Feedback Received and IESO Response

Bulk Study Updates (South and Central Ontario) November 20, 2024

The IESO hosted a public webinar on November 20, 2024, to provide updates for the South and Central Bulk Study, and Northern Ontario Bulk Study. Following the webinar, the IESO invited stakeholders to provide feedback on the topics discussed during the webinar.

The IESO received written feedback submissions on the South and Central Bulk Study from:

- Energy Storage Canada
- Ontario Greenhouse Vegetable Growers
- Pattern Energy

Each presentation and recording of the webinar, along with the IESO's responses to feedback are available on South & Central Bulk Study, and Northern Ontario Bulk Study engagement webpages pages.

Note on Feedback Summary and IESO Response

The IESO appreciates feedback about our work from stakeholders. The responses to the feedback about these studies are organized by bulk study and then topic.

South and Central Bulk Study

Feedback / Common Themes	IESO Response
Energy Storage Canada strongly encouraged and recommended the need for and importance of additional data and consolidated information to be shared, specifically: • Information regarding the new demand or generation development that is requiring the investment. • Sub-regional or locational demand forecasts, future generation resource mix, and the existing transmission system capabilities. • Additional information regarding planning objective changes under the new Market Renewal Program. **Pattern Energy inquired if datasets and inputs for the UPLAN simulation are available for stakeholders to run studies under NDAs, like base cases.** **Ontario Greenhouse Vegetable Growers recommended providing more information about assumptions underpinning the sufficient confidence for the needs.**	The IESO recognizes the importance of transparency and information sharing. The IESO is currently analyzing needs for the 2035 scenario. Further details on the 2035 and 2050 needs and the screening of wire and non-wire options will be shared in an upcoming engagement and provided in the final report. To ensure bulk transmission needs are met in a timely fashion, the IESO had released early actions that need to be taken in advance of the bulk study continuing to advance. Further detail on the timing and magnitude of needs will be shared at the appropriate stage in the study. IESO available data can be found through the Annual Planning Outlook, Data Directory, and the bulk study webpages: • Demand projections are available as part of the IESO's Annual Planning Outlook. • A summary of the study's assumptions and base case modeling was completed earlier in the year and shared in the engagement webinars for the South and Central Bulk Study. • Data Directory webpage contains several public reports that can be used to understand the existing system, including current transmission system capabilities and generation output. The APO provides a long-term view of Ontario's electricity system, forecasting system needs, including identifying bulk studies, and exploring the province's ability to meet them. More information about the drivers of the transmission system expansion, methodologies and supplementary data is available on the IESO's website. The IESO offers engagement opportunities regarding the APO to facilitate questions and seek clarifications from

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	stakeholders. More information about upcoming engagements can be found on this page. Previous bulk studies provided study assumptions, need profiles and high-level cost information as part of the public webinar and/or in the final report and appendices. The IESO will consider this feedback as the Bulk Planning process continues to evolve and encourages further detailed feedback from stakeholders on the value of this information for proponents, particularly how it would impact their participation in the IESO's planning processes. Information about the Market Renewal Program (MRP) can be found on the IESO's website. There are currently no plans to incorporate insights from real-time nodal price information from MRP as an input for active Bulk Planning activities.
Energy Storage Canada recommends working with a broader group of stakeholders and market participants to inform the Bulk Study, beyond the Technical Working Group. **Pattern Energy inquired if all IESO planning studies are completed in collaboration with transmission owner planning studies.**	The IESO encourages all stakeholders to be part of the public engagement process. As the study progresses, the IESO will continue to host opportunities to share more details, including additional webinars, and opportunities for feedback. We encourage any interested parties to visit the IESO website to subscribe to receive updates, to find out about upcoming engagements, and to share feedback. The IESO uses Technical Working Groups for a few initiatives, including Regional Planning. The membership of the Technical Working Group for regional planning is determined as per the Ontario Energy Board established regional planning process. Membership in the working group includes the transmitter, the IESO, and the local distribution companies that have customers in the regional electrical area. At this time, a technical working group has not been established for the bulk studies to ensure transparent sharing of information with all

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	interested stakeholders through public webinars. As part of the engagement process the IESO welcomes additional information around the capabilities of non-emitting resources and wire options. Additional information can be submitted through the public facing feedback forms, or confidentially to engagement@ieso.ca.
Ontario Greenhouse Vegetable Growers shared that combining Bulk Planning updates was efficient, however the presentation and allocation of time resulted in confusion.	The IESO will consider this feedback when planning future engagements.
Ontario Greenhouse Vegetable Growers shared that the early actions presented appear to overlook the high growth areas in the Hamilton to Windsor corridor, and that reducing development time for new infrastructure is essential. They recommend pre-planning infrastructure around pre-determined population centers to ensure customers can connect and sharing risks associated with delaying the implementation of recommendations. **Energy Storage Canada requested clear data and analysis that justifies the exclusion of non-wire alternatives in the early action plans.**	The IESO acknowledges the importance of ensuring the bulk transmission system is adequate to meet growing electricity demand. During the November 20th webinar, the IESO identified two sets of early actions to enable the connection of Small Modular Reactors at Darlington Nuclear Generating Station which are currently planned for the early 2030s, and to continue the work to identify and preserve land required for transmission infrastructure to support long-term growth in the GTA. These two sets of early actions were identified to meet the in-service dates for the Small Modular Reactors and to facilitate alignment between active Integrated Regional Resource Plans in the GTA. Remaining actions based on the 2035 and 2050 forecast scenarios will be shared during upcoming webinars. Further details on the 2035 and 2050 needs, and linkages to ongoing regional plans that would inform the impact of non-wires alternatives on the timing and magnitude of the needs, will be addressed in upcoming engagements for the South and Central Bulk plan and provided in the final report. Since 2018, the IESO has undertaken significant planning work to address capacity needs in the

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	Windsor-Essex electrical area. Previous recommendations included to increase bulk transfer capacity by 1,800 MW (in-service between 2022-2030), multiple new supply stations, to increase bulk transfer capacity by 1,800 MW (in-service between 2022-2030), multiple new supply stations, 550 MW of local generation (successfully procured 800 MW) and targeted funding for energy efficiency and innovation projects. The Windsor-Essex Integrated Regional Resource Plan (IRRP) was completed on April 3, 2025. As part of this regional plan, additional draft recommendations, including redundancy measures, energy efficiency and new transmission infrastructure, have been made to continue to meet the growing electricity needs of the Windsor-Essex electrical area. Lastly, the IESO acknowledges the importance of ensuring that recommendations are in place to continue to provide reliable, affordable and sustainable electricity. To balance the risk of overbuilding or underbuilding the system, the timing of recommendations will be based on the electricity needs, informed by the load forecast and customer commitments, as well as implementation timelines of the optimal solution. The IESO will endeavour to provide context for recommendations and plans, so that if higher growth materializes, steps to advance or trigger reinforcements are clear to ensure continued reliable supply.

General Inquiries

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Pattern Energy inquired about the IESO's evaluation process for options through its RFPs, specifically: • Whether the evaluation process considers system-level optimization or individual generation unit behaviour. • Whether non-wire options account for network upgrades alongside new resources or assume no grid changes.	To address provincial capacity gaps, the IESO developed the Resource Adequacy Framework (framework) that sets out a long-term competitive strategy to acquire resources while balancing ratepayer and supplier risks, recognizing the unique characteristics and contributions of different resource types. Designed to facilitate the transition to a more competitive procurement environment and to better align acquisitions with evolving needs, the framework incorporates the mechanisms to purchase capacity in the short, medium and long term. The short, medium and long term procurement evaluation process are on the IESO's website. An important step in the long-term procurement process is to ensure that resources can effectively address emerging reliability needs. The preliminary connection guidance for the energy steam (Item 17, April 4, 2025) can be found on the IESO's website. More details about the capacity stream will be available in the near future. Given that the short- and medium-term procurements focus on existing resources, no connection guidance is provided.