

Feedback Form

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Gas Phase-Out Impact Assessment – May 27, 2021

Feedback Provided by:

- Name: David Butters
- Title: President & CEO
- Organization: APPrO
- Email: [REDACTED]
- Date: June 9, 2021

To promote transparency, feedback submitted will be posted on the Gas Phase-Out Impact Assessment webpage unless otherwise requested by the sender.

- **Please provide feedback by June 17, 2021** to engagement@ieso.ca. Please use subject:
- Feedback - Gas Phase-Out Impact Assessment

Questions

Topic	Feedback
Are there additional considerations the IESO has not identified in defining the scope of the assessment to examine the reliability, operability, timing, cost and wholesale market implications of reduced emissions on the electricity system?	Click or tap here to enter text.

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General Comments/Feedback

Thank you for the opportunity to provide commentary.

We understand that the IESO wishes to address certain misunderstandings and misinformation about the use of natural gas fired generation in Ontario.

Ontario's electricity system is already remarkably clean. Our electricity sector accounted for 2% of economy-wide GHG emissions in 2019, and is in the top-six lowest emitting jurisdictions in North America, and also one of the lowest in the world.

The efforts to achieve net-zero by 2050 have put a focus on the future of gas generation in Ontario.

Ontario's current gas-fired generation installed capacity is about 11,000 MW, accounting for about 25% of total installed capacity in the province and about 7% of energy production. The life expectancy and useful economic life of most plants, based on a total life of 35-40 years, can stretch to 2040. Most of Ontario's current natural gas-fired generation fleet is under contract. Approximately 8,000 MW will reach the end of their contractual term by 2030 - the balance will expire around 2040.

Shutting down a plant that still has useful life removes a cost-effective source of capacity from the system, capacity that may need limited sustaining capital and fixed costs to operate. Since affordability remains an issue in electricity matters, continued operation of these gas plants would be a much more cost-effective option to the ratepayer than building brand new plants. Retiring the plants early will result in stranded natural gas generation assets, in addition to numerous pipelines and other infrastructure that may no longer be required, but will continue to be paid for by Ontario's energy customers. These are important points to consider for all scenarios.

If natural gas was taken out of the supply mix, the electricity system would face significant challenges that would require a comprehensive plan to develop and invest in suitable replacement supply in order to maintain diversity of generation mix (flexibility/resiliency), reliability of the system while balancing cost and climate change impact. The Ontario Energy Association recently released a report suggesting that this cost could approach \$60 billion. This would be a very expensive abatement cost for marginal improvements in total electricity system emissions.

Our view is that the most effective and affordable way of achieving the very ambitious objective of net-zero emissions by 2050 is by optimizing the useful service life of Ontario's current generation

electricity fleet to enable economy-wide electrification. This will provide energy to address uncertainty in any demand growth trajectory before new longer lead-time non-emitting baseload generation can come on line. Ontario's reliable, low-carbon electricity should be utilized to drive carbon emission reductions in the transportation, industry and the building sectors. Altogether, these sectors account for about 82% of Ontario's emissions. Prematurely eliminating an affordable and reliable source of generation that has the capability to decarbonize in a number of pathways (e.g., carbon capture storage and utilization, RNG, hydrogen blending, etc.) may actually hinder progress toward net-zero emissions by 2050.

Specific Comments

- The purpose of the engagement should be to provide factual and correct information about the role natural gas-fired generation plays in the Ontario electricity system in a clear and credible manner.
- The assessment should exclusively focus on system needs, technology attributes, and reliability and cost considerations of continuing to leverage the natural gas-fired generation fleet. An analysis of cost considerations of continuing to leverage the natural gas-fired generation fleet will require that IESO conduct a comparative analysis of abatement options as part of this study. This comparative analysis must consider forecasted abatement costs incurred vs. emissions reductions achieved, and without this the IESO risks contributing to an incomplete picture of policy options to be considered by Ontarians interested in decarbonizing, while supporting greater electrification at costs that are affordable for all ratepayers.
- Supply/demand scenarios should be based on, or build off of the most recent Annual Planning Outlook (APO) assumptions. APPrO notes that the current APO assumes all existing resources continue for the duration of the study period. However, beginning in 2026 a persistent ~3000 MW capacity shortfall arises while demand will continue to rise. Further, a high electrification scenario poses a practical supply concern for any plans and should be considered.
- Assumptions regarding the price of CO₂ must be explicit. If the IESO is considering a range CO₂ price scenarios, the scenarios must be based on known government policies. CO₂ prices will affect commodity costs and therefore commodity cost cannot be forecasted without also considering associated carbon liabilities.
- Ontario's will experience both a very significant capacity and energy shortfall if a high electrification scenario comes to fruition, and especially if gas is phased-out. As part of the scenario review for the gas phase-out assessment, as well as its next Annual Planning Outlook, the IESO should consider higher electrification scenarios. Studies have shown that using gas to help electrify the transportation sector still leads to CO₂ savings. Fuel switching from higher-emission fuels to low-carbon electricity could play a significant part in reducing overall province-wide emissions.
- For scenarios considered, these must include estimates of the incremental investments in the system associated with the level of emissions reductions achieved, to inform consideration of the cost-effectiveness of individual scenarios relative to available and emerging technologies

- The baseline scenario should be based on the assumption that natural gas assets operate to the end of their useful life and then assess what internal resources can realistically fill this emerging gap, and how those resources alter the energy supply mix for the province.
- From this revised baseline we recommend the IESO assess two scenarios to demonstrate what a reduced GHG footprint across the electricity sector could potentially look like:
 - Increase reliance on emission free external resources, including Hydro-Quebec imports, to fill the (increased) remaining energy supply gap
 - Increase the reliance on emission free internal resources including variable generation and/or storage resources to fill the (increased) remaining energy supply gap.
- In APPrO's view, the alternatives discussed above are the only practical and realistic options to analyze as gas-fired generation cannot be contrasted with, for example, nuclear generation. Each technology offers different yet equally important services to the Ontario electricity system and one cannot be swapped out for the other.
- APPrO believes that the role of natural gas generation in Ontario, and its future, is fundamentally a policy matter. APPrO is not aware that the Government is considering any phase-out of natural gas-fired generation. APPrO therefore agrees that final report should not include views on the best or preferred means to achieve policy directions.