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The Hon. Todd Smith
Ministry of Energy, Energy Supply Policy Division
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RE: ERO Posting 019-6647 – IESO Pathways to Decarbonization Feedback

Potentia Renewables Inc., (PRI) a wholly owned subsidiary of Power Sustainable, is a fully-integrated developer, manager and operator of renewable energy assets based in Toronto, Ontario. Potentia currently owns or manages nearly 1,000 MW of wind and solar projects in operation, under construction, or under contract. With an investor committed to long-term success, combined with the industry-leading experience of our team, Potentia is a prominent renewable energy provider in Canada that is ideally positioned for continued substantial growth. PRI is pleased to provide comments on the Independent System Operator's (IESO) Pathways to Decarbonization report.

The Ontario energy system is currently encountering various obstacles that impede its ability to meet the projected demand throughout the province. One major concern is the potential shortage of energy capacity in Ontario, which could arise as early as 2026 when crucial energy generation contracts start expiring. This urgent requirement for additional capacity is intensified by the Ontario government's commitment to achieving decarbonization targets in the coming decades. In essence, Ontario faces the immediate challenge of securing sufficient energy generation resources to meet growing demand while simultaneously transitioning the provincial energy grid to achieve net-zero emissions.

To address these challenges effectively, it is crucial to acquire new wind, solar, and energy storage resources. These investments will not only accelerate the decarbonization efforts but also ensure that Ontario's energy grid is adequately equipped to meet the rising demand. Considering Ontario is a relatively small jurisdiction, it is essential to establish clear policy objectives and create investment-friendly incentives while reducing the investment risk associated with investing in green energy in the province. This approach will foster an active and competitive market, ultimately providing the best value for ratepayers during the energy transition.

Wind energy, solar energy, and energy storage are particularly advantageous for Ontario as they offer several benefits. These resources have shorter development timelines, can be strategically located in high-demand areas to support growth, and can be combined in flexible hybrid configurations to meet varying demands. Moreover, wind and solar are currently the most cost-effective energy resources available, offering significant value to Ontario ratepayers. Additionally, these resources align with the growing demand for decarbonized electricity, making them appealing to companies for future investments.

Investing in wind, solar, and storage projects will not only expedite decarbonization efforts but also bring various regional benefits. This includes stimulating investment and job growth in local communities, driving innovation, and creating direct and indirect employment opportunities within the evolving clean economy.

Furthermore, competition for renewable energy sources is intensifying globally. For instance, the U.S. Inflation Reduction Act is expected to boost wind, solar, and energy storage investments in the United States, leading to increased competition for these technologies and their components. Given this context, it is vital for Ontario to proactively develop the necessary supply chain infrastructure and policy environment to position itself as an attractive hub for renewable energy investments. This should involve exploring options to optimize the existing fleet of wind and solar assets already contributing emissions-free electricity to the grid.

Potentia Renewables Inc. is prepared to develop new wind, solar, and energy storage projects to address immediate demand requirements and help Ontario. However, this potential can only be realized with clear and timely signals from the government and the Independent Electricity System Operator (IESO) regarding the future path for these resources.

Consultation Questions:

1. ***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?*

The regulatory and permitting timelines in Ontario for wind and solar are known for being among the lengthiest, costliest, and most burdensome in North America. The current policies and regulations in place not only create significant obstacles for developing new renewable energy projects but also increase investment risks for developers and unnecessarily drive-up costs for ratepayers. PRI recommends that the Ontario Government review these permitting requirements for both standalone and hybrid facilities to strike a balance between conducting proper, science-based reviews, involving public input, and removing unnecessary barriers that are essential for our future grid.

Additionally, enhancing system planning and communicating with industry about system plans will help to ensure timely procurement and will provide developers with adequate time to plan for the necessary permitting processes. This is particularly important for developers utilizing technologies that require long lead and development timelines like long duration storage.

PRI supports the government's focus on streamlining both the approvals processes and Class Environmental Assessments for low-risk development such as sustainable power facilities and

transmission lines. The completion of the changes to the Class EA program and including stormwater approvals in the EASR program, will significantly reduce the timelines and risks for regulatory approvals. Of ongoing concern is the uncertainties around use of agricultural lands for development and curtailment of wind farms related to bird and bat mortalities, which can significantly affect the production capacity of a facility. The current emphasis to limiting development on Prime agricultural lands, including recently proposed changes to the Provincial Policy Statement, obstruct the placement of new power facilities from many areas that meet land and noise requirements for building this infrastructure. Excluding land from development of electrical infrastructure will make it difficult to site projects and thus difficult to meet system reliability needs as well as decarbonize the grid.

Curtailment requirements related to bird and bat mortalities remain a significant unknown risk for wind development given the uncertainty around estimation techniques and mitigation technologies. Open dialogue between industry and the government is required to develop a manageable path forward on this complex issue.

2. ***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?*

PRI supports HydroStor's comments and recommendations regarding long-duration storage resources. The IESO should explore a 2,000 MW contingent procurement process for long-duration energy storage projects (8 hours or more), based on the pathways to decarbonization for Ontario's electricity grid. The initial 2,000 MW procurement should be intended to leverage LDES simultaneously with the integration of new variable resources and incremental nuclear generation.

PRI strongly believes in the early engagement and active, inclusive consultation with the public and Indigenous communities when planning and siting new generation and storage facilities. By engaging stakeholders early and often we gain valuable insights into their specific concerns, expectations, and interests. This collaborative approach allows us to identify potential challenges and opportunities, ensuring that our projects align with the social, environmental, and economic goals of the region.

Alongside early engagement, we are dedicated to maintaining transparency and fostering open dialogue throughout the entire project lifecycle. We recognize the importance of integrating Indigenous knowledge and perspectives into the planning process. By incorporating their feedback, we can develop mutually beneficial solutions that address environmental impacts, preserve cultural heritage, and support local economies. Building strong and respectful relationships with Indigenous communities and the public is crucial in establishing trust and garnering support for our projects.

3. ***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?*

PRI strongly supports additional investment in clean energy sources in the short, medium and long terms. Wind and solar are currently the least cost sources of energy generation and are a key component to decarbonization of the Ontario grid. Ontario's plan to meet growing electricity demand with natural gas generation is projected to increase grid emissions by 260% by 2040. This is incompatible with Canada's plan for net zero emissions by 2050. Investing in more natural gas will only serve to undermine the benefits of economic-wide electrification and add a risk of stranded assets as we move to a zero-carbon grid.

The IESO should focus on maximizing the development of new wind, solar, and storage sites as part of the transition away from gas-based energy generation. This transition can be achieved without imposing an undue financial burden on ratepayers if executed efficiently. The Ontario government must proactively strive to streamline the procurement process for new developments to prevent increased costs for all stakeholders. This is particularly crucial given the need to secure a substantial amount of renewable energy generation to address projected capacity shortfalls and achieve decarbonization targets.

4. **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?*

Transparent and consultative long term system planning 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 local stakeholders to design efficient mechanisms to mitigate the supply chain challenges, risks, and costs of building new projects.

During the planning stages of procurement and development, it is crucial to consider factors that can increase costs. The Ontario government should carefully consider municipal requirements, labor and equipment availability, and the long lead times required for major energy projects that can extend project timelines and increase costs. To minimize these impacts, it is important to establish mechanisms that address these cost-increasing factors. While ratepayer affordability is a concern, these concerns should not override the need for investments in new generation supply and transmission infrastructure. Such investments are essential to address imminent capacity shortfalls, accelerate decarbonization initiatives, and foster economic growth.

The Government of Ontario should also consider the following to reduce costs associated with clean energy generation:

- Efficient Permitting Process: Streamlining and expediting the permitting process for clean electricity infrastructure projects can significantly reduce costs. This can be achieved by establishing clear guidelines, reducing bureaucratic hurdles, and ensuring efficient coordination between different government departments and agencies.
- Grid Modernization: Investing in grid modernization and smart grid technologies can improve the efficiency and flexibility of the electricity system. This includes upgrading transmission and distribution infrastructure, integrating advanced monitoring and control systems, and promoting demand response programs. A more robust and flexible grid can optimize the utilization of clean electricity resources, reducing the need for costly infrastructure expansion.
- Community Engagement and Education: Working with the Ontario Government to engage local communities and educating them about the benefits of clean electricity infrastructure to help reduce resistance and delays associated with projects. Transparent and inclusive decision-making processes can build trust and encourage public support, minimizing legal and regulatory obstacles that can increase costs.
- Investment in Research and Development: Increased investment in research and development can drive innovation and help develop more cost-effective technologies for clean electricity generation. This could involve funding research institutions and providing incentives for private sector involvement in developing and deploying new technologies.

5. **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 and other low carbon fuel sources have the potential to contribute to decarbonizing Ontario's energy grid and aid in the province's shift away from gas-powered energy generation. However, it is crucial to ensure that investments in these energy sources do not undermine the proven efficacy of wind, solar, and energy storage assets. These established technologies have already demonstrated their effectiveness in Ontario and should continue to play leading roles in the province's decarbonization endeavors.

6. **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?*

Similar to investments in hydrogen, investments in new hydro-electric generation should not be at the expense of wind, solar and energy storage. These technologies are not nearly as capital intensive as large-scale hydro facilities. New renewables and storage or hybrid projects that include storage can perform as effectively as hydro but at a fraction of the cost. If new hydro-electric generation is pursued, those facilities should be required to have sufficient ramping and storage capabilities to be able to add capacity to a grid with increasing levels of intermittent sources.

7. **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?*

To meet the need for more clean energy generation, Ontario must prioritize the development of new transmission infrastructure in untapped areas of the province. The government should provide clarity early on regarding the targeted regions for transmission development. Stakeholders and developers need sufficient advance knowledge to connect new projects and understand the province's transmission capabilities.

Simultaneously, the Ontario Government should explore cost-effective alternatives to building new transmission infrastructure. Optimizing the use of existing physical transmission and distribution assets can be a viable option. To achieve this, the government should encourage the development of more energy storage projects across the province. Energy storage has been proven effective in Ontario and globally, offering a cost-effective means to meet immediate energy and capacity demands, and balancing the need for additional transmission infrastructure.

Energy storage technologies also provide various grid services such as capacity value, peak shaving, voltage support, frequency regulation, and more. Leveraging these services reduces reliance on expensive and time-consuming transmission investments, while generation and transmission capacity is being expanded to meet future demand.

Potentia Renewables Inc. thanks the Government of Ontario and the IESO for the opportunity to provide comments on the Pathways to Decarbonization report.

Sincerely,

Jennifer Tuck

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