

## **PWU Input to the Electrification and Energy Transition Panel re: IESO Pathways to Decarbonization**

January 13, 2023

The Power Workers' Union (PWU) respectfully makes the following submission to the Electrification and Energy Transition Panel regarding the Independent Electricity System Operator's (IESO) simultaneous Dec. 15, 2022, release of its *Annual Planning Outlook (APO)* and *Pathways to Decarbonization* study (Pathways Study). Our comments support the Panel's mandate from the Ontario government to develop an effective pathway to *"improved long-term planning to benefit both ratepayers and companies by creating a more predictable investment environment, making energy more affordable and Ontario more competitive."* Our comments supplement the PWU's prior advice provided to the Ministry of Energy Northern Development and Mines (MENDM) in 2021,<sup>1</sup> and recommends the development of a new approach for procuring the non-emitting electricity system that Ontario needs for the long term.

### *The urgent challenge to securing Ontario's affordable and reliable energy future*

These new IESO documents underscore an urgent lingering risk to Ontario's system reliability that must be addressed. Since 2013, the IESO planning documents have been forecasting ever-increasing capacity risks for Ontario by 2030, but has done little to address them.<sup>2</sup> The PWU's 2021 submission to the MENDM in 2021 elaborated on the risks to government. Between March and April 2022, significant pressure from the IESO's Stakeholder Advisory Committee changed its capacity procurement goal from 1000 to 6000 MW because of these unaddressed risks, including the now probable brownouts.<sup>3</sup> The IESO's Pathways Study suggests that even this higher capacity target will leave Ontario unprepared to meet the growing clean electricity needs from electrification of the economy. The IESO's latest APO indicates a 2030 capacity gap that is larger than predicted in the previous year's forecast. Additionally, this latest APO, that represents the IESO's planning reference for its 2023 procurement activities, explicitly excludes the implications of its Pathways Study, suggesting that next year's APO will show a rising capacity need yet again.

The IESO's Pathways Study is correct in concluding that Ontario should expand its low-cost, low carbon nuclear generation as it is the most cost-effective option for helping the province achieve net zero while growing the economy. However, a number of the IESO's fundamental supply assumptions require additional scrutiny. These include that:

- No potential exists in Ontario to support carbon capture for the province's existing gas fleet;
- Ontario's existing gas generation will be replaced by hydrogen-fired thermal plants fueled by hydrogen produced in western Canada; and,
- Extensive transmission system upgrades will be required to connect this generation and pair it with renewables.

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<sup>1</sup> PWU Feedback to the MENDM on its Reforming the Long-Term Energy Planning Framework Consultation, April 27, 2021

<sup>2</sup> PWU Submission on the IESO's 2021 Annual Planning Outlook, February 17, 2022

<sup>3</sup> Stakeholder Advisory Committee – Challenge Statement: Urgency and Timing of New Resources, March 9, 2022; IESO, Annual Acquisition Report, April 2022; PWU Submission on the IESO's 2022 Annual Acquisition Report April 27, 2022

These questionable assumptions underpin the IESO's conclusion that the costs for electricity ratepayers are forecast to grow dramatically – contrary to the imperative for an affordable energy transition. These assumptions and conclusions ignore that:

- 1) More investment is flowing into carbon capture in Canada than in any other technology;<sup>4</sup>
- 2) Ontario is exploring its potential for carbon capture and sequestration;<sup>5</sup>
- 3) Ontario's Hydrogen Strategy includes significant production of hydrogen from electricity, which the IESO acknowledges will increase electricity demand over its forecast;<sup>6</sup> and,
- 4) Ontario imports most of its natural gas via U.S. pipelines, hydrogen conversion may not be easy.

*More affordable alternative solutions have been presented*

In contrast, the Green Ribbon Panel identified an affordable approach to achieving Ontario's decarbonization goals.<sup>7</sup> The Green Ribbon Panel is comprised of a broad range of experience, expertise and knowledge from across the economy, including: Canadian Manufacturers and Exporters; Ontario Chamber of Commerce; Council of the Great Lakes Region; Pollution Probe; Asthma Society; PlugnDrive; Hydrogen Business Council; Society of United Professionals; and, the Power Workers' Union, among others. The Panel's first report in 2020 advanced "a Made-in-Ontario" emission reduction solution enabled by integrated electricity and natural gas demand side energy management systems, energy storage, hydrogen, and with nuclear generation as the backbone. Analysis indicated that this "Made-in-Ontario" solution would reduce ratepayer costs by over 25% -- not increase them. The Panel's second report in July 2021 examined the supply risks Ontario continues to face and presented solutions on the needed reform to Ontario's long term energy planning framework. The third and latest report from the Green Ribbon Panel in 2022 reiterated their recommendations.

*However, the IESO is stuck in a high cost and outdated electricity markets paradigm*

In the meantime, the IESO is continuing its dogmatic approach to place greater attention on using the capacity and energy market mechanisms that it administers than on the reliability and affordability of Ontario's electricity system.<sup>8</sup> Failure of these market mechanisms is being recognized across North America, given their unsuitability for the new, largely fixed cost non-emitting supplies. The European Union recently declared that electricity markets were no longer "fit for purpose".<sup>9</sup> The IESO was confronted with this stark reality in the development of its recent procurement planning activities. It was compelled to revise its procurement criteria away from its capacity market model in order to attract

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<sup>4</sup> Investment Tax Credit for Carbon Capture, Utilization, and Storage; <https://www.canada.ca/en/department-finance/news/2022/08/additional-design-features-of-the-investment-tax-credit-for-carbon-capture-utilization-and-storage-recovery-mechanism-climate-risk-disclosure-and-k.html>; Federal Fall Economic Statement, November 2022. <https://www.nrcan.gc.ca/our-natural-resources/energy-sources-distribution/carbon-capture-utilization-and-storage/4275>

<sup>5</sup> <https://www.ontario.ca/page/geologic-carbon-storage>;

<sup>6</sup> <https://www.ontario.ca/page/ontarios-low-carbon-hydrogen-strategy>

<sup>7</sup> <https://www.greenribbonpanel.com/reports-and-publications/>

<sup>8</sup> Strategic Policy Economics, Electricity Markets in Ontario: An Examination of Mismatched Conditions and Options for Future Competitive Procurements, November 2020, <https://strapolec.ca/publications/>

<sup>9</sup> <https://www.cnn.com/2022/09/14/eu-chief-von-der-leyen-promises-overhaul-of-energy-markets.html>

investor interest.<sup>10</sup> The IESO's affinity for markets may have influenced its decision to include high-cost, hydrogen-fired thermal generation given the fit with its administered markets.

#### *PWU Recommendation*

Ontario must aggressively move forward to develop a more effective approach to procuring long economic lifecycle, low-cost non-emitting assets such as nuclear and carbon capture, both of which take time to build and cannot be procured with the IESO's current mechanisms. We understand that the Ministry of Energy is planning a consultation to explore options. We hope that the Panel's newly commissioned study will better inform the urgently needed decisions on how to procure an affordable and reliable energy system for Ontario.<sup>11</sup>

The PWU has a successful track record of working collaboratively with other energy stakeholders to strengthen and modernize Ontario's electricity system. The PWU is committed to several 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 would be pleased to discuss these comments in greater detail with the Panel and participating in the ongoing stakeholder engagements.

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<sup>10</sup> <https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Long-Term-RFP>

<sup>11</sup> PWU Response to the Ministry of Energy's Request for Information (RFI) on Scoping a Cost-Effective Energy Pathways Study for Ontario, June 13, 2022