

ENVIRONMENT INDUSTRY WEEK 2021

BRIEFING NOTE: Driving Energy Innovation Towards Net Zero

What is the issue?

Jurisdictions around the world are moving towards “net zero” emissions targets for greenhouse gases (GHG). Ontario is no exception, with the Minister of Energy issuing a directive on October 7th, 2021 to the Independent Electricity System Operator (“IESO”) asking it to “... evaluate a moratorium on the procurement of new natural gas generating stations and develop an achievable pathway to zero emissions in the electricity sector”. While Ontario already has a very low emission energy sector by world standards, we will need measures that encourage the development and deployment of innovative technologies if we are to lower or eliminate emissions in the energy sector.

Current programs, such as the Ontario Energy Board’s (OEB) “Innovation Sandbox,” are useful for facilitating discussions and change in the sector at the utility level. However, the services provided do not align with the well-known barriers (e.g. the “valleys of death”) that growing technology companies need to overcome. For Ontario to be competitive, we need better and targeted support that encourages collaboration and innovation in order for promising companies in this area to grow and scale.

What is the potential benefit?

In an environment where businesses are seeking to drastically reduce their emissions, Ontario already has a competitive advantage. Our electricity system is already 94% emission-free and we now have a chance to be a world leader in the transition to net zero. By acting now to develop innovation funding programs that encourage and support the procurement of advanced net-zero technologies, the province can also reduce costs to ratepayers in the long term.

In a recent article, Terry Young, the Former President and CEO of the IESO, and Aleck Dadson, former Chief Operating Officer and Executive Advisor to the Chair at the OEB, stated that “... small investments in innovation now can help ensure that the move to net zero also addresses the need for affordability of electricity costs in the future”¹.

What do we need the Province to know (or do)?

- Ontario has deep expertise in clean technology and is home to many growing innovation companies. These companies do well in their start-up and early growth phases, but the lack of domestic anchor customers” hinders their ability to grow and serve a global market.

¹ “The Move to Net Zero in the Electricity Sector”. Toronto Star. October 16th, 2021.

<<https://www.thestar.com/business/opinion/2021/10/16/the-move-to-net-zero-in-the-electricity-sector.html>>

- Current approaches assume that entities such as Local Distribution Companies (LDCs) will step in to be the “market making” customers that help these innovative companies move forward. While this may be true in some respects, these types of organizations are generally risk-averse and are slow to consider, adopt and experiment with new technologies.
- To overcome this challenge, we need targeted programs that encourage the use and adoption of decarbonizing technologies. These can take the form of introducing measures that actively encourage LDCs, building owners, government agencies, or industrial facilities to invest in new technologies for decarbonization.

For more information

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Please also refer to the supplemental attachment for the brief, outlining the “Valleys of Death” and current gaps in active innovation measures for early-stage companies.