

Feedback Form

Gas Phase-Out Impact Assessment – May 27, 2021

Feedback Provided by:

Name: Trevor Esdaile

Title: Manager of Government Affairs

Organization: Enbridge Gas Inc.

Email: [REDACTED]

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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?	Scenarios 1 and 3 as listed in the posted materials should be modified from calling for new resources to also allow for existing resources to participate with carbon neutral fuels such as green or blue hydrogen or renewable natural gas (RNG). These generators could also utilize carbon capture utilization and storage to achieve the same objective focused on emissions reductions. Scenario 2 should also examine the potential cost impacts of using low carbon fuels to run these gas turbines.

General Comments/Feedback

Enbridge appreciate the IESO undertaking this impact assessment on the significant implications that phasing out natural gas-fired electricity generation would have on the reliability and operability of Ontario's electricity system as well as the impacts such a policy would have on the ratepayers of this province. In our view, the municipal proposals to phase out gas-fired electricity generation ignore the practical realities of Ontario's energy system, do not offer realistic solutions, or acknowledge available, affordable low-carbon alternatives.

Ontario already has one of the cleanest electricity systems in the world and this has been made possible through the introduction of gas-fired generation which helped the province transition off coal and now plays an integral role in maintaining power system reliability. Gas generation provides flexible peaking supply on a minute-by-minute basis, responding to variable supply from wind and solar generators. Natural gas also enables additional renewables on the system. Given that renewables are now very inexpensive supplies of energy and when paired with natural gas, the two can provide both cost and environmental benefits for ratepayers and the Province.

The Ontario Energy Association (OEA) recently released a report produced by Power Advisory LLC examining the implications of shutting down all of Ontario's natural gas-fired generators by 2030. The report underscores the need to maintain Ontario's natural gas-fired generation fleet to ensure Ontario homes and businesses have a reliable electricity supply both today, and as Ontario retires the Pickering nuclear plant and refurbishes its nuclear fleet over the coming years. The report is titled [Implications of Shutting Down Ontario's Gas-Fired Generators by 2030](#).

It found that natural gas-fired generators, which currently provide 11,000 MW or about one third of Ontario's generation capacity, will play an essential role over the next decade in maintaining power system reliability and flexibility to meet systems needs such as peaking capacity and operating reserves and local supply. Maintaining these critical facilities will avoid at least a \$60 billion increase in electricity costs for electricity customers across the province.

Enbridge's perspectives are that Ontario requires flexible generation in the electricity grid that only natural gas can provide. Today, and for the foreseeable future, electricity can't be efficiently stored. Emerging storage technologies are more expensive, can only provide energy for a set amount of time, and still rely on another source of electricity generation. In addition, Ontario is home to the Dawn Hub which is one of the largest natural gas storage hubs in North America with the ability to store ~280 billion cubic feet of natural gas to support the reliable dispatchability of contracted generators.

The recent municipal motions call for importing hydro electricity from Quebec as an alternative to the baseload provided by natural gas, however replacing gas fired generators with supply from Hydro Quebec is not feasible by 2030. Upgrading existing transmission lines would not provide enough capacity and new transmission lines would be required across Ontario and Quebec, necessitating lead times beyond 2030. Hydro Quebec has also never offered Ontario the firm capacity that would be necessary to replace the role of the gas generators and Hydro Quebec has forecasted it will have its own deficit over the next decade, limiting the firm capacity it can offer Ontario.

At Enbridge, we share the desire to transition to a low-carbon future. However, to achieve realistic, low-carbon solutions that are reliable and affordable, energy systems must work together to evolve and transition to a net zero future. Immediate and affordable carbon reduction can be attained by leveraging existing technologies and energy infrastructure. This can be done by greening the gas supply with carbon-neutral sources including hydrogen and renewable natural gas (RNG), which are displacing traditional natural gas and reducing emissions. These technologies have the added benefits of diverting waste, leveraging existing infrastructure, stimulating regional economic development and creating local jobs at a lower cost than electricity¹. This would also meet the objectives of the IESO's Innovation Roadmap which called for unlocking the value of existing resources which in this case could be done by utilizing carbon neutral fuels or leveraging carbon capture utilization and storage (CCUS) for these existing generators. The combination of using carbon neutral fuels paired with CCUS could in fact be a significantly net negative CO2 reduction. Importantly, the technology to utilize these carbon neutral fuels in electricity generation is proven and exists today. Other solutions such as hybrid heating can also offer affordable GHG reductions and can alleviate what would otherwise be a significant increased peak load on electric infrastructure.

An additional point for the IESO to consider in its assessment is that the existing contracts between gas-fired generators and the IESO have been the mechanism that enabled the significant long-term investments in this infrastructure. Any amendments to these contracts would significantly erode investor confidence in the Province and its electricity system.

As outline in this submission, gas-fired generators are an integral part of the supply mix to cost-effectively maintain power system reliability. Enbridge appreciates the IESO undertaking this work and believes the impact assessment will demonstrate the significance of the role that gas-fired generators have for the reliability and affordability of the province electricity system.

¹ RNG costs \$24/GJ—equivalent to \$0.09/kWh (Source: [cga.ca/wp-content/uploads/2020/08/RNG-Handbook-for-Municipalities-in-the-GTHA_2020-07-07.pdf](https://www.cga.ca/wp-content/uploads/2020/08/RNG-Handbook-for-Municipalities-in-the-GTHA_2020-07-07.pdf)); Electricity in Ontario is priced at \$0.128/kWh. (Source: [oeb.ca/rates-and-your-bill/electricity-rates](https://www.oeb.ca/rates-and-your-bill/electricity-rates) (Rate as of September 2020))