Agenda Item Requirements Note

DATE: August 15, 2017

TO: Executive Leadership Team

FROM: Darren Matsugu & Tam Wagner

Action Required:	Information
Date Required:	N/A
Time Required:	N/A

Subject: US Senate Committee Hearing on Wholesale Electricity Markets

Comments: Summary of discussions between the US Senate Committee on Energy and Commerce and US RTO/ISO CEOs on wholesale electricity markets. The relevance of the discussions to the IESO is also noted in this memo.

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US RTO/ISO CEOs Speaking on Wholesale Electricity Markets at a Senate Committee Hearing in July 2017

Background

The electricity industry is undergoing a period of transformation due to technological innovation, restructuring of wholesale electricity markets (or "markets") and changes in policy objectives as reflected in changes to supply mixes. With these changes, a number of US government departments and agencies have been exploring the ability of markets to accommodate system and policy changes. The Federal Energy Regulatory Commission ("FERC") has held a number of technical conferences to address various aspects of markets, such as capacity markets, uplifts, and price formation.

Wholesale energy prices are at historically low levels. While the development of new low-cost technologies and the decline in fuel prices have played a role in lower wholesale electricity costs, this trend is also a product of a competitive market design that rewards efficiency and conveys pricing signals to the marketplace. Competitive markets have clearly led to efficient use of the transmission system, in the form of priority use for the lowest cost resources and greater utilization of the transmission system overall. Markets have also adapted well to rapid changes in the generation fleet. However, with the low energy prices, coal and nuclear generators are finding it difficult to earn sufficient revenue in the RTO/ISO markets in order to continue operations. In response, some states are evaluating whether to support certain nuclear and coal units with additional payments, which would also allow for certain policy objectives to be met.

In the summer of 2016, the Committee on Energy and Commerce (or the "Committee"), a standing committees of the US House of Representatives, launched a long-term review of the Federal Power Act to ensure the nation's electric system is equipped for 21st century challenges. As part of their review, the Committee sent a letter to FERC highlighting a number of issues they see facing the market including "how markets, have in many ways, become mere administrative constructs that are continuously "tweaked" through the regulatory process". As a result, efficient deployment of capital is impeded and consumers are prevented from realizing the potential benefits that competitive markets can yield. FERC responded to that letter indicating that markets have delivered some unquestioned successes since their launch more than twenty years ago.

As a continuation of its review of the Federal Power Act, the Committee held its first hearing as part of their recently announced "Powering America" series. The CEOs of the US RTO/ISOs were asked to appear to discuss a number of issues such as the long-term functioning of markets, the state of regional and interregional transmission planning and development, and RTOs and ISOs preparation to incorporate new resources into the market.

Summary of US RTO/ISO Responses to Committee Questions

On July 26, 2017, all seven RTO/ISOs CEOs were part of a panel for the Senate Committee hearing on "Review of the Operation and effectiveness of the Nation's Organized Wholesale Electricity Markets" in Washington D.C. The overall message was that markets are not just working, but working well. Key comments made by the CEOs were:

- Markets have provided savings to customers as a result of efficiencies gained by utilizing competitive markets as a tool to ensure that electricity is delivered at the lowest reasonable cost.
- Wholesale electricity prices are the lowest they have ever been and a consistent level of system reliability has been maintained.
- Markets also provide transparency on what is happening on the electricity system by setting electricity prices that reflect supply needs across an operating day and identifying associated transmission congestion.
- The combination of low competitive rates along with continued investment in generation and demand response resources is a sound testimony that markets have achieved much of what Congress intended when it first introduced competition in the wholesale electricity industry.
    - For example, in New England, the capacity market has incentivized – through a market base investment signal – a substantial amount of new capacity resources, including highly efficient natural gas-fired power plants as well as investment in renewable energy and demand resources.
- The transition to a greater reliance on natural gas and renewable energy resources in the nation's wholesale markets is not a threat to power system reliability.
- Wholesale markets have maintained reliability, increased efficiency and supported the secure operation of the grid.

A concluding note made by the RTO/ISO executives was that market-based solutions are a preferable means to address the issues facing the industry, rather than regulators or legislators guessing as to the ideal supply mix for the future.

Relevance to the IESO

While the policies and issues being discussed by the committee do not directly impact the IESO, the IESO has been closely following the potential impacts on the development of US wholesale electricity market and features that may be appropriate for consideration in Ontario, and in Market Renewal more specifically. The congressional testimony of US RTO/ISO leaders as well as the historical success of US energy markets strongly supports the objectives of Market Renewal. How the US markets improve on price transparency to better value and signal system

needs such as flexibility to adapt to supply mix changes and sufficient capacity to ensure reliability are relevant to Market Renewal. Ontario differs from US markets in that Ontario has spent the last decade changing our supply mix (retiring coal-fired generation and bringing on renewables) through Government Directives and long-term contracts. Additionally, Ontario has further committed to climate change goals by implementing a cap and trade program, which prices carbon in a sector-wide manner. Ontario's focus is now on ensuring our market mechanisms are capable of effectively operating the new supply mix and also help meet policy objectives in a more cost effective manner.

Addressing the new generation supply mix challenges

With more renewable and natural gas resources and less traditional "baseload" resources (e.g. coal, nuclear), grid operators are adapting to a different fleet with a larger range of operating characteristics, while maintaining adequate reserve margins and system reliability. Ontario is ahead of many US markets that are now starting to integrate renewable resources into their systems. Ontario experienced and continues to adapt to the challenges of a new diverse supply mix; both from an operational perspective and to maintain reliable system operation. While Ontario is ahead in many ways, there are still common challenges that Ontario and other ISOs are facing, such as forecasting.

Capacity Markets

With Ontario introducing an incremental capacity auction as a part of Market Renewal, the IESO will bring lessons learned from US jurisdictions and ongoing debates at FERC. These discussions regarding efficient capacity market design can inform us as we work with stakeholders to develop an incremental capacity auction.

Furthermore, some states are proposing market-based solutions to their stakeholders as creative solutions to ensure policy objectives are met in an effective and transparent manner by adapting their market mechanisms. This type of solution allows state policies to be implemented, while preserving the market principles for competitive price formation. These proposals demonstrate the importance for Ontario to design a flexible market structure that can appropriately value desired system attributes and incorporate market-based solutions to address current and future policy initiatives. The Committee panelists unanimously agreed that single state regions, like Ontario, have more flexibility when implementing state policies within a market structure as they do not need to accommodate competing priorities of multiple state policy objectives.

Conclusions

US wholesale electricity markets remain supported federally by the Committee and participating states. RTOs/ISOs continue to evolve markets to better accommodate policy objectives and changing resource fleets. The IESO will continue to monitor future Committee hearings and developments on US wholesale markets for features that may be suitable for the design of Market Renewal.