

November 9, 2023

Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street, 27th Floor Toronto
Ontario M4P 1E4

Dear Ms. Marconi,

Re: Benefit-Cost Analysis Framework for Addressing Electricity System Needs EB-2023-0125

Invest WindsorEssex is a not-for-profit organization supported by the City of Windsor and County of Essex. We are responsible for advancing economic development to grow and sustain prosperity in the region. As the lead economic development organization in the region, we provide confidential and expert assistance to companies and entrepreneurs in all sectors. Our focus is to develop and execute strategies to retain, expand, attract, and help start up new businesses in the Windsor-Essex region.

Invest WindsorEssex has retained Power Advisory as a strategic advisor to support our engagement related to electricity planning, which is foundational to the businesses we are working with. Given the importance of enabling economic development, Invest WindsorEssex is an active participant in the Independent Electricity System Operator's (IESO) Integrated Regional Resource Plan (IRRP) development. It is well known that the ability to connect new, large loads in the Windsor-Essex region is often challenging due to limitations of the transmission system. Competition for attracting investment is fierce. Electricity infrastructure is critical and necessary to guaranteeing increased access to reliable and sustainable energy for all current and future business in our region and supporting the prosperity of our local economy. This must meet the needs of our growing key sector industries and their emergence into new and innovative economies with a reliable and sustainable electricity supply, as it is essential to our region and the strategic 401 corridor as the region continues to work towards developing a solid base for local and global investment. It must be underscored that the Capital Investment value of our current pipeline of Foreign Investment, High Priority Leads, exceeds \$8 billion. More importantly, these companies are currently waiting on confirmation of a reliable and sustainable energy supply, of which electricity is a vital component. Furthermore, there are four (4) battery plant supply chain companies currently under construction in our region. Total square footage is approximately one (1) million, with an estimated 1,050 jobs.

Winter peak demand in the Windsor-Essex focus area is expected to grow from less than 2 GW in 2025 to over 3 GW by 2035 from new and forecasted greenhouse customer connections. Ontario is forecasted to shift from summer peaking to winter peaking; this will impact supply contributions of some resources (e.g., solar generation), which may need to be augmented with other resources (e.g., energy storage). Due to significant demand growth, the West of Chatham (WOC) interface is expected to



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at times be overloaded and must be addressed. The demand forecast is expected to be updated in the IRRP.

Power Advisory has advised us to expect the demand forecast to continue to show steady levels of growth in the base case.

Further, Lauzon TS T7/T8 DESN is expected to be loaded above its long-term emergency ratings during the 10-year forecast period. This is due to higher near-term growth forecasts in the outskirts of the city. These transformers are reaching end-of-life, so there is the opportunity to coordinate the station capacity need with the asset replacement plans. This may require station reconfiguration if larger transformers are needed. The Technical Working Group (TWG) recommends that the capacity need for Lauzon TS T7/T8 DESN be further reviewed in the upcoming IRRP to examine the timing of the need, opportunity to coordinate with the asset replacement, and opportunities for integrated solutions involving both wires and non-wires solutions.

On April 4, 2022, the Minister of Energy made an announcement related to “Ontario Supporting Economic Growth in Southwest Ontario”. This announcement included the need to support southwest Ontario through five transmission lines, three of which have been declared priorities.

Projects include:

1. The Chatham to Lakeshore Line, a 230-kilovolt line
2. The St. Clair Line, a 230-kilovolt line from Lambton Transformer Station
3. The Longwood to Lakeshore Line, a 500-kilovolt line from Longwood Transformer Station
4. A second 500-kilovolt line from Longwood Transformer Station to Lakeshore Transformer Station
5. The Windsor Line, a 230-kilovolt line that would run from the Windsor area to Lakeshore Transformer Station

Hydro One is currently exploring developing the Windsor Line. This line would benefit the local agriculture sector and economic growth in the area. However, this project has not been approved and the line has not been considered in the IESO system plans, highlighting lack of coordination between agencies.

With this context, we offer the following for consideration based on the October 26, 2023, stakeholder session:

1. Content. What additional information could be included in the Handbook that would help LDCs to assess the value of DERs for meeting system needs?

LDCs must be empowered to implement non-wires alternatives (NWAs) as an interim solution when customers are challenged to connect. Transmission projects take time – planning, procurement, supply chain, construction, etc.

Utilizing NWAs during the period when transmission development is pending offers a pragmatic and sustainable solution to address energy distribution challenges. NWAs encompass a range of innovative

technologies and strategies, such as demand response programs, energy storage systems, and grid optimization techniques. By deploying these alternatives, utilities can effectively manage peak energy demand, enhance grid reliability, and reduce the need for costly infrastructure upgrades. This approach not only mitigates the potential delays and uncertainties associated with transmission development but also aligns with the broader goals of energy conservation and environmental stewardship. NWAs empower communities and LDCs to navigate the transitional phase of grid expansion with flexibility and resilience.

In short, in areas of the grid that are experiencing constraints, LDCs should be part of the solution to enable connection in the near-term while transmission solutions are being developed in the longer term. Businesses simply do not have the ability to wait for transmission to be built and will look elsewhere.

2. Impacts. For the DST and EST, are the proposed impacts and their suggested applicability correctly aligned with the purpose and intent of each test?

The benefits of a proposed solution must include economic benefits associated with attracting new customers and enabling connections. These customers not only contribute to employment and economic prosperity of the region, but they are also customers that pay for their fair share towards the costs of electricity.

LDCs must prioritize economic considerations when assessing NWAs due to their direct impact on both the bottom line and consumer costs. Evaluating NWAs solely from a technical perspective may result in suboptimal decisions that burden consumers with unnecessary expenses. A robust economic analysis helps LDCs identify the most cost-effective NWAs, considering factors like capital and operational costs, return on investment, and long-term financial sustainability. It also ensures that the chosen solutions align with regulatory requirements and contribute to a competitive energy market, ultimately benefiting consumers by minimizing rate hikes and fostering a more efficient and affordable energy distribution system. In today's rapidly evolving energy landscape, understanding the economic implications of NWAs is crucial for LDCs to make informed decisions that balance both financial prudence and the pursuit of a more resilient and sustainable grid.

3. Examples. The BCA Handbook will include three summary worked examples of BCAs for different DER NWAs. What types of system needs, DER solutions, and practical constraints should these examples address? The more specific the detail that can be provided here, the better.

The examples in the BCA should consider the application of DERs in an area that is experiencing economic growth and expansion, and large loads that might arrive “in chunks” rather than smooth demand growth over time. Industrial or commercial enterprises coming online with significant energy demands can strain the existing grid infrastructure. DERs such as solar arrays, battery storage, and microgrids, offer an agile solution to address these fluctuations. They can be strategically deployed to offset peak loads and ensure grid stability, effectively shaving off the highest demand spikes and reducing the need for costly infrastructure upgrades.

Moreover, the examples may consider how DERs can enhance grid resilience by providing backup power during outages, thus benefiting not only large customers but the entire community by improving energy reliability and reducing the risk of disruptions.

4. Inputs. We expect that the most significant benefits and costs of DERs will be derived from project- and program-specific information. Are you aware of any material impacts for which generic values are available and might be used?

In general, we agree. While the most significant benefits and costs of DERs do often stem from project- and program-specific details, there are several generic values available that can offer valuable insights and serve as useful benchmarks. For instance, generic values can help estimate the broad categories of benefits and costs, such as reduced greenhouse gas emissions, improved grid reliability, and potential energy cost savings. However, it's crucial to recognize that the actual benefits and costs can vary significantly based on the specific circumstances of a DER project or program, and as such, these generic values should be used as reference points rather than precise predictions.

Conclusion

We are supportive of the OEB's efforts related to establishing a Benefit-Cost Analysis Framework. In particular, we hope that this process will result in the ability for both transmitters and distributors to utilize DERs as short-term solutions where the electricity grid is experiencing constraint. We urge the OEB to move forward expeditiously such that solutions can be developed and deployed in the near future to ensure economic prosperity for our region.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Stephen MacKenzie', with a stylized flourish.

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