



Environmental Registry – Response

IESO Pathways to Decarbonization Study

ERO – 019-6647

Nuclear Innovation Institute

May 14th, 2023



Overview

The [Nuclear Innovation Institute](#) (NII) is an independent not-for-profit organization based in Saugeen Shores, ON. NII provides a platform for accelerating the pace of innovation within the nuclear sector while leading [STEM education](#), [economic development](#), [environmental](#) and [public policy](#) programming.

This is in response to the Environmental Registry of Ontario (ERO)'s posting regarding the Independent Electricity System Operator (IESO)'s *Pathways to Decarbonization* (P2D) report. The submission will cover the critical topic of improving siting and regulatory processes when it comes to large electricity projects in the province of Ontario.

Specifically, the submission will include insights on polling recently commissioned by NII demonstrating that Ontarians and Canadians understand the importance of both nuclear energy and the need to lay the groundwork now for nuclear to be part of a future net-zero electricity mix.



Ontarians support made-in-Ontario nuclear energy.

For decades, nuclear energy has been a fundamental part of Ontario's electricity grid—a grid that draws more than 90% of its supply from non-emitting sources. Governments, system operators and electricity specialists have known for years that the emissions intensity of Ontario's electricity grid would undoubtedly be much higher if not for nuclear energy. It turns out that Ontarians understand this, too.

NII recently (December 2022) commissioned a poll¹ of Canadians regarding their views on nuclear energy and the broader electricity/electrification landscape. The polling revealed many interesting insights regarding Ontarians' views on different types of electricity production and on creating a net-zero electricity system—across the country and within their own province.

Notably, support for nuclear power in Ontario is clear. By the end of the survey, **66%** of Ontarians stated that they support using nuclear energy to produce electricity, while **less than 14%** opposed the use of nuclear. Furthermore, when asked to select their preferred source of *baseload supply*, more Ontarians selected nuclear than any other source.

Furthermore, a recent report from the *Green Ribbon Panel* (of which NII is a member) revealed that Ontarians value the kind of stable, clean and made-in-Ontario electricity which nuclear can provide. In their [June 2022 report](#), the panel states that: “Ontarians favour energy self-reliance over relying on imports of electricity from other jurisdictions.”² The report goes on to cite polling³ that found **7 in 10 Ontarians** believe it is important to be **self-sufficient in electricity supply**, while only 14% stated that they would be comfortable relying on other jurisdictions, like Quebec, to supply Ontario with power.

NII's polling also found that Ontarians do fear potential energy and electricity shortages. When asked: “How concerned are you about the following energy-related issue(s)?”, **55% of Ontarians** stated that they were **very concerned** about energy and electricity shortages.

¹ Polling conducted by The Gandalf Group in December of 2022 with a sample size of more than 1,600 Canadians.

² Green Ribbon Panel. 2022. [Green Ribbon Panel—More clean power. How Ontario can build a clean economy that works. \(pcdn.co\)](#)

³ Polling conducted by Innovative Research Group in February of 2022 with a sample size of more than 1,500 Ontarians.



To summarize, it is clear that:

- ✓ Ontarians support the use of nuclear energy for electricity production—and place it at the top of their list when it comes to sources of reliable baseload.
- ✓ Ontarians are concerned about potential shortages of electricity and would rather be self-reliant than rely on other jurisdictions to meet our provincial needs.

Ontarians are ready to lay the groundwork for future new nuclear.

Among the many calls to action in the P2D study, the IESO is clear that siting and regulatory processes must be improved and streamlined to enable the buildout of the infrastructure needed to meet our net-zero grid target. Impact and environmental assessment processes have become increasingly onerous and time consuming in Canada—and time is not on our side.

That said, Ontarians are ready to start assessment processes **now** in order to leave the door open to potential new nuclear in the years to come. NII's polling asked the following question: "Would you support or oppose beginning the process now to assess the environmental impact of addition more nuclear power in the event that Canadians decided in future years that it is necessary?" **65% of Ontarians** stated they would **support** this course of action. Meanwhile, **only 6%** stated they would **oppose** doing so.

Furthermore, Ontarians are also quite supportive of new large-scale nuclear generation on existing nuclear sites. When asked about their support for the construction of new nuclear reactor units on existing sites, here's what Ontarians had to say:

- Across Ontario, nearly **60% support** the buildout of new reactor units on an existing site while only **12% oppose** (28% remain unsure).
- In the Greater Toronto Area (GTA), nearly **60% also support** this buildout with only **18%** in opposition (23% remain unsure).

It is clear: to meet the level of ambition in the IESO's 'no-regrets' scenario, we must start planning now. Thankfully, Ontarians are ready to get started.

Once these processes are started, they must also be smarter and more efficient. For example, nuclear generating sites are heavily studied, reviewed and regulated by a multitude of agencies and bodies. This continuous study should help to inform expeditious reviews of potential new generation on existing sites. These processes are also exceedingly costly for the



operators of these sites. Proponents will require a policy regime that allows for costs associated with reviews of new generation to be recovered.

To summarize:

- ✓ 65% of Ontarians are ready to start the important work of assessing sites for new nuclear generation in order to meet the province's net zero target.
- ✓ Opposition to beginning impact and environmental assessments for potential new nuclear projects is very low.
- ✓ Existing nuclear generating sites present a significant opportunity in terms of public support for new generation on those sites as well as a history of extensive study and review.
- ✓ Project proponents will be asked to take on significant risk and will therefore require supportive policy regimes that allow for the recovery of costs associated with siting and assessment processes.

