

PWU Submission to the IESO's April 2021 Enabling Resources Engagement

May 12, 2021

The Power Workers' Union (PWU) is pleased to submit comments and make recommendations to the Independent Electricity System Operator (IESO) regarding the April 21 Enabling Resources Engagement webinar. The PWU remains a strong supporter and advocate for the prudent and rational reform of Ontario's electricity sector and recognizes the importance of planning for low-cost, low-carbon energy solutions to enhance the competitiveness of Ontario's economy.

The IESO has undertaken this consultation to help meet Ontario's forecast capacity needs using existing resources "to provide electricity system services in the IESO administered markets post-Market Renewal Program (MRP), that they cannot, or cannot fully, provide under current market design."¹ . The resources being considered include: imports; variable generation; existing regulation service providers; not-so-quick-start natural gas; demand response; Distributed Energy Resources (DER); storage; and hybrid variable generation-storage. This consultation seeks input on the assets that should be initially prioritized.

The IESO's proposed criteria for prioritizing assets include: the timing and magnitude of the required capacity; the timing and capacity that can be provided by the resource; potential interrelationships between the options; and the IESO's resources and constraints. While each resource opportunity is assumed to provide operating reserve, the IESO has prioritized the resources that can supply increased capacity, as their contracts end around 2026.

Background:

Increasing available capacity is an important element of the reliability of Ontario's future electricity system. The closure of the Pickering Nuclear Generating Station will remove over 15% of the province's low-carbon electricity supply. The IESO predicts a capacity gap of 2.5 to 3 GW even if all existing generating assets are renewed as their current contracts expire.² This consultation is intended to partially address this capacity need, by enabling almost 500 MW of additional capacity from existing resources as their contracts are renewed, beginning in 2026. While these actions could potentially address 15% to 20% of the forecast need, an integrated, and well-thought-out approach is still required to address growing capacity needs over the next 10 years.

The PWU makes the following recommendations:

1. Review the priorities after Ontario's total 2026 capacity needs are clearly and transparently defined by the Annual Acquisition Report (AAR) including how the needs will be met, the respective contribution by each resource, and their priority for procurement;
2. Fully evaluate the capabilities of the Atikokan Generating Station to provide additional capacity. This renewable biomass fuelled plant is absent from the IESO's list of options; and,

¹ IESO, Enabling Resources April engagement, 2021

² IESO, Annual Planning Outlook, 2020

3. Prioritize the development of a long-term procurement mechanism for new low-carbon, domestically sourced resources.

Recommendation #1: Review the priorities after Ontario’s total 2026 capacity needs are clearly and transparently defined by the Annual Acquisition Report (AAR) including how the needs will be met, the respective contribution by each resource, and their priority for procurement.

The IESO’s plan assumes existing resource contracts will be renewed as they expire, either via mid-term mechanisms or short-term capacity auctions. The IESO has repeatedly stated that there is no need for new resources. In its 2020 APO, the IESO noted that “*Ontario can meet its needs through continued use of existing resources, the expansion of transmission, imports, the growing use of distributed energy resources (DERs), storage, and incremental energy-efficiency savings*”.³

However, taken together, these actions will not adequately address Ontario’s capacity gap as the IESO has recently disclosed. The two highest priority resources advanced by the IESO as part of this consultation – DER integration and hybrid generation-storage – have been disclosed for the first time as only being expected to provide 100 MW and 25 MW of capacity addition, respectively, by 2026.⁴ The other initiatives required to fill the balance of Ontario’s 500 MW gap are identified as mid- or low priority given the uncertainty associated with their acquisition. While the PWU supports this prioritization approach, we believe the greater challenge is not being addressed.

The IESO is planning on its new AAR to clearly and transparently establish the resource options for fully addressing Ontario’s 2026 electricity needs. This information is needed in order to provide any recommendations on how to prioritize the initiatives within this consultation.

Recommendation #2: Fully evaluate the capabilities of the Atikokan Generating Station to provide additional capacity. This renewable biomass fuelled plant is absent from the IESO’s list of options.

The Atikokan Generating Station (GS) in Northwestern Ontario was converted from burning coal to become the largest 100 per cent biomass fuelled electricity generating plant in North America with an in-service generating capacity of 205 MW of dispatchable power.

This renewable low-carbon fuel is recognized as beneficial to climate change mitigation. Biomass can be acquired from agricultural and forestry residues, some industrial wastes and purpose grown crops. Combusting biomass to create electricity and heat releases no new carbons back into the atmosphere.

The Atikokan plant has historically operated at relatively low-capacity factors of 8-10%⁵. Increasing the operating factor of the plant could add value to the grid by offering different grid services, e.g. operating reserve. Furthermore, increasing its contribution to Ontario’s electricity system would facilitate the reduction of GHG emissions by offsetting natural gas-fired generating plants.

Our analysis clearly indicates that the continued operation of Atikokan after its contract expires in 2024 will be required to help address Ontario’s capacity gap. As well, there is an opportunity to better integrate this power and heat source with Ontario’s “*Sustainable Growth: Ontario’s Forest Sector Strategy*” and *Climate Action Plan*. As the former notes, “Ontario will also promote the use of renewable

³ IESO, Annual Planning Outlook, 2020

⁴ IESO, Enabling Resources engagement, 2021

⁵ IESO, 2015-2019 Generation Data; Strapolec Analysis

forest biomass by industry and as an energy source to provide heat and potentially both heat and power for northern, rural and Indigenous communities.”⁶

The PWU recommends that the IESO examine the benefits of expanding the role of Ontario’s Atikokan GS and renewable biomass resources to produce low-carbon electricity (including, capacity and additional value-added services to the grid, for heating buildings and integrate with other previously noted provincial strategies).

Recommendation #3: Prioritize the development of a long-term procurement mechanism for new low-carbon, domestically sourced resources.

The IESO is seeking input on criteria for prioritizing resource capacity enhancements through enabling existing resources to participate more fully in the electricity market. It is doing so at a time when the IESO is facing organizational and human resources constraints resulting from its commitment to MRP implementation.⁷ This in turn, has focused the IESO’s attention on easily available short-term supply solutions, like re-contracting natural gas-fired generators, DER integration and hybrid variable generation and storage.

However, Ontario’s capacity gap is not just a short-term problem but a longer-term challenge that persist throughout the IESO’s current forecast. Furthermore, the IESO acknowledges that its forecast has not accounted for increased electricity demand resulting from the electrification of Ontario’s economy. Most of the existing capacity available to be re-contracted by the IESO is carbon-emitting natural gas-fired generators. These resources are insufficient to meet the province’s future needs, but the degree is uncertain, even before accounting for electrification-induced increases to demand. The PWU’s previous Resource Adequacy submissions have consistently emphasized that Ontario’s existing resources will be insufficient to fill the capacity gap and that the available procurement timelines are too short for addressing these needs in time to avoid a system reliability consequence or failure.⁸ Importantly, the planning timeframe for cost-effective carbon-reducing procurements is shrinking.⁹

Focussing only on existing assets puts Ontario’s carbon reduction achievements to date at risk and is contrary to achieving the province’s and Canada’s future emission targets. As such, simply optimizing available capacity from renewing the contracts for existing resources may not be in Ontario’s interest. As the world addresses climate change, a premium is increasingly being placed on domestic energy security using low-carbon emitting fuels. Such energy security provides businesses and industries with a competitive advantage that enables job creation, economic growth, and environmental sustainability. Making the wrong decisions today will have long-lasting impacts on Ontario’s economic competitiveness.

The IESO should prioritize the immediate development of long-term procurement mechanisms that encourage investments in domestic, low-carbon energy resources for 2026 and beyond and, in that light, evaluate how the current focus on enabling existing resources can be optimized. Longer term

⁶ Government of Ontario, Sustainable Growth: Ontario’s Forest Sector Strategy, 2020

⁷ IESO, verbally communicated during Enabling Resources April engagement, 2021, and identified it as a factor in the next steps considerations.

⁸ PWU, Resource Adequacy Engagement Feedback Submission, April 2021; PWU, Resource Adequacy Engagement Feedback Submission, February 2021

⁹ PWU submission to the MENDM on energy planning reform, April 27, 2021

procurements may enable the sector to best optimize the blend of existing assets with the introduction of new assets. This will not only help meet Ontario’s capacity gap but may also ensure that Ontario sustains its global status as a low-carbon electricity jurisdiction.

Closing

The need to immediately clarify Ontario’s going forward procurement strategy is critical. The IESO’s contracting/RFP process should begin much earlier than the IESO’s planned 2025 completion for its process design. The process should also develop a procurement mechanism that ensures low-carbon, long-term electricity for Ontario.

The PWU has a successful track record of working with others in collaborative partnerships. We look forward to continuing to work with the IESO and other energy stakeholders to strengthen and modernize Ontario’s electricity system. The PWU is committed to the following principles: Create opportunities for sustainable, high-pay, high-skill jobs; ensure reliable, affordable, environmentally responsible electricity; build economic growth for Ontario’s communities; and, promote intelligent reform of Ontario’s energy policy.

We believe these recommendations are consistent with, and supportive of Ontario’s objectives to supply low-cost and reliable electricity for all Ontarians. The PWU looks forward to discussing these comments in greater detail with the IESO and participating in the ongoing stakeholder engagements.

Requested feedback areas:

Feedback Requested	Feedback Mapping
Are there resource enablement opportunities missing from this analysis	Recommendation #2 Atikokan GS is an asset that should be explored
Is the prioritization and sequencing approach sound and is there clear alignment between the approach and the analysis presented	Recommendation #1 supports the initial priorities but illustrates that without a full forecast it is not possible for the IESO to prioritize resources
Do stakeholders have additional information or comments on input assumptions for consideration	The IESO’s human resource, organizational workload, and schedule burden due to the MRP should not deprioritize its parallel focus on long term planning. The reliability risks are noted in Recommendation #3
Do stakeholders agree with the prioritization outcomes	These resources will be insufficient to address the capacity gap outlined in Recommendation #3
Are there any additional timing considerations IESO should be aware of?	The time available to the IESO to secure new capacity before 2030 is extremely short and will be exacerbated by further electrification of the economy as discussed in Recommendation #3
Are stakeholders supportive of the objectives and approach detailed in the draft enabling resources engagement plan?	The PWU generally supports the objectives as articulated, however, we believe they are insufficient as discussed in Recommendations #1 and #3