Feedback Form

Regional Electricity Planning in GTA North (York Region) Area – November 26, 2024

Feedback Provided by:

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To promote transparency, feedback submitted will be posted on the GTA North (York Region) engagement webpage unless otherwise requested by the sender.

Following the GTA North (York Region) electricity planning engagement webinar held on November 26, 2024, the Independent Electricity System Operator (IESO) is seeking feedback on the draft electricity demand forecast scenario and Engagement Plan. A copy of the presentation as well as a recording of the session can be accessed from the engagement web page.

Please submit feedback to engagement@ieso.ca by **December 17, 2024.**

Topic	Feedback
What additional insights, if any, should be considered in the draft forecast scenario?	No comments at this time.

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What areas of concern or interest about electricity should be considered as part of the planning process?	Slide 17 of the IESO presentation "GTA North (York Region) Regional Electricity Planning dated Nov. 26, 2024 notes that in York Region, electricity demand could double in the Summer and triple in the Winter by 2044 with building heating electrification as a significant contributor to electricity demand. The document "GTA North IRRP Forecasting Method" outlines the forecast method used by each of the local distribution companies (LDCs) in the GTA North IRRP (Integrated Regional Resource Plan). The document references the use of available information on heat pump adoption (Alectra - page 4, 3rd bullet; Hydro One - page 5, 5th paragraph) to develop the electricity demand forecast provided by the applicable LDC (i.e. to reflect building heating decarbonization in that forecast).District Energy is a proven solution that can provide a cost effective, reliable, lower-electricity demand alternative to individual, in-building electric heat pumps for heating and cooling. District Energy can leverage locally-available sources of clean energy. For example, Enwave's new district energy system in the new community of Lakeview in Mississauga will leverage heat recovery heat pumps to move heat from municipal waste water to heat buildings and cool buildings by moving excess heat from them to the waste water. These heat recovery heat pumps use approx. 1/3 of the electricity to produce the same thermal output as air source heat pumps and have a lower $/GJ capital cost. Similarly, a district energy system that produces heat with a large-scale electric boiler would have a lower peak demand on the electricity system than the demand of the alternative, aggregate stand-alone in building air source heat pump/electric boiler systems. Furthermore, the large scale electric boiler could be contracted by the IESO as a dispatchable load to reduce its demand during peak events by switching to an alternative fuel source. Enwave encourages the IESO and Technical Working Group (TWG) for the GTA North IRRP to fully evaluate district energy and local clean thermal energy and electricity solutions for their potential to cost-effectively defer/offset other sources of generation, distribution and transmission infrastructure to meet local energy needs. Enwave would be pleased to share information about the potential for district energy in the region to reduce

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	electricity otherwise needed for space and process heating and cooling.
What information is important to provide to participants throughout this engagement?	Detailed method and forecast for developing the baseline demand forecast for the area (i.e. specific technologies and penetrations assumed for building space and process heating). Details on the potential value of deferral of local distribution and transmission infrastructure, that could be achieved through non-wires solutions (e.g. district energy and low carbon thermal energy solutions and local generation) to enable potential solution providers to develop options for consideration by the IESO and IRRP Technical Working Group (TWG) as part of the suite of solutions to consider for recommendation in the final IRRP.
Does the proposed Engagement Plan provide sufficient scope and opportunities for input?	No comments at this time.

General Comments/Feedback

Thank you to the IESO and the GTA North IRRP Technical Working Group for the opportunity to comment. Enwave and Condor Properties are currently working together to explore clean energy options – including district energy systems – for the two new large-scale mixed-use communities that Condor Properties is developing at its High Tech and Bridge sites in Richmond Hill and Markham respectively. The new High Tech community will include 21,000 residential units (1.6M sq. m.) and151,000 sq. m. of office space with 9,500 jobs. The Bridge community, located immediately south of High Tech, will include 20,000 new homes and 147,700 sq. m. of office space with 9,400 jobs. There is an opportunity to integrate the development of district energy, thermal energy storage, local electricity generation and storage into the build-out of these new communities to reduce the electricity capacity and supply that would otherwise be needed to serve them. There is also an opportunity to leverage these local energy solutions to defer and/or reduce the distribution and transmission infrastructure that would otherwise be needed to serve these communities – saving money for electricity ratepayers and expanding the life of existing electricity system assets. Enwave and Condor Properties request and welcome the opportunity to work with the IESO and the applicable local distribution and transmission companies to evaluate the potential for these local clean thermal energy and electricity solutions to reduce demand that will otherwise be realized in the area and to discuss innovative procurement and contracting structures that could be used to enable the value of these local solutions to the electricity system to be fully realized. An example of such an innovative solution would be a contract for the avoided electricity system capacity that the IESO would otherwise need to purchase if buildings that are heated with district energy using a non-electricity based low carbon heat source (e.g. renewable combined heat and power, or waste heat recovery) were instead electrified. We look forward to engaging with you directly with regards to the

potential to integrate clean thermal energy and electricity solutions into High Tech, the Bridge and the GTA North more broadly.