

Ministry of Energy

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MC-994-2022-228

April 7, 2022

Ms Lesley Gallinger
President and CEO
Independent Electricity System Operator
1600—120 Adelaide Street West
Toronto ON M5H 1T1

Dear Ms Gallinger:

I would first like to thank you and your team at the Independent Electricity System Operator (IESO) for your ongoing work to maintain a flexible, reliable and innovative electricity grid in the province.

On April 7, 2022, the government released Ontario's Low-Carbon Hydrogen Strategy, which builds on the province's existing strengths and lays a path forward to drive innovation and encourage growth in the hydrogen economy. I am writing to you to engage the IESO in supporting this strategy by exploring opportunities to further improve the stability of Ontario's electricity grid using low-carbon hydrogen technologies.

As you know, Ontario has one of the cleanest and most flexible electricity systems in the world, with over 90 per cent of the electricity generated in Ontario in 2020 coming from non-emitting resources. Producing low-carbon hydrogen from this clean electricity supply mix can further our province's efforts for the environment, while increasing innovation and creating jobs.

We want to position Ontario as a global leader in new technologies and recognize the diverse range of potential applications of hydrogen across industries. Made-in-Ontario hydrogen technology is already powering projects around the world, such as transit buses and heavy-duty trucks as well as the world's first hydrogen train. Ontario is also home to North America's first large-scale power-to-gas facility, and recently, that same facility supported another first-of-its-kind project to successfully blend hydrogen into the natural gas system for customers in Markham, Ontario.

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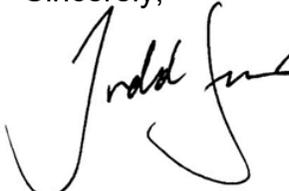
I recognize that the IESO began exploring the potential impacts of innovative energy storage resources on the electricity system several years ago through the Phase I Energy Storage research program, and contracted a variety of technologies such as batteries, flywheel, compressed air and the power-to-gas facility mentioned above. While the needs of the electricity system have evolved since then, the need for flexible and responsive technologies to help manage Ontario's diverse energy resources will continue. Hydrogen's long-term potential to store electricity could make it a valuable resource for the decarbonization of Ontario's electricity system. I know the IESO's work to identify a pathway to decarbonization, further to my October 2021 letter, is well underway.

I trust that there are a number of innovative approaches and opportunities involving low-carbon hydrogen technologies that may be valuable in order to strengthen Ontario's electricity grid while reducing greenhouse gas emissions.

With this in mind, I would ask that the IESO investigate and propose program options to integrate low-carbon hydrogen technologies into Ontario's electricity grid for the purposes of balancing and strengthening our reliable electricity system and contributing to broader decarbonization. I would also ask the IESO to report back to the Ministry of Energy by October 31, 2022, with program options, timelines, costs and any additional advice the IESO may have on how to proceed.

I want to thank the IESO in advance for the work required on this initiative and its support to advance Ontario's low-carbon hydrogen economy. I look forward to the IESO's assessment and analysis in its report back on this important initiative.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd Smith". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

Todd Smith
Minister

- c: David Donovan, Chief of Staff to the Minister of Energy
- Carla Nell, Vice President, Corporate Relations, Stakeholder Engagement and Innovation, IESO
- Stephen Rhodes, Deputy Minister of Energy