

October 7, 2021

Regional Chair and CEO Wayne Emmerson
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Independent Electricity System Operator

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Dear Regional Chair Emmerson,

Many municipalities across the province today are looking to their energy futures, planning and developing projects to support their economic development or achieve sustainability goals like decarbonization. As such, we are writing to let you know that the IESO has recently completed a [technical assessment](#) evaluating the feasibility of phasing out gas generation in Ontario by 2030. This is an issue that was raised by several municipalities leading to a number of important questions.

As Ontario's electricity system operator, the IESO provides a continuous and reliable source of electricity for the province today. We also plan for future needs and ensure a cost-effective and reliable system for tomorrow. We therefore have an insider's and expert view of the impacts that a phase-out of natural gas generation would have on the electricity system as a whole. This study is intended to highlight these complexities and inform the ongoing public discussion.

Our study concludes that it is not feasible to replace natural gas generation within the next eight years and still maintain a reliable and affordable electricity system.

Key highlights of the study include:

- Gas generation is almost always available, responds quickly to changes in consumption, and balances the variable output from wind and solar generation. A complete phase-out of gas generation by 2030 would lead to sustained and frequent blackouts, as electricity would not always be available where and when needed.
- Progress is being made to develop and integrate newer forms of electricity supply such as storage, small modular reactors and demand response; however, they are not as yet proven at the scale required to replace gas. Nor are there sufficient people, capital and equipment to build replacement infrastructure within the next eight years.
- Costs for a phase-out by 2030 would total more than \$27 billion (for the installation of new sources of supply and to upgrade transmission infrastructure). For residential consumers, this would translate into a 60 per cent or \$100 increase on the average monthly electricity bill.

The assessment did find, however, that there are potential pathways to both significantly lowering overall emissions in Ontario and reducing those from the Ontario grid, including:

- *Switching to electric vehicles.* Only three per cent of all emissions in the province come from the electricity sector, compared to 38 per cent from transportation. By switching to electric vehicles, Ontario car owners could reduce their own emissions by more than 95 per cent.
- *Accelerating the adoption of non-emitting forms of electricity supply.* There are already 5,000 megawatts (MW) of clean energy sources operating at the local level. As we prepare the system to meet future energy needs, we have been working to integrate new technologies, whether they are connected to the grid, or within a local distribution network.

We are working with businesses, universities, municipalities and other key stakeholders to find the best approach to leveraging the electricity sector in support of decarbonization in Ontario. Our engagement with communities and stakeholders will continue to be key a priority for us. Ultimately, preparing the grid for decarbonization is a collective effort – an effort to which the IESO is fully committed.

As these discussions move forward, if there is any additional information that would help your municipality to understand the implications of a natural gas phase-out, please don't hesitate to reach out to me or communityengagement@ieso.ca.

Regards,



Carla Y. Nell
Vice-President
Corporate Relations, Stakeholder Engagement and Innovation

CC: Bruce Macgregor, CAO