

P.O. Box 756  
Toronto, ON  
M5C 2K1



**APPRO**

ASSOCIATION OF  
POWER PRODUCERS  
OF ONTARIO

Policy Coordination and Outreach Branch  
Ministry of Energy and Electrification  
77 Grenville Street  
Toronto, ON  
M7A 2C1  
Canada  
[integratedenergyplan@ontario.ca](mailto:integratedenergyplan@ontario.ca)

December 12, 2024

Via email

**RE: (ERO 019-9285) Integrated Energy Resource Plan Consultation**

This submission is made by the Association of Power Producers of Ontario (APPRO) in response to a request for comments posted on the Environmental Registry of Ontario website on October 22, 2024, in relation to the above-referenced topic.

APPRO appreciates the opportunity to provide such feedback.

Best Regards,

A handwritten signature in blue ink, appearing to read 'Colin Anderson', written over a light blue horizontal line.

Colin Anderson  
President and CEO, APPRO

**(ERO 019-9285) Integrated Energy Resource Plan Consultation  
Submission of the Association of Power Producers of Ontario (APPrO)**

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## **INTRODUCTION**

APPrO represents generators operating in the province of Ontario, and a variety of organizations and individuals concerned with generation. APPrO members include developers, suppliers and consultants to power enterprises, both public and private, with an emphasis on implementing responsible and sustainable energy systems in Canada and around the world.

The Ministry of Energy and Electrification is seeking input and perspectives from the public, stakeholders and Indigenous communities to inform the integrated energy resource plan, planned to be released in early 2025. This submission is in response to that request for public comments in relation to the Integrated Energy Resource Plan, as posted on the Environmental Registry of Ontario website.

APPrO's members are committed to a reliable, affordable and sustainable energy supply in the province of Ontario, which is why APPrO has an interest in this matter.

APPrO appreciates the opportunity to provide feedback.

## **DETAILED COMMENTS**

### **A. Planning for Growth**

On October 17, 2024, the Independent Electricity System Operator (IESO) announced its most recent load forecast for the province<sup>1</sup>. In that forecast, Ontario's electricity demand is anticipated to grow 75% between now and 2050 – with annual consumption rising from 151 terawatt-hours (TWh) in 2025 to 263

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<sup>1</sup> <https://www.ieso.ca/Sector-Participants/IESO-News/2024/10/IESO-Releases-Updated-Demand-Forecast>

TWh in 2050. Increases of that magnitude cannot be met by incremental adjustments. Rather, they beg for bold action and for robust planning processes that are able to accommodate the demand growth that is expected today as well as being able to adjust over time for unanticipated changes. Effective planning is a critical issue in electricity system investment and operation. The planning tools of the recent past were perhaps suitable based on the relatively modest scope and challenges that faced the electricity system. However, the current suite of planning tools is inadequate for the much more significant expansion of the future system that will be required.

Planning processes that are robust, fact-based, open, and transparent, publicly contestable, and stable over time will contribute to the availability of information, and the fostering of competition that will help to encourage cost-efficiency over the longer-term. Planning mechanisms must recognize that some technologies have extensive lead times, and therefore to maximize resource optionality to meet Ontario's needs, the identification of needs should occur earlier so that as many technologies as possible can effectively compete to provide affordable, reliable, and sustainable electricity.

Ontario needs to articulate its views on coordinated long-term energy planning, including objectives, technological options, and the roles, responsibilities, and expectations of participants in the sector in achieving those objectives. APPrO advanced a number of recommendations regarding general *Governance and Accountability* in its June 2023 submission to the Electrification and Energy Transition Panel<sup>2</sup>, and maintains those views today. Currently, there is no specific requirement or process for the Government of Ontario to set broad objectives for the sector before the planning process starts.

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<sup>2</sup> Also APPrO's *2021 Achieving Excellence in Electricity Planning – a Roadmap for Ontario* submission to the Ministry of Energy, Northern Development and Mines, Re: ERO 019-3007 Review of Ontario's Long-term Energy Planning Framework, 2021

In addition to this, APPrO supports the general need for coordination of planning for natural gas and electricity. However, this does not necessarily mean the full integration of the two, and it is unlikely that the IESO currently has the appropriate level of expertise that would be required to take on planning for natural gas. As a result, planning for natural gas would best be left to Enbridge. APPrO supports additional coordination between Enbridge and the IESO.

A week after the IESO's revised demand forecast (October 24, 2024), the Ministry of Energy and Electrification released a vision for ensuring Ontario can meet its future energy needs<sup>3</sup>. This vision calls for an unprecedented build-out of Ontario's electricity system to meet the forecast consumer demand. It has been characterized as an "All-of-the-Above" approach, including nuclear, hydroelectric, renewable, natural gas and storage technologies. APPrO supports this inclusive approach, and the continuation of a portfolio methodology for Ontario's electricity supply mix, to meet the needs of the province while facilitating investment, economic development and energy security.

In addition to enabling new capital investment, a reliable, affordable, and sustainable energy system requires the maximization of the value of the assets already within the system. Over the last 20 years, billions of dollars of capital have been invested into Ontario's electricity system. These investments have led to the development of flexible generation, and renewable power supplies at scale. As an example, Ontario's nuclear fleet is in the process of significant refurbishment activities at Darlington, Bruce and Pickering, which will result in additional decades of clean, reliable, affordable energy for the province. This was the right choice. So while new sources of supply and new investment will be absolutely necessary, Ontario's existing assets cannot be neglected. Contracts for many existing generation resources will expire within the next decade, in most cases, well prior to the end of the useful life of the assets. This challenge

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<sup>3</sup> [https://www.ontario.ca/page/ontarios-affordable-energy-future-pressing-case-more-power?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=iesobulletin](https://www.ontario.ca/page/ontarios-affordable-energy-future-pressing-case-more-power?utm_source=newsletter&utm_medium=email&utm_campaign=iesobulletin)

requires a timely and appropriate solution for new and re-contracted resources to be in a position to help fill the gap and solve the supply shortfall. Related to this, APPrO strongly supports the need for gas-fired generation in the province into the medium term. No other generation resource can currently provide the flexibility of natural gas in service of provincial reliability and affordability objectives.

Bold leadership will ensure the energy sector has the best chance at balancing both the near- and long-term needs, while ensuring a decisive and orderly transition in a time where evolving and emerging technologies will no doubt challenge and test Ontario's longer-term objectives. This emphasizes the importance of the IESO's resource adequacy framework. However, as certain resources do not fit into the existing procurement structure and timelines, alternate mechanisms are required to enable the development of these critical resources. Specifically large, clean electricity infrastructure that has long development timelines (i.e. nuclear and large hydroelectric / pumped storage) and is likely to be employed irrespective of the final pathway to decarbonization, should be advanced and committed to in the near term.

Ontario currently enjoys a strategic competitive advantage over many of its adjacent jurisdictions in that its electricity supply mix is already approximately 90% free from GHG emissions<sup>4</sup>. That advantage makes Ontario particularly attractive when competing for investment capital. Steps must be taken to protect that advantage, including evaluation and rationalization of the province's siting processes. Ontario must reevaluate its regulatory, approval and permitting processes with a view towards their rationalization. APPrO suggests that such processes should be consistent with those that exist in neighbouring jurisdictions. New generation and transmission infrastructure will be needed in Ontario as part of resource adequacy activities as well as electrification resulting

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<sup>4</sup> <https://www.ontarioscleanenergyadvantage.ca/>

from decarbonization. However, Ontario is not the only jurisdiction that will be pursuing such goals. It would be unfortunate if other jurisdictions were viewed as more welcoming of infrastructure investment simply because they refined their processes to be more accommodating to project proponents. It may be appropriate for the province to exercise some due diligence in understanding exactly how others approach such procedures, and to learn from, and potentially adopt, less onerous approaches. Additionally, the potential harmonization of local, provincial and federal processes in addition to consideration of some reasonable time constraints should also be considered for Ontario.

## B. Affordable and Reliable Energy

A combination of clean energy technologies including nuclear, large hydroelectric, conventional renewables and Distributed Energy Resources (DERs), complemented by system balancing resources such as short- and long-duration storage assets will be needed to successfully navigate the energy transition. As we navigate the transition, the foundation of our electricity system will be provided by nuclear and hydroelectric power. APPrO supports policy and regulatory changes that support the development and adoption of clean, reliable and affordable energy supply sources.

Policy decisions will shape the pace of transition and the adoption of new technologies. APPrO recommends while considering all potential available technologies, it is important to have a streamlined policy landscape to deploy these technologies following their approval. Well-designed policies provide a framework that supports and incentivizes the development, deployment, and utilization of innovative technologies.

In regards to affordability, APPrO believes that the need to decarbonize is not exclusively driven by electricity, or the electricity sector. In fact, the electricity sector is being looked to (eventually) as a source of “replacement energy” for

fossil fuels. As a result, where the funding comes from to effect the changes that are being considered to the electricity system must be carefully considered.

In general terms, the regulatory principle of “costs follow benefits” should guide these considerations. Since decarbonizing the electricity sector serves multiple objectives beyond strict electricity resource adequacy, the beneficiaries of those other objectives should be partly responsible for electricity sector decarbonization costs. Objectives dealing with the environment and climate change are very much being served by electricity sector decarbonization, and as such, in addition to the electricity ratepayer, much of the total cost should be socialized, with the taxpayer being obligated to pay its fair share.

Related to this is the question of where appropriate funding sources can be found. Given that both Federal and Provincial Governments are acting in harmony to advance actions intended to minimize the effects of climate change, the total costs associated with decarbonization, and the resulting need for increased electrification, should be shared. Federal funding of this sort may come in the form of Investment Tax Credits and/or some other vehicle, but in any event, the longevity of such mechanisms must be addressed in order to provide the regulatory certainty for potential investors to participate in decarbonization activities.

### C. Becoming an Energy Superpower

Industry has already started to move in terms of increasing investments in jurisdictions that already possess a clean electricity system. That movement is likely to continue and grow. Further, Ontarians themselves are also making more climate-conscious choices, in an attempt to reduce Greenhouse Gas (GHG) emissions that contribute to climate change. All of these changes require a clean electricity system to power the province as the move away from fossil fuels

continues, and Ontario's electricity system is approximately 90 per cent emissions free and accounts for just 3.4 per cent of the province's total GHG emissions<sup>5</sup>. This is a potential strategic advantage for the province.

Not just a strategic advantage, Ontario's clean electricity system could be its climate change advantage<sup>6</sup>.

Ontario currently has "the high ground" with an electricity system that is one of the cleanest in North America<sup>7</sup>. As we move forward in our efforts to decarbonize and build out our electricity grid, we must keep this in mind, and take actions that maintain and grow our advantage, for the good of the economy and the environment. The climate change advantage that Ontario currently has is ours to lose - we must make choices that guard against that potential loss, while attracting necessary investment capital, realizing opportunities for economic development and achieving a state of energy security.

Nuclear power is a cornerstone of that competitive and climate change advantage and must be relied upon to maintain and grow it. Nuclear is very much Ontario's pathway to becoming an Energy Superpower.

Ontario currently has a diverse portfolio of generation resources including nuclear, hydroelectric, solar, wind, biomass and natural gas. This is necessary because each technology has operating characteristics that are unique to it and the portfolio approach allows a system operator to use those technology differences as required to effectively operate the system and manage risk. However, because of the overall increase in electricity supply that will be required, Ontario's number of nuclear reactors will need to increase. Adding 75% to the province's electricity capacity by 2050 is no small undertaking and

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<sup>5</sup> Ibid

<sup>6</sup> Ibid

<sup>7</sup> <https://www.ontarioscleanenergyadvantage.ca/facts>



meeting that goal will absolutely require additional generating resources, including large-scale nuclear. Nuclear technology is safe and reliable and contributes almost no GHGs, making it an ideal component of a post-decarbonized electricity grid.

As a result of Ontario's proven track record of current nuclear refurbishments being conducted on-time (or early...)<sup>8</sup> and on-budget and its leadership role in advanced technologies like Small Modular Reactors (SMRs), the world is watching. Ontario's nuclear success is not simply paving the way for decarbonization in the province, but is also creating the necessary environment for Ontario to export its technology and its expertise, helping others to decarbonize while helping Ontario realize its goals in regard to economic development and energy security. Government should be doing everything in its power to advance this perspective, market this opportunity and realize this success story on the world's stage. This means fostering nuclear innovation, supporting the existing nuclear supply chain and celebrating Ontario's nuclear story within the context of electricity supply, decarbonization and fighting climate change and serving Ontario's economic development and energy security needs.

In addition to nuclear, energy storage, which Ontario has successfully begun to procure and has additional opportunities to expand, supports Ontario's goal of becoming an Energy Superpower by storing clean energy off peak when demand is low and delivering that clean energy when it is most valuable, either at home or to our neighbours, ensuring that Ontarians receive the full value of our clean energy generation<sup>9</sup>.

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<sup>8</sup> <https://news.ontario.ca/en/release/1005358/ontario-marks-completion-of-darlington-unit-1-refurbishment-project-five-months-ahead-of-schedule>

<sup>9</sup> [www.ontarioscleanenergyadvantage.ca](http://www.ontarioscleanenergyadvantage.ca)