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Independent Electricity System Operator
1600 – 120 Adelaide Street West
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Via email to engagement@ieso.ca

RE: Reliability Standards Review

On August 26, 2020, the Independent Electricity System Operator (IESO) presented on a new consultation to review Reliability Standards in anticipation of supply shortfall in the near future.¹ The objective of the consultation for the IESO is to ensure that the appropriate assumptions are applied for Reliability Standards while considering ratepayer value.

TC Energy is pleased at the opportunity to provide feedback to the IESO on the review of Reliability Standards. Reliability Standards are a foundation of power system planning and an important component of defining future supply adequacy needs for Ontario.

Feedback on Focus of Review

In the Reliability Standards Review the IESO stated that the objective of resource adequacy is to achieve a loss of load expectation (LOLE) of 0.1 days per year (i.e., 1 day per 10 years). The IESO listed six areas of potential focus for the review of Reliability Standards. They are:

- Demand uncertainty
- Scheduled outages and derating
- Forced outages and derating
- Assistance over interconnection with neighbouring areas
- Transmission transfer capabilities
- Capacity and/or load relief from available operating procedures

From the assessment of the six potential areas of focus, the IESO recommended two areas for further analysis and potential changes. They are: i) forced outages and derating; and ii) assistance over interconnection with neighbouring areas (i.e., real-time imports). TC Energy supports the selection of the two areas of focus. Forced outages and imports from neighbouring jurisdictions are significant components of the ability of a power system to supply peak demand needs.

Inclusion of Demand Uncertainty as Area of Focus

TC Energy recommends adding a third area of focus, demand uncertainty. Ontario's electricity demand has changed significantly over the past decades as the province's economy has shifted from a manufacturing and resource-based economy to a services-based economy. At the same time, climate change is altering demand patterns in many ways. Climate change is expected to create greater volatility of temperatures in the summer potentially leading to higher peaks. In addition, government policy changes have a considerable impact on grid level electricity demand. For example, the recent halting of the Industrial Conservation Initiative (ICI) by the government in response to COVID-19 resulted in a sizable spike of peak demand as large commercial and industrial

¹ <http://www.ieso.ca/Sector-Participants/Engagement-Initiatives/Engagements/Reliability-Standards-Review>

customers no longer took action to reduce their consumption during the five coincidental peaks. Additional policy changes could cause further changes to Ontario's demand profile that should be reflected in the IESO's resource adequacy assessment.

Transparency of Reliability Standards Assessment

The electricity sector is changing rapidly as emerging technologies (e.g., energy storage) and innovative solutions (e.g., flexible demand options) enter the market. At the same time, electricity is growing in its importance for the general economy and as a tool for meeting the challenges of climate change. With these changes occurring, review of Reliability Standards is reasonable and prudent by Ontario's power system planner, the IESO. Reliability Standards determine the resource adequacy needs of Ontario and are a foundational driver for investment in new supply resources. Without a well-defined system need to support new resource development, financing and government approval are difficult to obtain.

To ensure that the Reliability Standard Review is productive and supports the objectives of meeting Ontario's future supply need in a safe, reliable and cost-effective manner, the IESO must be transparent in its assessment. TC Energy recommends the following actions should be taken to ensure the reliability review is successful and supports future resource development.

First, the IESO should describe what tools and methods they are using to review the Reliability Standards. For real-time imports, the IESO should describe how they intend to model intertie flows and assess the probability of those flows being available during peak demand hours. As with any assessment process, the methodology and assumptions are important caveats on the results. Clearly articulating how the assessment process was run will help stakeholders understand the capabilities and limitations of the assessment.

Building on the first recommendation with respect to imports, the IESO should describe what assumptions are made for neighbouring jurisdictions. Ontario is interconnected to four neighbouring jurisdictions (i.e., NYISO, MISO, Quebec and Manitoba) through 26 interties. Assumptions for the supply availability within each jurisdiction is needed to understand the capability for real-time imports to Ontario. Further, future assumptions of supply/demand balance in each jurisdiction will greatly influence the potential for real-time imports. Stakeholders must be able to understand how the IESO developed its view of future real-time import capabilities to understand the prudence of the assumptions and how it might impact their investment options.

Third, the IESO should provide examples and linkages to how real-time imports and forced outage rates are evolving in other jurisdictions. Each jurisdiction moves forward on Reliability Standards updates under its own unique circumstances. Understanding how the IESO views similarities and differences with approaches taken in other jurisdictions will help stakeholders understand Ontario's resource adequacy needs. The IESO should not limit the Reliability Standards Review comparison to only neighbouring jurisdictions, as many other jurisdictions including those in the Western Interconnect and Europe are tackling similar issues.

Finally, the IESO should share data and models with stakeholders to allow for robust review and commentary. The ability of interested parties to replicate results is an important component to building confidence in determining system need and stimulating investment. Each stakeholder group views system need through their own lens. Having the data inputs to independently assess the matter is a prerequisite to aligning the various sector participants needed to develop the most cost-effective solutions for Ontario's resource adequacy needs in the future. Shared information also allows interested parties to present solutions to the IESO and decision makers using a verified data set.

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Enhanced Governance Structure for Planning Process

Establishing a process for stakeholders to offer differing conclusions and perspectives with respect to the Reliability Standards review is beneficial for the IESO and the electricity sector. The IESO should adopt a governance structure that efficiently allows stakeholders to question the IESO about the analysis and conclusions of the Reliability Standards Review. Stakeholders should also be encouraged to identify differences with respect to the advisability of assumptions and methods in the Reliability Standards analysis and to present alternative viewpoints in an organized manner. This is not to say that stakeholders should have the ability to determine the results of the Reliability Standards Review. Instead, the IESO should seek to ensure all parties' viewpoints are represented and a process is in place to present their analyses. The current approach using standard feedback forms is not suitable for the depth of analytics and technical assessment related to Reliability Standards.

We have full confidence in the IESO to manage a structured stakeholdering process for the Reliability Standards that accomplishes the goals of transparency and reproducibility. If that is not feasible, it is possible that an adjudicative process could serve as an alternative.

Ontario has been long on capacity for over a decade so ensuring that new capacity procurement is built upon robust and vetted analysis is a must for Ontario rate-payers to secure cost-effective solutions while maintaining the reliability we all depend on.

Final Remarks

TC Energy supports the IESO in reviewing Reliability Standards in anticipation of the resource adequacy need in the mid-to-late 2020s. The selection of forced outages and real-time imports are logical areas to focus analysis. TC Energy recommends including demand uncertainty as a third area of focus given the impact of climate change and the changes to Ontario's demand composition over the last decade. TC Energy recommends the IESO take time to clearly describe the tools and methodology they use for assessment. Specifically, for real-time imports, the IESO should describe their assumptions for neighbouring jurisdictions' capability to export during peak demand hours. The IESO should describe how real-time imports and forced outages are being assessed in other jurisdictions and the IESO should undertake a concerted and structured process to share data and associated models and methodologies so stakeholders can replicate analysis and help identify areas for improvement. Finally, the IESO should look to enhance the governance structure to ensure alternative viewpoints can be presented in an organized fashion.

Sincerely,
Charles Conrad
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