Feedback Received and IESO Response

Kitchener-Waterloo-Cambridge-Guelph Electricity Planning Process Public Webinar #1: Forecasting – December 12, 2024

The IESO hosted a public webinar on December 12, 2024, for the Kitchener-Waterloo-Cambridge-Guelph (KWCG) electrical region as part of its engagement to inform the development of a long-term electricity plan - the Integrated Regional Resource Plan (IRRP). During the webinar, the IESO provided an overview of the regional electricity planning process, shared the draft electricity demand forecasts, and draft engagement plan for input. The presentation materials and recorded webinar are available on the engagement webpage.

The IESO appreciates the input, which will be considered by the Technical Working Group[1] to develop the IRRP. Feedback was received from the following parties and the full submission can be viewed on the engagement webpage:

- City of Guelph
- City of Kitchener
- County of Wellington
- Enbridge Gas Inc.
- Township of Puslinch

The section below summarizes feedback received related to key developments, projects, and initiatives, as well as local issues and concerns that should be considered in the electricity planning for the KWCG electrical region.

[1] The Technical Working Group is lead by the IESO and consists of the LDCs in the region and the local transmitter (Alectra Utilities Corporation, GrandBridge Energy, Halton Hills Hydro Inc., Enova Power Corp., Centre Wellington Hydro Ltd., Wellington North Power Inc., Milton Hydro Distribution Inc., and Halton Hills Hydro Inc.)

Considerations for the Electricity Demand Forecast

Feedback / Common Themes	IESO Response
Confirm whether the following inputs have been included in the forecasts, specifically: • The City of Guelph shared that the electrification of transportation, such as the new Guelph Transit and Fleet Services facility, should be incorporated in the forecasts. • The County of Wellington inquired as to whether the population projection, land use projections, proposed Home Energy Retrofit Programme, and the Draft Tri-County green development standards have been included in the forecasts. • The City of Kitchener inquired as to whether electrification of heating has been considered.	Thank you for sharing details regarding local projects and programs to be included in the forecast. To develop the draft demand forecasts, forecast data is provided by each of the local distribution companies in the KWCG electrical area to the IESO. Using the forecast data received, the IESO accounted for the impacts of existing demand side management programs, planned distributed generation and extreme weather conditions. To enable meaningful feedback during the process and decisions to be made, the IESO has recently posted the detailed methodology which contains inputs from the local distribution companies including Alectra Utilities Corporation, GrandBridge Energy, Halton Hills Hydro Inc., Enova Power Corp., Centre Wellington Hydro Ltd., Wellington North Power Inc., Milton Hydro Distribution Inc., and Halton Hills Hydro Inc. By sharing this information, the IESO also aims to promote transparency and enable more purposeful community and stakeholder participation and input. Please click here for the draft Forecast Methodology. More details are shared below regarding specific inputs based on feedback from the local distribution company. LDCs responses: • Alectra Utilities has been in high-level discussion with the City of Guelph regarding electric bus charging at different locations. The expected load from these electrifications has been included in the load forecast. • Enova Power Corp. confirms that electrification of heating has been considered in the load forecast. For the entire Enova service area, on top of the standard annual growth rate, a separate load growth factor was used to account

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	for electrification (e.g., EV chargers, electric based heating systems, and electric water heaters), based on the customer segmentation for each station. Using the Electrification Strategy Report prepared by Hatch for Grid Smart City, electrification adaption rates were determined for each station separately. • Hydro One confirms that their forecast reflects load growth in the County of Wellington and that they have considered the Wellington County Official Plan and Tri County GDS data.
Provide more information regarding the forecast development and assumptions, specifically: • To build greater confidence in the proposed scenarios the City of Guelph encouraged the IESO to share assumptions, inclusions, and exclusions that have been considered. • The City of Kitchener requested details on how the IESO is addressing risks associated with peak scenarios and underbuilding the system in the near term. • The City of Kitchener inquired as to how LDCs and municipalities can further collaborate to explain how the load forecast incorporates growth information provided by municipalities to better understand the forecast and how municipalities can support energy planning needs.	The IESO strives to make information available throughout the development of IRRP to enable meaningful feedback during the process and decisions to be made. Generally, the IESO will provide a high-level summary of the load forecast through its first engagement webinar to solicit input, and the detailed methodologies are typically published with the final report. Based on feedback heard during the targeted outreach and webinar, the IESO advanced the publishing of the detailed methodology and load forecasts early in the process to enable more purposeful community and stakeholder participation and input. For details around the Forecast Methodology and Data Tables please click here. Additionally, data and information to be made available during IRRP development is outlined in the IESO Regional Planning Information and Data document. Thank you for requesting more information about peak scenarios and how the IESO builds the system. The Technical Working Group has developed two forecast scenarios to assess the region's needs. These two scenarios allow for rigorous technical studies to be conducted to determine needs that would arise on the system in each case, develop a range of options, and prepare recommendations as part of the final

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	plan to ensure a reliable and adequate supply of electricity to the region. By planning against different scenarios, this allows for further action in the future if, and when, higher growth materializes. This will enable demand growth in a timely manner while minimizing ratepayer risks associated with overbuilding or building too early. Note that a third demand forecast scenario (low growth) is being considered, and the TWG will continue monitor load growth drivers and adapt forecast assumptions if needed. Thank you for inquiring about how LDCs and municipalities collaborate to build the forecast scenarios. Please note the IESO has shared your inquiry with the Enova Power Corp., who is open to further discussion with the City of Kitchener on how to foster collaboration. Enova Power Corp. considers changes in the City of Kitchener Official Plan when load forecasting, and also highlights work done with the City's planning department to update the load forecast, identify the system bottlenecks, and revise the 5-year capital plan in response to zoning changes around LRT stations as an example of good collaboration. The IESO also endeavours to keep all interested parties informed of regional growth trends and priorities in preparation for the next planning cycle. However, municipalities, businesses and other community stakeholders are also encouraged to keep their local distribution company and the IESO informed of any new information about growth, energy priorities and projects. To enhance the coordination between municipalities and local distribution companies, through consultation, the Ontario Energy Board developed and released two key resource documents to enhance coordination between municipalities and local distribution companies: • Municipal Information Document – Improving the Electricity Planning Process in Ontario: Enhanced

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	Coordination between Municipalities and Entities in the Electricity Sector • Load Forecast Guideline for Ontario As the IRRP in KWCG continues to be developed the IESO is committed to keeping municipalities informed through targeted outreach and public webinars while providing opportunities for input.
The City of Kitchener asked whether the IESO can help address the significant and increasing gap between the reference scenario and the high scenario.	Thank you for inquiring about the gap between the reference scenario and high scenario. The Technical Working Group determined the need to develop both scenarios to allow for further action in the future if, and when, higher growth materializes. This will enable demand growth in a timely manner while minimizing ratepayer risks associated with overbuilding or building too early. The reference scenario accounts for firm loads (current and planned), and organic growth, while high scenario incorporate potential demand growth that is less certain, in terms of timelines, magnitude, and location. While planning recommendations will be primarily driven by the reference scenario, the high scenario will be considered to test the robustness of the plan, identify signpost to monitor forecast changes and contemplate additional actions required if higher demand growth materializes.
Municipalities would benefit from more clarity about how demand management solutions can be combined with electrification efforts to influence the trajectory of capacity over time.	The IESO agrees that demand management options play a very important role to reduce demand. As one of the lowest-cost resources, investment in energy efficiency through demand-side management plays a unique role in ensuring a reliable, affordable, and sustainable grid now and into the future. To capture the opportunities and grow the savings from energy efficiency, the IESO is continuing to lead the way in energy-efficiency programming in North America through a $10.9

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	billion, 12-year funding commitment from the Ontario government, beginning January 2025, that will provide continued and expanded opportunities for residential and business electricity consumers across the province to manage their electricity use and electricity costs. More details about programs and targets can be found here. As part of the regional planning process, non-wire options, such as energy efficiency, will be evaluated to meet the emerging regional electricity needs in KWCG. More details about how the IESO evaluates non-wire options can be found here.

Considerations for Scope, and Planning Approach

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Share more information about the regional planning process, specifically: • The City of Guelph inquired about ensuring grid capacity is sufficient to accommodate electrification project timelines, and DER projects. • Enbridge Gas Inc. requested more details on how regional electricity planning addresses and ensures system resiliency of the electricity grid in the KWCG region.	Regional system planning ensures a reliable supply of electricity to Ontario's 21 electricity planning regions. This process looks at the unique needs of each region, and considers conservation, generation, transmission and distribution, and innovative resources to meet these needs. Through this process, recommendations on how best to meet reliability needs after considering all these factors are developed. Regional planning is a continual process with plans developed for a 20-year outlook but evaluated every five years at minimum. Throughout the process the IESO works with local distribution companies that serve the region and the transmitter to ensure regional issues and requirements are effectively integrated into the electricity planning processes. LDC Response: • Alectra Utilities plans to engage HONI to upgrade the Campbell TS transformers for additional station capacity. This upgrade may increase the capacity to connect

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	additional DER. Based on the current plan the upgrades are planned expected to start in 2028 and complete in 3 years.
The City of Kitchener asked what role non-wire options such as demand management solutions, peak shaving, and load shifting play in reducing demand and addressing capacity needs.	Thank you for your interest in learning more about the role of non-wire options in reducing demand and addressing capacity needs. Non-wire options play a very important role in the regional planning process. Expected peak demand reduction impacts from the province's electricity Demand Side Management (eDSM) programs (marketed under the Save on Energy brand) are integrated into the demand forecasts used to identify needs. To ensure that Ontario's electricity system remains reliable, affordable and sustainable, an evaluation of different options to meet the needs is a key step. Typically, as part of the regional planning process, once the forecast scenarios and needs have been finalized, the IESO will screen and evaluate wire and non-wire options, such as transmission-connected generation or storage, additional eDSM programs, distributed generation and demand response to meet the needs and consider reliability, cost, technical feasibility, maximizing the use of the existing electricity system (where economical), and community preferences. The IESO will present needs and options in upcoming engagement sessions and encourages all interested parties to attend. As planning work advances, the IESO welcomes views and preferences of communities and stakeholders, which will be considered in the development of the plan.

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Enbridge Gas recommended coordinated energy system (gas and electric) planning be completed and due consideration be given to a diversified energy system approach in the forecasts for the KWCG electrical region.	Thank you for providing this feedback. The Technical Working Group acknowledges the potential benefits of coordination between electricity and gas planning processes and welcomes further discussion and input on the options available to meet needs. During upcoming regional planning milestones, the Technical Working Group welcomes input and data from Enbridge Gas on the amount of demand that could be supplied from low-carbon fuels and options available to reduce demand. Recently, the Ministry of Energy and Mines released the Minister's vision for Ontario's Affordable Energy Future, and in the vision paper reaffirmed the important role of integrated energy resource planning. The IESO looks forward to working with the Ministry of Energy and Mines, Ontario Energy Board, local distribution companies, municipalities, and gas utilities to inform a provincial integrated energy plan.

Considerations for Engagement

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To support future engagements participants recommended sharing the following information specifically: • Enbridge Gas Inc. suggested sharing more details regarding how Conservation and Demand Management (CDM) will be maximized and forecasted in the electricity planning. • The County of Wellington recommended sharing the map of the study area showing municipal boundaries.	Thank you for providing recommendations regarding additional information that should be shared during upcoming engagements. The IESO will consider these recommendations regarding mapping as planning continues to advance. For more information about the development of the forecasts please click here for the draft methodology and data tables, which include details about CDM.

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The City of Guelph recommended engagements include helpful dialogue with customers to better understand important concepts in the proposed scenarios.	The IESO is committed to continuing to engage with all interested parties in the KWCG electrical region on the development of this plan and the Technical Working Group welcomes input and perspectives as part of the regional plan. As planning work for the IRRP advances through each milestone the IESO will continue to host webinars which are accessible for everyone to attend. This provides opportunities for customers to share input and ask questions. As part of the public engagement process the IESO welcomes the views and preferences of customers, for consideration in the development of the IRRP. Note that the IESO will conduct targeted engagement (such as with impacted municipalities) as needed, and that the LDCs are often already in direct contact with large customers in their service territory.
Enbridge Gas Inc. appreciated the IESO's efforts to engage with stakeholders on the KWCG IRRP process.	Thank you for expressing support for how the IESO engages with stakeholders and welcomes recommendations around additional information to be provided.
Enbridge Gas requested to join the KWCG IRRP Technical Working Group.	The Technical Working Group recognizes the potential benefits of coordination between electricity planning and gas planning processes. The IESO welcomes the opportunity to work with Enbridge on options to address the needs identified in this plan and as part of the public engagement process. As the work progresses, the IESO will continue to host opportunities to share more details, including additional webinars, and opportunities for feedback. As noted earlier, the Ministry of Energy and Mines released the Minister's vision for Ontario's Affordable Energy Future, and the vision paper reaffirmed the important role of integrated energy resource planning. The IESO looks forward to working with the Ministry of Energy and Mines, Ontario Energy Board, local distribution companies, municipalities, and gas utilities to inform a provincial integrated energy plan.

General Comments/Feedback

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Township of Puslinch recommended considering lowering delivery costs to make them more equitable in rural areas compared to urban areas.	Thank you for your feedback. In Ontario, the Ontario Energy Board (OEB) is responsible for protecting consumers and making decisions that serve the public interest. The OEB would review and approve LDC rate applications and electricity infrastructure based on key criteria, including whether project need has materialized. Cost responsibilities are outlined in the distribution and transmission system codes found on the OEB's website. For opportunities to participate and engage with the OEB on current projects or initiatives, please visit the OEB Engage with Us website.