

Feedback Form

Gas Phase-Out Impact Assessment – May 27, 2021

Feedback Provided by:

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Date: June 17th, 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
<p>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?</p>	<ol style="list-style-type: none">1. The Gas Phase-Out Impact Assessment makes reference to “wholesale market implications”. Could the IESO please explain what in meant by this?2. Is the scope of the assessment the bulk transmission grid or all generation in Ontario?3. The assessment scope seems to assume that phasing out gas generation requires plant shutdowns. Why has there been no consideration of carbon neutral fuels for some of the existing gas plants?4. Has the province of Ontario ever asked Quebec for a price for a firm offer of electricity? What was the response?5. The letter sent to the City of Toronto Clerk¹ by the IESO makes reference to recent reliability problems in Texas. Since the letter was sent, the Texas electricity system operator, ERCOT, clarified that renewable generation was not responsible for the Texas reliability issues (the City of Ottawa provided the IESO information to this effect). Was this clarification passed on to the City of Toronto? Given that ERCOT has clarified that renewable generation was not responsible for the Texas reliability issues, would you agree that renewable energy penetration in Ontario is not a threat to reliability issues?6. Will IESO provide a list of options that they consider acceptable to enable the phase-out of gas plants (ex. integrated and balanced combination of energy efficiency and demand response, wind and solar and zero carbon imports)?7. What are targets and timelines to phase natural gas out in Scenario 3?

¹ IESO [Communication from Terry Young, Interim President and CEO, Independent Electricity System Operator](#). March 9th, 2021

General Comments/Feedback

The City of Ottawa thanks the IESO for the opportunity to comment on the Gas Phase-Out Impact Assessment and the public engagement webinar by Chuck Farmer, Senior Director, Power System Planning on May 27th, 2021. We acknowledge IESO initiative in proactively addressing this issue and are pleased that the IESO has committed to undertaking a comprehensive assessment of how Ontario can phase-out its gas-fired power plants.

Ottawa's community energy transition plan, Energy Evolution, relies on steady incremental reduction of GHG emissions on the electricity grid to meet our target and reduce community GHG emissions 100% by 2050. Currently, 7-8% of Ottawa's required emission reductions are projected to come from a carbon neutral electrical grid.

Unfortunately, IESO's Annual Planning Outlook is forecasting that the GHG emissions from Ontario's gas-fired power plants will rise by more than 300% by 2030 and by 500% or more by 2040. Ottawa, and many other Ontario municipalities, will not be able to achieve their GHG reduction targets if this happens. Beyond this, Ontario municipalities face barriers to market access to reduce the emissions intensity of the local electricity grids.

Feedback on IESO's Assessment of the Current Situation and Challenges

The IESO does an excellent job of setting the stage and discussing the current role of natural gas in meeting system need's in today's grid. We agree that the description of the regional as well as province-wide needs is a particularly useful reminder in the assessment outline.

These efforts notwithstanding, there is a strong bias to favour the status quo in the IESO's discussion and proposed assessment. Any prospective gas phase-out is seen in terms of cost and risk with little discussion of benefits and savings. The [Lazard 2020 annual report](#) levelized cost of energy report² identified yet another year of falling costs for wind and solar generation which is now less expensive than the lowest cost natural gas generation based on each resources lifecycle costs. More importantly, some renewable generation is cost competitive with the marginal operating costs of existing natural gas generating plants.

This trend along with carbon pricing, which, subject to federal election results, could rise to \$170 per tonne by 2030 puts into question the statement that "Useful economic life remains in the gas fleet after 2030"³. Although the plants will still have operating life in them at 2030, it may not be accurate to say that they will still have *economic* life. One needs look no further than US electricity markets where coal plants, under a pro-coal US administration, faced [early retirements](#)⁴ due a loss of competitiveness vs. natural gas and renewable generation. There's no reason this scenario couldn't repeat for renewables and storage vs. natural gas generation. Indeed last month, the [Wall Street Journal](#)⁵ identified this scenario as a distinct possibility.

² Lazard. [Levelized Cost of Energy and Levelized Cost of Storage 2020](#). Oct 19, 2020

³ IESO. [Gas Phase-Out Impact Assessment](#), slide 16

⁴ Scientific American. [Coal's Decline Continues with 13 Plant Closures Announced in 2020](#). Benjamin Storrow, May 27th 2020.

⁵ Wall Street Journal. [Natural Gas, America's No. 1 Power Source, Already Has a New Challenger: Batteries](#). Katherine Blunt, May 16, 2021

These market trends flag a risk in the IESO's stated approach to a gas phase-out. The IESO states that any phase out of gas generation would require a comprehensive plan. Other system operators such as PJM and AESO tend to plan less and allow the market to dictate more. If the IESO intends to dictate and plan a transition, IESO will need to ensure that mechanisms exist for cost competitive solutions to be employed. IESO will also need to avoid a bias towards legacy natural gas generation and consider projected carbon price increases and decreases in renewable energy generation costs.

Finally, the IESO states that the technology to replace gas generation does not exist at scale. We take this to be a reference to battery technology and feel that this statement is debatable. Earlier this year, a 1.2-Gigawatt hour (GWh) battery, capable of expansion to 6 GWh and 1200 MW of flux was [energized in California](#)⁶ and another 1 GWh project [was approved](#)⁷. Also, other solutions such as securing capacity from outside the province or pump storage are already happening.

[Feedback on the Final Product](#)

We note some items for IESO's consideration in the final product section. These are as follows:

- As is true in the *Challenges* section we respectfully submit the benefits and savings must be tallied along side risks and costs.
- One of only two stated outputs of the assessment is an outline of the current role natural gas plays in maintaining a reliable electricity supply across Ontario. Our observation is that the IESO has already outlined this extensively. We recommend that the assessment focus on strategies that reduce emissions and their associated timeliness.
- The final report will not consider decarbonation plans. This is unfortunate and a missed opportunity. Since the last IESO outlook report published last December municipal community energy plans aiming to significantly reduce GHG emissions have advanced significantly through federal funding and projects, and an increasing number of decarbonation plans in the corporate sector. In Ottawa, implementation of Energy Evolution continues. The situation is changing quickly, and we recommend that the IESO adapt and respond accordingly.

[Feedback on the Three Scenarios](#)

We applaud the IESO for using a scenario approach and offer comments below on each of them.

[Scenario 1 - Complete phase-out of gas by 2030 with a supply mix approach of new resources, in response to municipal city council resolutions](#)

⁶ Power. [Vistra Energizes Massive 1.2-GWh Battery System at California Plant](#). Sonal Patel, January 14, 2021

⁷ Electrek. [Tesla's Massive 1 GWh Mega Battery Project with PG&E is approved](#). Fred Lambert, February 27, 2020

We strongly support the IESO's proposal to assess how Ontario can achieve a complete phaseout of its gas plants by 2030. To limit the long-term increase in global temperatures to 1.5 degrees Celsius, we must also start to significantly reduce GHG emissions before 2030. Ottawa's Energy Evolution plan requires steady incremental decreases in GHG emissions associated with the electricity grid.

As stated earlier, it will be important to consider benefits and savings as well as risks and costs. Open minded thinking will be key with a strong commitment to avoid assumptions and biases which cause opportunities to be overlooked. This is in all our interests and although hitting the 2030 phase out target may prove a challenge; we are sure all parties can agree on taking such a productive and common-sense approach

Scenario 2 - A market-based approach that examines the potential for higher gas prices to reduce the utilization of the gas fleet to reduce emissions by 2030 and to provide market signals to clean energy projects

We are unclear as to the goal or expected outcome of scenario 2. Indeed, by the IESO's logic this approach will never lead to the phase out of natural gas because the IESO states that a comprehensive plan is required⁸, and that will only be developed under scenario 1 and possibly scenario 3.

A market approach is interesting, and we are optimistic in the ability of renewables and storage to be competitive. However, currently, there are few mechanisms for resources other than gas to compete in the Ontario market. Net metering can provide some resources (typically solar) and the Industrial conservation initiative encourages battery storage. The Minister of Energy Northern Development and Mines recently issued a [directive to seek more capacity](#)⁹ but the scope and timeline for action under this directive is as yet undefined.

Given these severe limitations its likely that increases in the cost of gas generation will mostly have the effect of increasing electricity rates with a small increase in renewable solar generation as it can offset the higher priced electricity we anticipate. This would be counter productive to general decarbonation plans as its very difficult to decarbonize the economy with expensive electricity as most decarbonization plans rely on electrification.

Scenario 3 - Reduce emissions by 2030 with a supply mix approach of new resources

This option needs more definition. This scenario should clearly state the targets and timelines to phase out natural gas after 2030.

Ottawa would only support scenario 3 if scenario 1 proves to be too costly and scenario 3 helps keep the price of electricity lower so that fuel switching is encouraged.

We again thank the IESO for soliciting this feedback and their efforts undertaking this assessment.

⁸ IESO [Gas Phase-Out Impact Assessment](#). Slide 4

⁹ IESO [Minister Issues Letter to IESO Regarding Future System Needs](#). June 3, 2021