

BACKGROUND

Role of the Interties in Ontario

- Electricity imports to Ontario are delivered across 26 different interties with Manitoba, Quebec, New York, Michigan and Minnesota.
- Currently, 85 per cent of all electricity imports into Ontario come from Quebec and Manitoba and are purchased on an hourly basis in the IESO wholesale electricity market.
- Ontario has been a net exporter of electricity for a number of years, primarily to U.S. jurisdictions, but was a net importer throughout the early 2000's.
- Ontario's interconnections with neighbouring jurisdictions have provided significant economic and reliability benefits to the province since the first connection between Ontario and New York was established more than 110 years ago.
- While the interties provide reliability and greater cost-effectiveness to the Ontario electricity system, they also provide much needed support during emergency events, such as the sudden loss of a significant generating source or transmission element.
- The resiliency of the interconnected network is maintained through adherence to continent-wide reliability standards, which define the reliability requirements for planning and operating the North American bulk power system.

Review of Ontario Interties - Highlights

- Opportunities exist today to enhance the benefits of the interties, which include more frequent scheduling of intertie transactions, expanding the provision of ancillary services such as operating reserve, and using the interties for the purchase or sale of capacity.
- Current opportunities for reliance on long-term firm import arrangements are limited. There may be potential to use firm imports to fill some capacity needs, if neighbouring jurisdictions are able to offer competitive pricing while considering the cost of required transmission enhancements.
- Costs for enhancements would vary, depending how much import capacity is desired. Further detailed design, analysis and assessments of specific arrangements would be required before reaching any conclusions on firm import proposals.
- In order to assure cost-effectiveness for Ontario ratepayers, any cost comparisons around firm import arrangements must include the cost of electricity as well as internal transmission enhancements.
- Offer prices and any greenhouse gas emissions associated with the imports also need to be taken into consideration. System benefits and Ontario's needs, such as year-round availability for supply, are also factors to consider.

- The IESO is actively considering how interties can be used to import or export capacity to maximize value to ratepayers. The OPA also periodically explores opportunities for medium to long-term import arrangements.

Ontario / Quebec Interties

- Firm import capability on the Quebec-Ontario interties is quite restricted due to transmission constraints in the Ottawa area. Currently, up to 500 MW of firm capability could potentially be accommodated on a regular basis; but even this would be limited during some extreme local conditions. This capability is expected to decrease to zero by 2020.
- The report considers three scenarios for enhancements in the Ottawa area:
 - A transmission upgrade in Ottawa required to meet future reliability needs provides the opportunity for additional work that would allow up to 1,000 MW of firm imports on the high voltage direct connection with Quebec. The estimated cost of these enhancements is \$325 million.
 - Further enhancements would allow Ontario to increase this amount of firm imports to 1,800 MW. These enhancements include adding a transmission line between Cornwall and Ottawa, and installing additional equipment in the Ottawa area for an estimated cost of \$500 million.
 - After all these local enhancements are in place, a new interconnection between Ontario and Quebec would increase the amount new firm imports to a total of 3,300 MW. This new interconnection would require a major equipment upgrade at the New York/Cornwall interface and a new transmission line near Toronto. The estimated cost of this enhancement would be up to \$1.4 billion.
 - All together, the cost of enhancements needed to import 3,300 MW is roughly \$2 billion.
- A smaller firm import agreement may be mutually beneficial given the complementary nature of the electricity systems in Quebec and Ontario (Quebec is winter-peaking, Ontario is summer-peaking).

Manitoba

- From Manitoba, an increase in firm import capacity by 1,000 MW would require the construction of a transmission link approximately 1,700 km to deliver the power to the GTA, at a total estimated cost of between \$2 and \$3 billion.