

Lake Erie LP (“Lake Erie Connector”) appreciates the opportunity to respond to the Ministry of Energy and Electrification’s (“MOEE”) request for feedback regarding the province’s integrated energy resource plan – specifically, by providing responses to the guiding questions prepared by the MOEE consistent with the key energy policy priorities in “Ontario’s Affordable Energy Future: The Pressing Case for More Power.”

The Lake Erie Connector is a first-of-its-kind project designed to create a direct link between the largest wholesale electricity markets in the United States (“U.S.”) and Canada. Lake Erie Connector thus has a compelling interest in Ontario’s energy future and commends the MOEE for committing attention and resources to address the unprecedented demands for energy on the horizon while also prioritizing affordability, reliability, choice, and energy leadership.

Informed by the scope and benefits of its intertie project, below Lake Erie Connector offers comment on select guiding questions.

1. Overarching Question:

- *What policy options and actions should the government consider in the integrated energy resource plan to achieve Ontario’s vision for meeting growing energy needs, keeping energy affordable and reliable, ensuring customer choice and positioning us to be an energy superpower?*

Lake Erie Connector Response:

Ontario’s energy policy goals can be realized by expanding the province’s electric transmission interties and creating new markets that enhance energy trading, reliability, and affordability. The Lake Erie Connector project is designed to help accomplish this by establishing an electric transmission intertie directly to PJM Interconnection LLC (“PJM”), which is the largest regional transmission organization (“RTO”) in the U.S. As the first direct link between the largest wholesale electricity markets in the U.S. and Canada, Lake Erie Connector would create a new international trading hub that would improve energy reliability and affordability while managing the anticipated acceleration of load growth in both Ontario and the U.S.

Interregional transmission has been a crucial part of the grid since Ontario connected to the New York system over 120 years ago. As Ontario’s supply mix has evolved, investments in new intertie capacity have provided essential operational flexibility to manage supply and demand imbalances. To meet the high load growth projected by the Independent Electricity System Operator (“IESO”), further investment in intertie capacity would complement new additions of nuclear, renewable, and hydroelectric resources. New intertie investments that connect to the PJM market should be prioritized due to the benefits from a new unique connection for Ontario, unlocking new energy trading opportunities across the border.

2.Planning For Growth

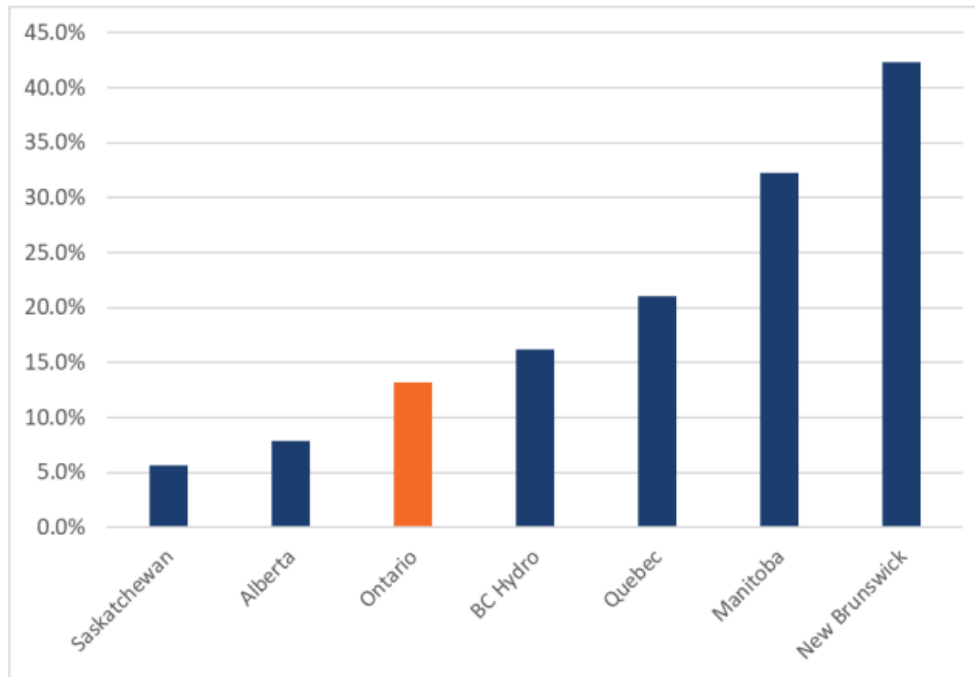
- *The government’s priority is to ensure Ontario has the energy resources it needs to support growth. Are there opportunities to enhance the province’s approach to procuring electricity generation supply to better serve this priority?*
- *What actions should government consider to promote greater access to electricity and accelerate grid-connections that will support economic growth, connecting new homes, and electrifying transportation and heating?*
- *What cooperation opportunities exist across other jurisdictions to support energy trade, construction of transmission infrastructure (ex. pipelines and interties), and transportation electrification?*

Lake Erie Connector Response:

The projected 75% electricity load growth by 2050 will place significant stress on the Ontario electricity system to meet this demand reliably. As Ontario develops plans for this growth, new transmission infrastructure will be critical to supporting the province’s generation capacity needs to provide reliable, affordable, and clean energy across the province. Interties capable of bi-directional flow will be a crucial factor in the ability of an electrical system to manage emergency system conditions as well as extreme weather events and other associated challenges.

According to the latest IESO planning projections for generation in its 2025 Annual Planning Outlook, Ontario would need to add over 2,000 MW of intertie capacity within the next 20 years in order to maintain the current percentage of intertie capacity relative to installed firm capacity. Figure 1 below demonstrates that Ontario’s intertie capacity is not as robust as other provinces. This assumes peak demand can be met with resources having operating characteristics similar to natural gas, which is sufficiently flexible, with some limitations, to ramp up and down as system conditions change. If future peak needs are increasingly met by intermittent and baseload resources that are less flexible, managing supply and demand imbalances will require greater investments in new sources of operational flexibility, including interties. Unlike investments in existing interties, connecting to PJM would link Ontario to a completely new source of generators and customers.

Figure 1: Intertie Capacity vs Installed Generation Capacity



Source: 2024 CER Regional Profiles

Action by Ontario to enhance transmission to the U.S. through interties to PJM would further help ensure reliable and affordable energy across the province. As Ontario's capacity needs grow, interties will create new opportunities for trade with its neighbors, unlocking access to energy to support Ontario's economic growth, electrification, as well as increasing reliability and resiliency across the province during both normal and extreme events when reliable and affordable energy is needed most. To meet the high load growth projected by the IESO, further investment in intertie capacity will complement new additions of nuclear, renewable, and hydroelectric resources.

A direct link between the largest U.S. and Canadian energy markets will help enable Ontario to become an international energy hub providing significant, and needed, economic and reliability benefits to all of Ontario.

3. Affordable and Reliable Energy

- *What further actions could the government take to maintain an affordable energy system for Ontarians throughout the energy transition?*

Lake Erie Connector Response:

Developing interties to link Ontario to the U.S. will provide Ontarians with reliable, secure, and affordable energy during the present period of energy transition and escalating energy demand. Ontario should look to new interties to ensure that Ontarians have access to reliable, affordable, and increasingly clean energy when they need it the most. Interties contribute to diversifying the domestic supply mix and could provide ancillary services to enhance grid stability when equipped with advanced HVDC technology (as Lake Erie Connector plans on deploying). Interties can also help maintain reliability by balancing supply and demand and supporting system operations during emergency events.

4. Becoming an Energy Superpower

- *What opportunities exist to further capitalize on Ontario's leadership and expertise in nuclear technology and nuclear innovation?*
- *What opportunities should Ontario consider to leverage its position as a clean energy leader?*

Lake Erie Connector Response: Becoming an Energy Superpower

In addition to the comments provided in response to Question 1 above, interties are crucial facilities for Ontario as a region with a high proportion of inflexible generation resources, such as run-of-river hydroelectric generation. Ontario's historical expansion of intertie capacity coincided with the development of large-scale nuclear and hydroelectric plants, providing an effective outlet for surplus electricity generation and a reliable source of emergency power while experiencing technical issues. More recently, interties to new regions have been instrumental in efficiently integrating renewable energy, as they would flexibly respond to supply-demand imbalances for Ontario.

Looking forward, interties will continue to offer these significant benefits to Ontario, with the added advantage of monetizing sales of clean energy. This is particularly relevant now for PJM, which depends heavily on fossil fuels for the majority of its electricity current and future needs.