

# Feedback Form

## 2023 Annual Acquisition Report (AAR) – February 23, 2023

### Feedback Provided by:

Name: Rose DeSantis, B. Eng. Physics, P. Eng, MBA

Title: Senior Market Simulation Analyst

Organization: Ontario Power Generation

Email: [REDACTED]

Date: March 9, 2023

Following the February 23, 2023 engagement webinar, the Independent Electricity System Operator (IESO) is seeking feedback from stakeholders on the items discussed during the webinar. The webinar presentation and recording can be accessed from the [engagement web page](#).

**Please submit feedback to [engagement@ieso.ca](mailto:engagement@ieso.ca) by March 9.** If you wish to provide confidential feedback, please submit as a separate document, marked "Confidential". Otherwise, to promote transparency, feedback that is not marked "Confidential" will be posted on the engagement webpage.

## Questions Directed at All Resource Types

Topic	Feedback
<p>Do you agree with the IESO recognizing market exit as an uncertainty and its intention to consider that some facilities exit the market in its analysis?</p>	<p>OPG is in agreement that some existing assets will likely exit the market unless they continue to receive compensation for new capital investments plus a reasonable return. OPG believes the deterioration of these assets will accelerate if they are run without sustaining capital expenditures. This could cause a larger than expected energy and/or capacity gap than anticipated. It is imperative from a Resource Adequacy perspective, that IESO consider that some facilities exit the market in its analysis as a sensitivity.</p>
<p>Do you expect your facility to participate in the next 5-10 years?</p> <p>What are some considerations that may impact participation?</p>	<p>Participation will be impacted if compensation for new capital investments that would need to be made to some of the aging assets is not achieved. A plant might require a 10-year commitment to justify the capital investment. OPG believes the deterioration of these assets will accelerate if they are run at continued higher CF without the needed capital investment for the asset.</p> <p>Results from the first Medium-Term RFP in the summer of 2022 did not secure the expected capacity and the procurement was at a much lower level than previously contemplated. This is likely due to the upward pressure on delivering cost-effective results for ratepayers and securing supply in the Medium-Term 1 RFP at a cost about 30 percent lower than previous contracts. This will undoubtedly impact participation in any future Medium-Term RFP's.</p> <p>There is increased risk of stranded gas assets if they are no longer permitted to run before the end of life due to regulations and carbon pricing.</p>

Topic	Feedback
<p>Facilities require regular maintenance and operational activities throughout their lifecycle. At what year of life would your facility require significant capital investments to extend its usable life? How long of a commitment would you expect to pay-off significant capital investments?</p>	<p>A typical plant might require a 10-year commitment to justify the capital investment. This will not be met by a 5 year Medium-Term RFP with a contract award of 30 percent lower than previous contract awards. Most of the contracted assets have been in operation for over 10 years with retirement dates in the mid 2030's and mid 2040's. With this consideration, most of these assets would likely require some form of capital investment in the near term in order to extend usable life.</p> <p>It is notable that different technologies and stations will have differing capital investment requirements. Further, sustaining capital expenditures (as opposed to only "significant capital investments") will be required throughout the course of the life of an existing asset</p>
<p>How can existing assets be maximized? What is needed for these facilities to stay and continue operation?</p>	<p>The new design from the Market Renewal Program will model additional hydro resource characteristics in both the day-ahead and pre-dispatch timeframes. Modelling these additional resource parameters will improve resource optimization and increase the likelihood that hydro resources receive operational schedules. Current market price signals result in inefficiencies and unnecessary curtailment and spilling of low-marginal-cost resources such as hydro, wind, and nuclear generation. More efficient pricing will better incent demand to respond to low prices and reduce curtailment and spilling, which in turn could reduce system costs. Reduced spill from hydro resources should also increase taxpayer revenues from hydro rental charges (GRC).</p>

Topic	Feedback
<p>Is repowering your facility(ies) with a renewable fuel an option for future participation, and if so, what would be the earliest timeline for this?</p>	<p>Gas units are currently capable of blending up to 15% (by vol) without significant modifications, beyond the capital investment of blending and fuel handling equipment. However, blending does not necessarily yield the equivalent reduction in Emissions (i.e. blending 15% Hydrogen does not translate to 15% reduction in Emissions..likely only 6% reduction in Emissions) since burning hydrogen releases less energy than methane. New Hydrogen specific plants would be required as opposed to retrofitting. Retrofitting would require so many modifications that it would be equivalent to building a new plant.</p>

## Questions Directed at Natural Gas Facilities

Topic	Feedback
<p>How do you interpret the expected Clean Electricity Regulations (CER) in terms of the impact on the future operation of your facilities, including for emergency use purposes?</p>	<p>Until draft regulations are posted outlining pertinent information such as the definition of End of Prescribed life, it is difficult to fully understand the impacts on existing facilities and their continued operation in the market and their use for emergency purposes.</p> <p>There are many factors that will impact the future operation of gas facilities, not only Clean Electricity Regulations.</p> <ul style="list-style-type: none"> <li>• Economists are anticipating more volatility in the price of oil and gas in the years ahead, this issue is here to stay. This will have a negative impact on home heating and transportation for consumers. Climate catastrophes are occurring on a near-weekly basis and emitting resources are to blame. There is a hidden cost of natural gas - U.S.'s Environmental Protection Agency estimates that a tonne of carbon emitted in 2020 costs the economy between C\$160 and C\$450. The Canadian government has referenced a range of between \$135 and \$440 a tonne.</li> <li>• The Atmospheric Fund looked at three different potential pathways for Ontario to reach net zero by 2035 and found that, in each scenario, wind made up the largest share of new capacity, with both solar and storage playing important supporting roles in achieving a clean, reliable, affordable grid. With Canada's full carbon price, solar power with storage is set to be at least 28% less expensive by 2030, while wind with storage would be at least 59% cheaper. Electricity from wind and solar is already cost-competitive with natural gas generation in Ontario and Alberta</li> <li>• When the current carbon price is also included, both wind and solar are significantly cheaper than natural gas.</li> </ul> <p>All of the above when paired with Clean Electricity Regulations will decrease the desirability of gas.</p>

Topic	Feedback
<p>What impact will the rising federal carbon price have on the operation of your facilities in 2030 and beyond?</p>	<ul style="list-style-type: none"> <li>• Risk of increased probability of stranded gas assets if they are no longer permitted to run before the end of life.</li> <li>• Future of Hydrogen would be an issue if costs to retrofit current gas plants are higher than adding a new hydrogen plant with lower emissions than wind and solar with storage.</li> <li>• Modelling indicates that at \$170/t carbon, if natural gas generation is subject to progressively lower emissions standard, transitioning to 0 t/GWh by 2030 and there is no Carbon Border Adjustment, US thermal generation would be more economic, and its import would increase dramatically. This would result in increase regional total carbon emissions, and Ontario’s electricity price may increase in the hours where imports are not sufficient. IESO should consider the design and implementation of any applicable CBA and consider how it may impact carbon leakage and competitiveness in Ontario’s electricity sector.</li> </ul>

## Other

Topic	Feedback
<p>Has the IESO missed any considerations in terms of the future participation of existing resources?</p>	<p>External policies (i.e., resulting from consultations such as the current Pathways to Decarbonization), will also impact participation of existing resources as well as any participation from new resources. Therefore, the IESO needs to understand how all these new policies, regulations and programs could impact future participation from existing resources and have multiple scenario outlooks, and not only highlight an “all or nothing” scenario, as in the current and past APO’s.</p>

## General Comments/Feedback

Click or tap here to enter text.