Feedback Form

Pathways to Decarbonization – February 24, 2022

Feedback Provided by:

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Following the February 24 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 by **March 16**. Please attach research studies or other materials for consideration by the IESO to support your submission.

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.

Policy

Topic	Feedback
Are the assumptions indicated reasonable and comprehensive in terms of scale and timing?	See below under "Refining the Scope".

Topic	Feedback
Are there other considerations for the IESO?	

Demand

Topic	Feedback
Are the assumptions indicated reasonable and comprehensive in terms of scale and timing?	See below under "Feedback on Assumptions".

Topic	Feedback
Are there other considerations for the IESO?	

Resources

Topic	Feedback
Are the assumptions indicated reasonable and comprehensive in terms of scale and timing?	See below under "Feedback on Assumptions".

Topic	Feedback
Are there additional data sources that we should consider	See below under "Feedback on Assumptions".
Are there other considerations for the IESO?	

General Comments/Feedback

Introduction

The Atmospheric Fund (TAF) appreciates the opportunity to provide input on the IESO's Pathways to Decarbonization study. TAF is a regional climate agency based in the Greater Toronto Hamilton Area (GTHA) supporting a net-zero future. While we support the effort to consider pathways towards decarbonization of Ontario's grid, the IESO's study has several flaws, including the failure to fully consider the closing of existing gas plants. The study also targets 2050 as the target year for decarbonization, which is 15 years later than the federal government's 2035 target to achieve a national net-zero electricity grid. Below we offer recommendations to refine the scope of the study and ask for clarification on some of the study's assumptions.

Refining the Scope

Moratorium

The current focus of this study (pg. 6 of the Pathways to Decarbonization Study presentation) is to assess the feasibility of a moratorium on any **new** natural gas resource acquisitions, while still allowing for existing natural gas plants to compete in future procurements as their current contracts lapse.

Current utilization rates (~13% in 2021)[1] of existing natural gas plants suggest that the emissions intensity of the grid could increase substantially under these loose constraints. This is inconsistent with federal, provincial, and municipal climate goals and the overarching goal of this study, which is decarbonization.

We strongly recommend that a moratorium on the contract renewal of existing natural gas plants (in addition to that of new generation) be evaluated, either as the primary focus of the study or as a second scenario of equal consideration. While the IESO has stated they will evaluate the potential opportunity for replacing existing natural gas plants, this suggests a comprehensive study would only happen in the future. Given the long lead times for resource procurement and the risk of further locking in carbon-intensive contracts in the near-term, it is imperative that this scenario be considered in full immediately.

Decarbonization Pathways

While the IESO has stated that decarbonization pathways will reflect any firm and flagged policies (pg. 14 of the Pathways to Decarbonization Study presentation), the current horizon year of 2050 appears to be inconsistent with the stated federal policy of a national net-zero electricity grid by 2035**. We ask the IESO to clarify what emissions-related constraints or policies will be modelled, inclusive of emissions targets and associated timeframes,** and whether carbon offsets or other credits will play a role in achieving net-zero targets.

[1] Calculation based on 2021 capacity and output.

Feedback on Assumptions

We would appreciate clarification and/or consideration of the following:

- **Conservation and Demand Management:** The IESO plans to use a demand forecast adjusted for conservation outcomes consistent with prior complementary studies. However, conservation continues to be an underexplored component of long-term studies such as these, and assumptions on the potential impact of conservation measures are often overly simplistic and opaque. While we recognize that the IESO is currently revisiting its 2019 study on achievable potential conservation measures, we suggest that the full details of any conservation assumptions (including unit costs and total savings potential by conservation measure) be published for each scenario.

- **Demand Scenario Drivers:** The Annual Technology Baseline (ATB), published by the National Renewable Energy Laboratory (NREL), is listed as a source for a number of these assumptions. It is unclear, however, how exactly the specified cost ranges will be applied within the model. This could be resolved by publishing year-by-year cost assumptions, with direct linkages to the source data, rather than ranges.

- **Emissions Performance Standard (EPS):** The IESO proposes to assume that the current allowance of 370 tCO_2e/GWh for natural gas generation remain in place until 2030 and 2035 for each of the studies, respectively, significantly diluting the price signal imposed by the carbon price. We suggest considering a scenario where the performance allowance for natural gas generation begins declining earlier due to revisions to the federal Output Based Pricing System and/or amendments to the EPS.

- **Firm Imports:** During the February 24 engagement webinar, the IESO suggested that potential imports from other provinces, particularly from Hydro-Québec, would be re-evaluated as part of this study. This is inconsistent with the proposed capacity caps of 3,300 and 500 MW from Quebec and Manitoba, respectively. Recent research suggests that systems integration between provinces is imperative to deep decarbonization efforts. We strongly suggest that opportunities for further integration with Quebec and other neighbouring provinces and states be fully explored.

- **Future Publications of Assumptions and Study Results:** We suggest that all future assumptions, model inputs, and model outputs be published on IESO's website as spreadsheets or machine-readable files, in as much disaggregate detail as possible. In addition, any transformations of the data (e.g., conversion rates) should be obvious and, where possible, preserved in the formulas within these spreadsheets. This would mirror the approach used by the NREL in publishing their annual ATB dataset and ensure other modellers can easily use or replicate this data in their own analyses.

The Atmospheric Fund looks forward to seeing the final study. In the meantime, we urge the IESO to implement these recommendations and provide clarification on their assumptions in the areas outlined above.