



May 14, 2023

The Hon. Todd Smith
Ministry of Energy, Energy Supply Policy Division
77 Grenville St., 7th Floor
Toronto, ON
M7A 2C1

RE: ERO Posting 019-6647 – IESO PATHWAYS TO DECARBONIZATION FEEDBACK

Dear Minister Smith,

The Canadian Renewable Energy Association (CanREA) is pleased to provide this feedback in response to the IESO's December 2022 Pathways to Decarbonization Report. CanREA is the national industry association representing wind energy, solar energy, and energy storage in Canada. Our over 360 diverse members are uniquely positioned to deliver low-cost, reliable, flexible, and scalable solutions to meet Canada's net-zero commitments.

Regulatory Requirements: *What are your thoughts on the appropriate regulatory requirements to achieve accelerated infrastructure buildout? Do you have specific ideas on how to streamline these processes?*

- Regulatory and permitting timelines in Ontario for resources such as wind are the longest, most expensive, and most onerous in North America. The province's current structures not only create significant barriers for building new renewable energy projects, but have also heightened investment risk for developers, and have unnecessarily increased the costs for ratepayers. Reviewing these permitting requirements for both stand-alone and hybrid facilities will be critical to striking the right balance between ensuring proper, science-based review and public input, and removing unneeded barriers to these resources which will be critical to our future grid.
- CanREA and its members strongly support project development that is responsible and sustainable. This includes early and ongoing collaborative processes between the developer and municipalities and their residents. However, as currently designed, the mandatory Municipal Support Resolutions required by the IESO in order to simply submit a bid for a new project in the Expedited and Long-Term Procurements (E-LT1/LT1), risks adding further strain to municipalities being approached to consider supporting projects at this early stage. Continuing to mandate consent in order to submit a bid for consideration in a competitive process, will increasingly become a barrier for project development as the province seeks to build the essential infrastructure required to maintain reliability and achieve a net zero grid. The timing of the resolutions and the process to obtain them should be reviewed in order to minimize burden to municipalities and optimize project bid and development processes.
 - The Ontario government should work with the IESO and municipalities across the province to design mechanisms that will prevent Municipal Support Resolutions from delaying the construction of new projects that are key to meeting the province's immediate energy demands.

Specifically, the IESO should communicate early and ongoing updates to the areas where the capacity is likely to be added and they should strive to provide technical support to municipalities in anticipation of high levels of siting and development activity within their borders. The province should seek to define clear guidelines for municipalities to understand what role they need to play when planning for and enabling energy projects in their area. Ultimately, the government and the IESO need to play a more supportive role in advance of municipal resolutions being sought.

Planning & Siting Consultations: *What are your expectations for early engagement and public or indigenous consultations regarding the planning and siting of new generation and storage facilities?*

- CanREA and its members support a Best Practices approach to community and indigenous engagement. CanREA published the first ever [Wind Energy Development – Best Practices for Indigenous and Public Engagement](#) to promote this approach.
- To initiate significant investment, the renewable energy sector needs a public, clear message about the electricity and energy needs the province must fulfill. Having advanced, long term planning goals will give developers the time required to responsibly engage with municipalities and Indigenous Communities about project development and siting. Publicly communicating these goals will enable municipalities, community members and indigenous communities to access information in advance of development activities beginning in their communities.
- The energy sector in Ontario is witnessing increased participation from Indigenous groups on transmission improvements and other project development. Further inclusion of indigenous communities and developing a strong understanding of their preferences and needs will further reduce environmental and procedural barriers and allow for more renewable projects to be built faster.
- The Ontario government should work with indigenous leadership to also identify mechanisms for unlocking additional territory for new transmission and generation developments. There are currently many barriers to expanding renewable energy developments, particularly in Northern Ontario. Working with Indigenous and local stakeholders to lift these barriers and unlocking more territory across Northern Ontario and the rest of the province can incentivize the creation of more renewable generation assets and transmission corridors.
- Procuring new wind, solar, and storage assets are key components for accelerating decarbonization efforts in Ontario. It will be equally crucial for provincial siting structures to work as quickly and effectively as possible to support mass construction of these projects to meet forecasted energy demand across the province.

Natural Gas Phase-Out: *Do you believe additional investment in clean energy sources should be made in the short term to reduce the energy production of natural gas plants, even if this will increase costs to the electricity and ratepayers? What are your expectations for the total cost of energy to customers because of electrification and fuel switching?*

- As the national association for renewable energy assets, CanREA supports the full decarbonization of Ontario's grid in the most cost effective and timely way possible, and stresses that the development of wind, solar, and storage assets will enable the province to transition effectively and efficiently.

- The province's plan to meet growing electricity demand with natural gas generation is projected to increase grid emissions by 260% by 2040. This effort to support grid reliability, will come at a significant cost to Ontarians and undermine the benefits of electrification over an extended time period.
- Wind and solar projects have become the primary sources of new-build electricity generation development across the world. In this competitive market, Ontario should be seeking to strengthen the investment signals for these assets, in order to enable the province to accelerate the transition away from gas energy generation while ensuring reliability. Overall, procuring more wind, solar, and storage assets will be crucial for accelerating decarbonization efforts in Ontario and for maintaining reliability.
- New-build wind, solar, and storage sites should be maximized in the transition away from gas-fired generation, and if done effectively, should not come at an increased cost to ratepayers. The Ontario government should make a concerted effort to ensure that the new-build developments are procured efficiently to avoid increased costs on all stakeholders, especially considering that the province must procure a significant amount of renewable energy generation assets to resolve forecasted capacity shortfalls and meet decarbonization targets.
- It is crucial that the Ontario government coordinate effectively with gas and renewable energy asset operators to ensure an efficient and swift transition that does not negatively impact Ontario industry and ratepayers.

Potential System Costs: *Are you concerned with potential cost impacts associated with the investments needed? Do you have any specific ideas on how to reduce costs of new clean electricity infrastructure?*

- Instituting mechanisms to easily recontract and repower existing generators would significantly reduce the costs of acquiring new clean electricity assets. At the same time, procuring more wind and solar farms, which have comparatively lower operation costs, would allow the province to expand its arsenal of renewable assets while keeping costs down.
- Long-term planning horizons can help reduce risk, and by extension, the costs, of new electricity infrastructure. In addition, taking a proactive and region-centric approach to energy planning will allow stakeholders to design efficient mechanisms to mitigate the supply chain challenges, risks, and costs of building new projects.
- Cost-increasing factors should be considered in the planning stages of procurement and development. The Ontario government should consider how municipal requirements, long lead times, as well as labour and equipment availability, among other factors, can lead to increased project times and costs, and create mechanisms that minimize the impacts. Affordability concerns cannot supersede investments in new generation supply and transmission infrastructure necessary to meet looming capacity shortfalls, advance decarbonization efforts, and facilitate economic growth.
- Recent analysis demonstrates that there are more cost effective and efficient ways to accelerate Ontario's decarbonization efforts:
 - As Ontario shifts to electrify its economy, electricity costs will increase but overall energy costs will also decline over time. The Canadian Climate Institute has conducted [recent analysis](#) that demonstrates most Canadian households will save money in the switch to electricity.
 - Ontario could cut projected climate emissions 85% by 2035 **and** reduce its use of carbon-heavy, gas-fired power plants to less than 3% of power production if its grid met rising electricity demand with energy efficiency, solar, wind, and energy storage, according to [an analysis](#) released in November 2022 by The Atmospheric Fund. The modelling shows that it is more

affordable to meet rising electricity demand through a mix of energy efficiency, solar, wind, and storage, than it is to ramp up natural gas.

- Additionally, CanREA also recently modeled system and ratepayer impacts of doubling Ontario's rooftop solar capacity. [The analysis](#) found that this would help reduce costs for the whole energy system by up to \$250 million per year by 2030.

Hydrogen & Low-Carbon Fuels: *Do you have any comments or concerns regarding the development and adoption of hydrogen or other low-carbon fuels for use in electricity generation? What are your thoughts on balancing the need for investments in these emerging technologies and potential cost increases for electricity consumers?*

- Hydrogen gas and other low carbon fuel sources can play a helpful role in diversifying Ontario's energy grid and help the province transition away from gas-powered energy generation. However, investment in these energy sources should not come at the detriment of wind, solar, and energy storage assets, that have been tried and tested in Ontario, and that can take on leading roles in the province's decarbonization efforts.
- The inclusion of hydrogen and low-carbon fuel projects should also not create further complications for siting and permitting processes in Ontario. In fact, the adoption of these fuel sources presents additional opportunities for the Government to analyze provincial and municipal siting regulations and design a streamlined process for all renewable and clean energy assets.
- The Ontario government should work closely with stakeholders in the province's energy sector to ensure that the introduction of hydrogen gas in Ontario coordinates properly with other renewable assets to ensure maximum energy generation and prevent any unnecessary cost increases.

Hydroelectric Generation: *What are your thoughts on the potential for development of new hydroelectric generation in Ontario by private, indigenous, and government-owned developers? While the capital costs for hydroelectric generation may be higher than nuclear, wind, solar and natural gas, do you support investing in large scale hydroelectric assets that may operate for over one hundred years?*

- Construction of large-scale hydro facilities is capital intensive and should be considered as a long-term investment that, once again, should not come at the detriment of the ratepayer. New wind, solar, and energy storage projects do not come with this risk and can be deployed far more quickly. It is important for Ontario to balance overall costs and impacts on ratepayers and the sector when considering hydroelectric projects. The government should also not lose sight of the fact that wind, solar, and storage assets can perform effectively at a fraction of the costs required for new-build hydroelectric projects.
- In addition to high costs, large hydro development also requires long lead times to complete, which does not align with the province's *immediate* capacity needs. This is why the province should consider hydroelectric projects in the long term, while leveraging the construction of more wind, solar, and storage assets in the short term to meet immediate capacity needs in Ontario.

Transmission Capacity: *What steps should be taken to ensure that transmission corridors can be preserved and lines can be built as quickly and cost effectively as possible?*

- It is important for the province to unlock new territory – particularly in the north - to develop needed transmission infrastructure across Ontario. In doing so, the Government should include indigenous participations in assessing key areas and designing structures for new transmission development.
- To that end, it is crucial that the Ontario Government provide the sector with significant *early* clarity on which regions the province is targeting for new transmission developments. Considering current lead and permitting/siting times, it is vital for stakeholders and developers to know with enough anticipation where they will be able to connect new projects and have a clear forecast of the province’s transmission capabilities.
- At the same time, CanREA strongly urges the Ontario Government to consider cost-effective alternatives to building new transmission infrastructure in the meantime. Simply put, there are other courses of action in addition to building costly new transmission infrastructure, including using the physical transmission and distribution assets that comprise the grid in a more efficient manner than we do today.
- Specifically, the Ontario Government should encourage the development of more energy storage projects across the province to balance the need for more transmission infrastructure to be developed. These projects are tried and tested in Ontario, Canada, and across the world, are cost effective, and most importantly, will allow the province to meet immediate energy and capacity demands.
- Energy-storage technologies can provide 13 key services to the grid, as identified by [the Rocky Mountain Institute](#) : Capacity Value, Peak Shaving, Voltage Support, Frequency Regulation, Transmission & Distribution Deferral, Transmission & Distribution Congestion Management, Regulating Reserve, Spinning Reserve, Black Start, Time Shift/Arbitrage, Demand Charge Reduction and Backup Power. All of these services preclude the need to rely solely on costly and timely transmission investments and should be leverage while we simultaneously build out the generation and transmission capacity to meet future demand.
- Finally, there should be a more robust transmission planning and procurement process that considers the use of competitive procurement to ensure ratepayer value. Coordination between the regional and bulk planning processes should be prioritized.

Open Question: *Do you have any additional feedback on the IESO’s “no regret recommendations?”*

The Ontario energy system is facing increasing challenges which are limiting its ability to meet forecasted demand across the province. Chiefly among these factors is the looming energy capacity shortfall Ontario may face as early as 2026, which is when contract expirations of critical energy generation assets begin to come into effect. This urgent need for new capacity is further exacerbated by decarbonization targets that the Ontario government has committed to meeting over the coming decades. In short, Ontario is faced with the immediate challenge of procuring sufficient energy generation assets to meet increasing demand, while simultaneously decarbonizing the provincial energy grid to meet its climate targets and boosting economic development.

Procuring new wind, solar, and energy storage assets will be crucial in accelerating decarbonization efforts, while ensuring the Ontario energy grid is sufficiently equipped to keep up with demand. To compete in this active, global market as a relatively small jurisdiction, Ontario needs to establish clear, firm policy objectives, combined with investment-friendly inducement mechanisms while lowering the province’s risk profile for investment. This is the best way to create an active, competitive market and deliver best value for ratepayers through this energy transition.

Wind energy, solar energy and energy storage are perfectly positioned to deliver the resources Ontario most needs: they have relatively short development timelines, they can supply areas of high need and support economic growth, they can be combined in flexible, hybrid configurations to meet demand, and ever more importantly, wind and solar are the lowest cost energy resources available today, with the capacity to provide tremendous value to Ontario ratepayers. The above attributes are all in addition to the fact that these resources also deliver what companies want most for their future investments: a decarbonized electricity grid.

Wind, solar and storage projects will not only help accelerate decarbonization efforts, but also bring forth a multitude of regional benefits, such as enabling investment and job growth in local communities, driving innovation, and creating new direct and indirect jobs in our rapidly changing clean economy.

At the same time, competition for renewable energy sources is rapidly accelerating as the sector expands across the globe. The U.S. Inflation Reduction Act, for example, is likely to result in a boom in U.S. investment in wind, solar, and energy storage projects, meaning that Canada will be facing increasing competition for these technologies and their components. Considering this context, it is vital that Ontario be proactive in developing the proper supply chain infrastructure and policy environment to position itself as an attractive hub for renewable energy investment. This needs to include options to optimize the existing fleet of wind and solar assets that are already injecting emissions free electricity onto the grid.

CanREA members stand ready to develop new wind, solar, and energy storage projects to meet immediate demand needs, and to help Ontario remain as a hub for investment in this increasingly competitive market. This potential can be unlocked with clear, timely signals from the government and IESO on the path forward for these resources. We hope to work with you to streamline processes and design effective mechanisms and procurements to quickly deploy much needed new assets and to unlock opportunities to optimize the over 8GW of operating wind, solar and energy storage assets in the province.

In summary, CanREA would like to highlight the top priorities we feel the government should be seeking to provide clarity on sooner than later:

- Urgent need for clarification on development of new wind, solar, and energy storage projects
- Urgent need to develop new and expand existing infrastructure to meet imminent energy demand needs in Ontario
- The IESO and the Ontario Government must work closely with municipalities to create streamlined processes that will allow the sector to quickly deploy new infrastructure, specifically, wind, solar, and energy storage.

The Canadian Renewable Energy Association appreciates the opportunity to share these comments and we look forward to ongoing engagement and consultation.

Sincerely,



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