Regional Electricity Planning – Peel/Halton (GTA West) Region

Potential Options Screening to Develop IRRP – Feedback Form

Regional electricity planning for Peel/Halton (GTA West) Region is underway and the IESO is seeking input from communities and stakeholders to better understand local issues, priorities and identifying future needs.

During a webinar on August 5, the IESO presented an update on the electricity planning and Integrated Regional Resource Plan (IRRP) development underway for Peel/Halton Region (GTA West), to seek feedback on the range of potential options that will be examined and considered in developing the recommendations that will form part of the GTA West IRRP. The materials from the webinar presentation are posted on the engagement web page.

Feedback on the range of potential options to be explored when developing recommendations to meet local needs is important because it will help shape the next steps in electricity planning for this region. This feedback form is provided to help facilitate your input. The questions below are simply a guide to the type of information sought, so please feel free to share any feedback that you may have.

Please provide your feedback to engagement@ieso.ca by **August 19, 2020.** In keeping with the IESO's commitment to transparency, all feedback will be posted to the IESO website and all comments will considered and responded to by the IESO by September 9, 2020.

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Question for input:	Comments:
Based on the electricity needs defined in the Peel/Halton (GTA West) region, what other characteristics should be considered?	Energy storage should be considered in the electricity planning for the Peel/Halton (GTA West) Region. On July 17, 2020, Energy Storage Canada released *Unlocking Potential: An Economic Valuation of Energy Storage in Ontario*. This province-wide study highlights the economic benefits of implementing energy storage across Ontario's power system. Please refer to the report here: https://energystoragecanada.org/unlocking-potential.
What other options should be considered in defining the solutions to meet the electricity needs?	The benefits of implementing energy storage resources and technologies should be considered in the Peel/Halton (GTA West) Region electricity planning due to the: **Savings on Electricity Infrastructure** Energy storage could reduce costs in the transmission and distribution sectors in the Peel/Halton (GTA West) region by deferment of transmission assets and deferment of distribution assets. - **Deferment of Transmission Assets:** The installation of energy storage resources on the grid can increase the utilization of existing transmission assets and defer new investments required for system needs based on regional planning requirements. Our study found that total savings from enabling energy storage as it relates to deferred transmission investment in Ontario could range from $314 million to $556 million over the next decade.

	- **Deferment of Distribution Assets:** Energy storage resources can increase the utilization of existing distribution assets and defer new investments throughout a distributor's service territory and also augment distribution system planning. Our study found that savings from deferred distribution investment in Ontario range from $142 million to $284 million. **Qualitative Benefits of Energy Storage** - Energy storage provides additional benefits that should be considered for the Peel/Halton (GTA West) region. These include environmental benefits; reduced transmission congestion benefits; increased export and import value benefits and power quality improvement benefits. o **Environmental Benefits:** Implementing energy storage practices can lessen the reliance on gas-fired generators in the short-term, while also reducing the amount of gas-fired generation capacity required in the long-term. o **Reduced Transmission Congestion Benefits:** Transmission congestion on Ontario's grid continues to limit energy flows, leading to curtailed energy output. Targeted energy storage facilities can reduce the amount of curtailed energy output and shift that energy to either hours when transmission lines are uncongested or to higher-value hours, or to a combination of the two. o **Increase Export and Import Value Benefits:** Over the past decade, Ontario has been a net exporter of energy. Export customers do not pay Global Adjustment

	charges, hence energy exported at $0/MWh provides little value to Ontario's customers in the form of lowering fixed, system-wide costs. Energy storage can provide value to Ontario's customers (including those in the Peel/Halton region) by storing surplus energy in off-peak hours to either meet the province's own peak needs, or to potentially export it in hours when prices in neighbouring jurisdictions are higher. ○ **Power Quality Improvement Benefits:** Power quality in the Ontario power system can be enhanced by the deployment of energy storage. Energy storage can be used to increase the ability of the power system to integrate renewable generation in remote locations where voltage drop concerns limit the connection capability. -
What other information, if any, is needed to enable further feedback in this initiative?	As Peel/Halton (GTA West) Region continues its needs assessment, evaluation of appropriate energy storage resources and technologies should be considered. Please refer to our Valuation Study for more information: https://energystoragecanada.org/unlocking-potential. Further, a recently released OEB Staff Bulletin dated August 6, 2020, clarifies to utilities that they can ratebase BTM storage (for distribution related objectives) which should be considered in this Regional Planning exercise.
Other comments	No comment.