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Reliability Technical Conference

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Good afternoon Chairman McIntyre, and Commissioners Chatterjee, LaFleur, Glick and Powelson. Thank you for the opportunity to speak today on policy issues related to the reliability of the North American Bulk Power System and the North American Electric Reliability Corporation ("NERC") and the Regional Entities.

My name is Sylvain Clermont and I currently serve as Director, Operational Technology Convergence for Hydro-Québec TransÉnergie ("HQT"). HQT is the transmission division of Hydro-Québec, a vertically-integrated Crown corporation responsible for the generation, transmission and distribution of electricity in the Canadian province of Québec. HQT operates the most extensive transmission system in any North American jurisdiction, including 17 interconnections with the neighboring provinces of Ontario and New Brunswick, and with the Northeastern United States. Its 735 kV AC Network was recognized as a technical milestone in electrical engineering in 2005 by the Electrical Engineer Society.

I am appearing today on behalf of the Canadian Electricity Association ("CEA"), the national forum and voice of Canada's electricity industry. Every day, CEA members generate, transmit, distribute and market electric energy to industrial, commercial and residential customers across Canada and into the United States.

CEA's diverse membership includes integrated electric utilities, independent power producers (several of which also own assets in the United States), transmission and distribution companies, power marketers, manufacturers and the suppliers of materials, technology, and services that keep the industry running smoothly.

Canadians and Americans share custody of a highly-integrated electric transmission network, linked by over 35 cross-border transmission lines. This interconnected grid has provided indispensable economic, social and environmental benefits to both the United States and Canada for over 100 years. It has also drawn our two countries together in common purpose: ensuring the reliability and security of our shared electric grid.

The reality of the integrated nature of the North American grid requires adherence to a common set of operating principles, and that reliability and security solutions are based on a

foundation cross-border collaboration, not isolation. Our integrated grid does not know borders, and often reliability risks and security threats, such as extreme weather or cyber-attacks, do not respect jurisdictional boundaries.

Therefore, the reliability of the grid is a shared responsibility. Foundational to cross-border reliability and security efforts is the international ERO model. Through NERC, and other cross-border collaboration forums, Canadian stakeholders work together with our American counterparts each day to ensure the reliability and security of the bulk power system in North America.

CEA members include entities that are subject to reliability standards developed by NERC, which are mandatory and enforceable in Canada pursuant to provincial frameworks. Canadian entities make significant contributions to standards, assessments, and compliance through established collaboration mechanisms, and Canadians sit on NERC's Board of Trustees and on various NERC councils and committees.

The international ERO model is successful as it allows for grid security and reliability solutions to be developed in a way which considers the interconnectedness of the North American grid. It ensures the collaboration and support of the right experts from the right organizations, and regulatory and governmental authorities from both sides of the border, producing effective results.

As such, CEA remains an advocate of NERC's North American standard-setting model. It is in this spirit that I offer my thoughts on the topics of this panel.

First, CEA is supportive of the priorities for NERC identified by NERC CEO Jim Robb in his letter to Industry Leaders dated June 6, 2018, particularly the goal of full implementation and, where possible, extension of the risk-based philosophy established by NERC.

We also concur with the findings and recommendations of NERC's *2018 State of Reliability Report*.[1]

Notably, all key findings of the report include recommendations for increased coordination and outreach[2], particularly with the forums. As such, NERC, the forums and the regional entities should seek to leverage the strengths of each organization, pursue collaboration and avoid duplicative efforts.

Further, though the system encountered no load loss due to cyber or physical security events, these threats require continued vigilance from industry, governments, regulators and the entire NERC ecosystem. Moreover, as stated above, threats often do not respect jurisdictional lines. In that regard, we encourage the E-ISAC to continue to improve its information sharing functions,

[1] NERC, *2018 State of Reliability Report*; June 2018; https://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/NERC_2018_SOR_06202018_Final.pdf

[2] NERC 2018 State of Reliability Report recommendations: 1.3, 2.3, 3.3, 4.2, 5.3, 6.3

and for both Canadian and American officials to work to achieve solutions which allow for even more transparent, timely and secure information sharing. All parties working to ensure the security of the grid should seek to avoid duplication of efforts or incomplete or untimely information sharing.

Second, through its Standards Efficiency Review, NERC is undertaking a valuable initiative to ensure the standards that the electricity sector complies with represent the best set of standards which most effectively contribute to the reliability and the security of the Bulk Power System.

Over the past decade, the electricity industry has been consistently changing, often at a rapid pace. We have witnessed the advent of innovative technologies, shifting generation mixes, and new customer demands and policy imperatives. We are also experiencing new and developing threats, including more extreme weather events, and continually evolving cyber-threats.

Changes such as these mean that reliability is an evolving target. As our industry evolves, so to must standards. As such, it is good practice to review, on occasion, what we already have in place, using an expert-led and measured approach, to ensure that the set of standards which entities comply with are only those that effectively and efficiently contribute to reliability and security.

The goals identified for the Standards Review, to achieve reliability while reducing compliance burden and to consolidate, streamline or retire non-essential standards, are perfectly aligned with the importance of focusing on what matters most for reliability.

Moreover, the strategies to undertake this review are strong, including:

- Focus only on reliability. For example, retire market-based requirements and let the North American Energy Standards Board regulate business practices.
- Determine system performance, rather than the methods to achieve it: Requirements should be performance-based, and so many requirements that are competency-based or are internal controls can be retired. Furthermore, this provides entities the flexibility to implement other means to reach a performance objective which may be better suited to their specificities and so will further enhance reliability.

We believe that the benefits to reliability and industry will include:

- A better understanding of the standards amongst owners and operators;
- Greater efficiency in compliance preparation, monitoring and enforcement;
- A focus on reliability performance, with greater flexibility given to industry to implement adapted internal controls.

Overall, this effort will contribute to reliability as it will help ensure that industry's resources are not wasted on duplicitous, unnecessarily cumbersome or ineffective requirements, but on

compliance with the best set of streamlined, risk-based standards which contribute the most effectively to positive reliability and security outcomes.

Third, as the industry evolves and changes, the ERO enterprise must continuously strive to be even more effective and efficient, ensuring that resources are being best directed towards activities which appropriately address ongoing and emerging reliability and resilience considerations and risks.

In 2017, NERC published its *ERO Enterprise Long-Term Strategy*.[3] This strategy looks ahead five to seven years to examine how changes to the industry and reliability will affect how the ERO enterprise will achieve its vision and mission in the future.

As the ERO Enterprise works to implement this strategy and to position itself well for the future, it should consider how to ensure:

- Risk identification remains at the core of the ERO's activities;
- Sound technical expertise informs industry, regulators, politicians;
- The standards program becomes more risk-based, and that standards are streamlined and focused on the essential for reliability;
- The compliance monitoring and enforcement program is simplified and aligned on the most important risks, and that outreach to entities and work with the forums best facilitates implementation of new or revised standards;
- The creation of more opportunities to create synergies and partnerships with the Forums;
- Continuous, robust and meaningful stakeholder engagement;
- The creation of further synergies between ERO Enterprise operational and strategic planning documents;
- ERO activities are better streamlined and coordinated, and all are focused on its core mission.

As such, NERC should be commended for its ongoing focus of achieving greater efficiencies and effectiveness in the work of the ERO Enterprise, and should continue these efforts.

One of those positive efforts is the project to improve the efficiency and effectiveness of stakeholder engagement, a key component of ERO activities. As part of these efforts, CEA would respectfully offer that efficient and effective NERC Stakeholder Groups would meet the following criteria**:**

- Serve to minimize duplication of efforts with regions, forums and trade associations;
- Are related to the ERO core mission (standards and compliance);
- Should require or reinforce governance or oversight;
- Serve to minimize conflict of interest with compliance and enforcement;

[3] NERC, *ERO Enterprise Long Term Strategy*; November 2017; https://www.nerc.com/AboutNERC/StrategicDocuments/ERO_Enterprise_Long-Term_Strategy_Approved_by_the_NERC_Board_on_Novmeber_9_2017.pdf

- Have a continent-wide interest or coordination.

CEA also supports the focus in the *ERO Enterprise Long-Term Strategy* of 'Strengthening Engagement across North America'. A continuing effort by NERC to strengthen North American engagement, and the leveraging of existing ERO-Enterprise wide grid reliability and security efforts and frameworks, will further enhance the value of the international ERO model across North America.

Finally, in acknowledgement that emerging risks to the Bulk Power System often span across sectors, the ERO model should facilitate ongoing coordination with relevant parties outside of the sector. For example, IT standards bodies may be able to provide useful lessons in addressing cyber threats.

Fourth, regarding the significant and not yet fully realized changes in the Western Interconnection, we believe that key reliability questions that should be considered while evaluating these changing structures are well outlined in the GridSME Whitepaper, *Anticipating and Preparing for Multiple Reliability Coordinators in the Western Interconnection*:

- System Operating Limit and Interconnection Reliability Operating Limits Coordination
- Wide Area View and the Future of the Westwide System Model
- Outage Coordination
- Remedial Action Scheme Coordination
- Oscillatory Dynamics[4]

Having more than one reliability coordinator can work well, as does in the Eastern Interconnection. What is important is how the system is implemented, ensuring it maintains sound coordination and system visibility, taking into account multiple agreements, different models and unique outage coordination rules and timelines.

It will be necessary to keep these issues in mind when evaluating the various RC proposals.

Fifth and last, as Mexico is a part of the North American community alongside the U.S. and Canada, CEA was encouraged to see Mexico take steps to more fully join ERO structure, with the signing of the NERC/Mexico MOU in March 2017. Canadian jurisdictions have experience successfully integrating into the NERC framework. As such, as NERC and Mexican authorities proceed with these efforts, these parties may wish to look to the Canadian experiences as positive models for ways to proceed, where appropriate.

We also believe this has the potential to further improve the quality of the standard as more entities in different situations apply them.

[4] GridSME Whitepaper, *Anticipating and Preparing for Multiple Reliability Coordinators in the Western Interconnection*, April 2018 https://westernenergyboard.org/eim-bosr/documents/#

In conclusion, the ERO model has demonstrated its value in its capability to facilitate crucial North American collaboration and to administer a robust, inclusive standards development process, under the rigorous oversight of applicable government authorities across North America. Continued levels of high Bulk Power System reliability performance are evidence demonstrating this success.

Through maintaining a North American lens, through ensuring that standards are risk-based and sharply focused on reliability and security, and through striving to be effective, efficient and focused on its core mission, the ERO model will be well positioned to ensure the ongoing reliability and security of the North American Bulk Power System as our industry continues to evolve and innovate.

CEA also wishes to take this opportunity to thank the Commissioners for their ongoing support for the value that U.S.-Canada electric integration brings to shared electric reliability, affordability and sustainability. CEA urges the Commission to seek to continue strengthening its engagement with Canadian counterparts and to bear in mind that many of its directives have impacts in Canada due to the interconnected, international nature of the grid.