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

**Task Force on Coordination of Planning**

- ✓ Mr. Kofi Nimako of the New York State Electric and Gas Corp. to serve as an alternate member for The United Illuminating Company.

**Task Force on Coordination of Operation**

- ✓ Ryan McSherry to serve as the NPCC alternate.

**Task Force on System Studies**

- ✓ Joy Brake of Nova Scotia Power Inc to succeed George Fatu of the Ontario IESO as Chair.



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- ✓ Xia Jiang to serve as member replacing Ali Iravani, both of the New York Power Authority.
- ✓ Sunil Palla to serve as alternate member replacing Khin Swe, both of the New York Power Authority.

**Task Force on Infrastructure Security & Technology**

- ✓ Michael Foley to succeed Avani Pandya as an alternate for the Consolidated Edison Company of New York, Inc.
- ✓ Matthew Holiday of National Grid USA to serve as an alternate
- ✓ Jolan Marchese to succeed Jessica Clark as an alternate for New York State Electric & Gas Corp.

**CO-1 Working Group on Control Performance**

- ✓ David Kimmel to succeed Gabrielle Genaurio as the representative for PJM Interconnection LLC.
- ✓ Ilyana Dropkin to serve as the PJM Interconnection LLC alternate.

**CO-8 System Operations Managers Working Group**

- ✓ Rod Hicks to succeed Marc Theriault as an alternate member for the New Brunswick Power Corporation.

**CO-11 Working Group on Restoration**

- ✓ Martin Beaudin of Hydro-Québec TransÉnergie to serve as Co-Vice Chair.
- ✓ Robert Golen of New York ISO to serve as Co-Vice Chair.
- ✓ Jason Marshall to succeed Marc Theriault as an alternate for the New Brunswick Power Corporation.
- ✓ David Barrett to succeed John Antonakos as the representative for the Ontario IESO.
- ✓ John Antonakos to serve as an alternate for the Ontario IESO.
- ✓ Rajalakshmi Narayana to no longer serve as an alternate for the New York ISO.
- ✓ Maximus Rizk to serve as the representative for the Consolidated Edison Company of New York, Inc.
- ✓ Michael Mullin to serve as an alternate for Consolidated Edison Company of New York, Inc.
- ✓ Mark Townsend succeeds Robert Haromszeki as an alternate for Hydro One Inc.

**CO-12 Working Group on Operations Planning**

- ✓ Kevin Clark to succeed Courtney Fasca as the primary representative for ISO New England.
- ✓ Dave Evans to serve as an alternate representative for ISO New England.
- ✓ Frank Peng of the Ontario IESO to serve as the Vice Chair, replacing Mathieu Labbe of Hydro-Quebec TransÉnergie.
- ✓ Billy Labelle to serve as a Hydro-Quebec TransÉnergie alternate.

**CP-8 Working Group**

- ✓ Sushil Silwal to serve as a New York ISO alternate

**SP-7 Working Group on Protection System Misoperation Review**

- ✓ Wing Kong to succeed Elliot Fanshel as an alternate member for the New York Power Authority.



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

- ✓ Susan Alexander to serve as an alternate member for the Ontario IESO.

**IST-4 Cyber Security Working Group**

- ✓ Norm Dang to succeed Rob Antonishen as a representative for the Ontario IESO.

**IST-5 Physical Security Working Group**

- ✓ Jay Kosak to serve as a New York Power Authority alternate.

**NPCC Whitepaper on NERC Reliability Standard CIP-012**

Approved as provided in the Agenda package.

**NPCC RAS List – Mid-Year Update**

Approved as provided in the Agenda package.

**NPCC Directory No. 1 Implementation Plan**

Approved as provided in the Agenda package.

**TFSP Review of Mitigations for BPS Risk Reduction Implementation**

Approved as provided in the Agenda package.

**NPCC A-10 Criteria Clarification**

Approved as provided in the Agenda package.

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

Approved as provided in the Agenda package.

**Approval Items**

**2020 NPCC Criteria Compliance and Enforcement Program (CCEP) Assessment Report**

Mr. Nied reported that on August 18, 2021, the Compliance Committee (CC) accepted the *Assessment Report for the 2020 CCEP Implementation Plan*. The *CCEP-1 Process Document* directs the CC to present an annual assessment report for approval at the 3<sup>rd</sup> quarter 2021 RCC meeting. The 2020 report, included in the Agenda package provides recommendations on seven instances of noncompliance.

The CC recommended that the RCC accept the CC concurrence of noncompliance presented in the assessment report.

**After discussion, the RCC then unanimously approved the 2020 NPCC CCEP Assessment Report provided in the Agenda package (all written proxies in favor).**



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Mr. Nied indicated that following RCC approval of the 2020 NPCC Criteria Compliance Enforcement Program Assessment Report, in accordance with the CCEP-1 Process Document (Revision 8, 07/14/21) a letter will be sent to the CEOs of the noncompliant Full Members that includes a recap of the noncompliance, the status of mitigation activities, and an explanation of the assessment by the CC and subsequent acceptance by the RCC.

**Retirement of NPCC Directory No. 12 – Automatic UFLS program Requirements**

As provided in the Agenda package, Mr. Benker reported that concurrent with the development of PRC -006-NPCC-2 the NPCC Task Force on System Studies (TFSS) initiated a comparison of the criteria requirements in Regional Reliability Directory No. 12 with the requirements of PRC-006-NPCC-02 and the latest version of PRC-006 to assess the reliability impact of retiring all or part(s) of the criteria contained within Directory No. 12.

Based on this comparison and a mapping of requirements to the regional and continent-wide standards, the TFSS has recommends retirement of NPCC Directory No.12 subject to Provincial adoption of the requirements of PRC-006-NPCC-02 in all NPCC Areas. The TFSS posted their recommendation to the NPCC Open Process for 45 days from April 28th, 2021, to June 12th, 2021, and has responded to comments received.

**The RCC then agreed to recommend retirement of Directory No. be submitted to the NPCC Full Members for their approval (all written proxies in favor).**

**Endorsement Items**

**Goal II-1 –Develop a draft whitepaper for identifying and prioritizing which Directories should be revised to accommodate decarbonization objectives and increased amounts of DER and VER.**

Mr. Dunbar presented the NPCC whitepaper included in the agenda package developed to prioritize the review and revision of NPCC Regional Reliability Directories with respect to the decarbonization goals within the NPCC region. The whitepaper contains a prioritization of Directory reviews and categorizes them (low, medium, or high) using input on the potential impact of Distributed Energy Resources (DER) and Variable Energy Resources (VER), provided by NPCC Members, NERC, and Staff observations during the recent NPCC DER/VER Forums. The whitepaper was distributed to the NPCC Task Forces for comment and posted to the Open Process for a 45-day comment period from June 9, 2021, to July 27, 2021, and all comments have been addressed.

On August 11, 2021, the NPCC Regional Standards Committee approved the whitepaper and recommends RCC endorsement. Following RCC endorsement the whitepaper recommendations will be incorporated into the individual Task Force Work Plans.

**After discussion, the RCC unanimously endorsed the Goal II-1 Whitepaper included in the Agenda package (all written proxies in favor).**





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**Goal III-1 – Conduct three (3) joint physical and cyber security collaboration sessions with Gas Sector representatives and present coordination recommendations.**

Mr. Scalici reported on the engagement and collaboration of the Managing Director, Security and Operations of the American Gas Association (AGA) who has attended one joint NPCC and NERC meeting, held on March 25, 2021, and one NPCC Physical Security Working Group (PSWG) meeting, held June 9, 2021, where Intelligence, Threats, Technologies and Mitigation Strategies were shared. AGA’s Managing Director, together with an Intelligence Analysts from her organization are scheduled to attend September 16, 2021, meeting, along with future sessions of the NPCC PSWG.

Mr. Scalici explained that this will be an ongoing collaboration that adds value for NPCC registered entities. Critical Cross Sector risks and dependencies have been discussed and identified for the Gas Sector, achieved by leveraging the personnel from entities that are members of both the NPCC PSWG and the AGA Physical Security Group in addition to AGA representative’s participation in NPCC PSWG meetings.

Common risks and suggested mitigations are documented in the “Emerging Trends” document which is updated as new risks develop.

He reviewed the recommendations and mitigations provided in the Agenda package addressing the critical cross-sector emerging risk trends that affect both the Electric and Gas Sectors, including:

- ✓ Increased random patrols of critical paths of supply lines (Railway, fence lines, access points);
- ✓ Hardening of access points and fence lines;
- ✓ Hardening of switches and control valves that can disrupt the flow of Electricity or Gas;
- ✓ Increased camera coverage of critical assets in remote areas;
- ✓ Use of drones to patrol transmission lines, remote areas and pipelines;
- ✓ Ensure company vehicles are locked and secure to avoid theft of uniforms and other company assets (keys); and,
- ✓ Increased communications and coordination with Law Enforcement.

**After discussion, the RCC endorsed the Goal III-1 coordination recommendations provided in the Agenda package (all written proxies in favor).**

**Goal III-3 – Best currently available practices that Entities can use to reduce the risk of cyber-attacks.**

Mr. Bilheimer reported that the Task Force on Infrastructure and Security Technology recommends the RCC endorse the best currently available practices that Entities can use to



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reduce the risk of cyber-attacks presentation included in the agenda package. He noted that the recommendations are not binding or for compliance purposes and are presented to assist Entities in reducing the risk of cyber-attacks. The intended audiences for the presentation are subject matter experts implementing cyber security and executives approving cyber security.

**After discussion, the RCC unanimously endorsed the Goal III-3 the cyber threat awareness presentation provided in the Agenda package (all written proxies in favor).**

**Discussion Items**

**August 12, 2021 NERC Member Representatives Committee/Board of Trustees Meeting(s)**

Mr. Adam referred the RCC to the materials included in the Agenda package and noted the focus on Implementation of ERO Policies, Procedures, and Programs for 2021/2022 Winter Energy Readiness.

Mr. Fedora highlighted the NERC Board of trustees acceptance of the 2021 State of Reliability and the 2021 ERO Reliability Risk Priorities Report.

**September NPCC Board Meeting(s)**

Mr. Adam noted this topic had been previously covered in the President's report and the Chair report earlier in the meeting. Mr. Fedora briefly summarized the NPCC Board's policy input provided to the NERC Board of Trustees included in the Agenda package.

**September 8-9, 2021 NERC Reliability and Security Technical Committee Meeting**

Mr. Oks lead a discussion of the following Agenda topics scheduled for consideration at the September 8-9, 2021 NERC Reliability and Security Technical Committee (RSTC) Meeting:

- ✓ Accept to post the Reliability Guideline – *Distributed Energy Resource (DER) Forecasting* for a 45-day comment period. Mr. Rizvi explained that the NERC System Planning Impacts from Distributed Energy Resources Working Group (SPIDERWG) developed the Reliability Guideline to address the growing need to ensure the accuracy of Interconnection-wide planning, especially as some states are enacting policy that targets a specific level of DER integration.
- ✓ Approval of White Paper - Survey of DER Modeling Practices - Mr. Rizvi reported that the NERC SPIDERWG performed an informal survey of its membership regarding DER modeling practices of Transmission Planners and Planning Coordinators. Results from the survey were analyzed to identify any major trends in DER modeling practices, to characterize the level of detail being used for DER modeling, and to identify any potential gaps in these practices that should lead future efforts for SPIDERWG and industry
- ✓ Approval of the Synchronized Measurements Working Group (SMWG) Scope. Mr. Lal explained that the SMWG updated their scope document to reflect the transition from a



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subcommittee to a working group reporting to the Real Time Operating Subcommittee. Other clarifying edits for the scope and deliverables for the SMWG were made.

Mr. Adam thanked Mr. Oks for leading the discussion and NPCC staff for highlighting and summarizing the items scheduled for consideration at the June 8-9, 2021 NERC RSTC meeting. He encouraged the RCC to further review the materials provided in the Agenda package, if interested in further details.

**Goal IA-1 – Recruit three NPCC transmission owners to share an overview of the North America Transmission Forum (NATF) Transmission Resilience Maturity Model (TRMM) to evaluate its applicability for assessing transmission resilience.**

During May through August 2021, three NATF member companies volunteered within the NPCC region (Consolidated Edison, Hydro One, and the New York Power Authority) to complete and review their self-assessment using the TRMM to evaluate its applicability for assessing transmission resilience. They then shared their assessment observations with the NATF and coordinated with NATF staff on the report and presentation included in the Agenda package.

**Task Force 2021-2022 Work Plan Highlights**

Mr. Adam referred the RCC to the respective Task Force 2021-2022 Work Plan Progress provided in the Agenda package. The following highlights were presented by the Task Force Chairs:

**Task Force on Coordination of Planning**

- ✓ Ongoing review of NPCC Directory No. 1 - *Design and Operation of the Bulk Power System*;
- ✓ CP-8 Working Group resource adequacy activities; and,
- ✓ Review of Remedial Action Schemes (RAS);

**Task Force on System Studies**

- ✓ NPCC Area Transmission reviews;
- ✓ Update of the SPS/RAS List;
- ✓ NPCC Directory No. 12 - *Automatic UFLS program Requirements* retirement; and,
- ✓ Biennial update of the NPCC Electric System map.

**Task Force on Coordination of Operation**

- ✓ CO-11 Working Group review of Directory No. 8 - *System Restoration*; and,
- ✓ NPCC Wide Area RC-to-RC Restoration drill - scheduled to be held virtually on October 20, 2021.

**Task Force on Infrastructure Security & Technology**

- ✓ Developed consensus comments and ballot recommendations on CIP-003 updates;



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- ✓ Review of Critical Infrastructure Control Systems; and,
- ✓ Time synchronization security update.

Task Force System Protection

- ✓ Completed review of NPCC Directory No. 11 - *Disturbance Monitoring Equipment Criteria*.

**Informational Items**

Mr. Adam then referred the RCC to the Informational Items materials provided in the Agenda package. Mr. Fedora referred the RCC to the upcoming September 30, 2021 Annual FERC Commissioner-Led Reliability Technical Conference meeting; the notice is provided in the Agenda package.

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

<b>Next RCC Meeting Date</b>	<b>Location</b>
October 22, 2021	[WebEx meeting]

<b>Future RCC Meeting Dates</b>	<b>Location</b>
November 30, 2021	[WebEx meeting]
December 10, 2021	[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 Sallows  
Nova Scotia Utility & Review Board – S. Bruce Outhouse, Q.C.