June 7, 2021

Memorandum from the OCC's Energy Policy Council
Energy, Climate, and Economic Recovery

Background

As Ontario's COVID-19 vaccination rate climbs and the province gradually begins to reopen, decision-makers within the public and private sectors are beginning to turn towards **economic recovery**. Collaboration between governments, businesses, and communities will be critical for Ontario to emerge stronger.

Meanwhile, we would be remiss to forget about the other systemic threat looming large in the background: **climate change**. Its impacts are already being felt across Ontario, as extreme weather events pose a growing challenge for residents, businesses, and infrastructure. While confronting climate change is a historic challenge, it also elicits opportunities for innovation, job creation, economic development, and local leadership.

The Ontario Chamber of Commerce (OCC) and its members are uniquely positioned to tackle these challenges, and our energy sector is ripe with made-in-Ontario solutions that are a win-win for both the environment and the economy. With that in mind, the OCC's **Energy Policy Council** met with the **Government of Ontario** in May 2021 to discuss **the role Ontario's energy sector plays in economic recovery and climate action**. The following document outlines key takeaways based on that discussion.

We thank the Honourable Jeff Yurek (Minister of Environment, Conservation, and Parks), the Honourable Bill Walker (Associate Minister of Energy), and Lindsey Park (MPP for Durham and Parliamentary Assistant for the Attorney General) for their participation.

Ontario's Clean Energy Advantage

Since phasing out coal-fired generation, Ontario has one of the cleanest energy systems in North America. The Province's 2018 Made-in-Ontario Environment Plan set a target of reducing greenhouse gas (GHG) emissions by 30 percent below 2005 levels by 2030. The government affirmed its commitment to creating the right policy and economic conditions for the private sector to continue investing in sustainable innovation.

Areas of opportunity for Ontario include:

- **Decarbonization of transportation:** Most of Ontario's emissions currently come from the transportation sector. Efforts to further decarbonize transportation should be technology-agnostic, recognizing and leveraging a range of solutions.
    - Electrification is largely the path forward for passenger vehicles (see below).

- However, hydrogen and renewable natural gas (RNG) are essential to decarbonization in areas where battery storage has limited application.
- For example, for high-mileage and heavy-duty transportation (such as mass transit, shipping, and aviation), hydrogen fuel cell electric vehicles (FCEVs) can replace gasoline and diesel-fired internal combustion engines. FCEVs are carbon-neutral and able to match the range offered by their diesel counterparts.
- RNG vehicles also cost less than running electric buses. Replacing diesel with RNG can reduce carbon emissions by up to 200 percent.

❖ **Electrification**: Ontario can further reduce GHG emissions through electrification of its transportation and industrial sectors. Electrification has the added benefit of lowering electricity costs for ratepayers by distributing fixed generation costs over a larger number of users.
- Ontario's clean electricity grid can be leveraged to reduce emissions in mining and industrial processes by reducing their use of coal and diesel.
- As North America's second largest auto manufacturer and its second largest tech hub, Ontario has a unique advantage in the electric vehicle (EV) market.
- Ontario Power Generation and Hydro One are investing in the Ivy Charging Network, which will be Ontario's largest EV fast-charger network by the end of 2021.
- The Ministry of Transportation is implementing charging infrastructure along 400-series highway rest stops and Metrolinx is working to electrify GO trains.
- Some members noted that government support is needed to accelerate electrification, including a review of legislative barriers.

❖ **Energy storage:** The ongoing development of energy storage technologies will help optimize the balance between energy affordability, sustainability, and reliability.
- Ontario is well positioned to compete in battery storage technologies thanks to its unique combination of clean generation capacity, research and development expertise, and supply of critical minerals such as lithium and cobalt.
- Hydrogen storage is another promising opportunity for Ontario.

❖ **Hydrogen**: Hydrogen can be used to offset emissions in a variety of industrial, commercial, and residential applications in Ontario. For example, it can be blended into the natural gas pipeline for heating systems, used for industrial production of steel and cement, and used to power fuel cells in vehicles.
- In 2020, the Government of Ontario released a hydrogen strategy discussion paper and the Government of Canada released a national hydrogen strategy.
- Ontario can and should use a variety of hydrogen sources to reach its emission targets. This includes hydrogen made from electricity, biomass, and natural gas through carbon capture (see below).

❖ **Natural gas:** Natural gas is an affordable, reliable source of energy in Ontario that ensures households and businesses can continue to access the supply they need during economic recovery. Currently, natural gas is the only resource capable of meeting peak demand periods year-round. Population and economic growth over the next decade will require flexible assets that can be readily deployed.

- The Government of Ontario continues to expand natural gas infrastructure projects through its Natural Gas Community Expansion program, which will support economic recovery and regional development in rural and remote communities across Ontario.
- Industry players are working to integrate carbon-neutral sources into the gas supply and investing in low-carbon technologies for heat and transportation.
- Renewable natural gas (RNG) is a carbon-neutral fuel created by capturing methane emissions from organic waste, landfills, and wastewater treatment plants. RNG can be used to fuel transportation fleets, power industry, and heat buildings. Several RNG projects are already working to reduce emissions in Ontario.
- Members are concerned about recent advocacy and motions calling on the provincial government to phase out gas-fired generation. Doing so would erode the security of supply and increase electricity system costs. Ontario should focus on leveraging the intrinsic benefits of a diverse mix of generation assets.

❖ **Small modular reactors (SMRs)**: SMRs are a powerful tool to reduce emissions within heavy industry and provide clean, reliable energy to rural, remote, and Indigenous communities.
- Ontario has an opportunity to lead SMR deployment across Canada and globally as demand grows for clean, flexible, and reliable sources of energy generation.
- The Memorandum of Understanding on the development of SMRs signed by Ontario, New Brunswick, Saskatchewan, and Alberta is an excellent step forward. Provinces will need to identify and reduce regulatory barriers to deployment of SMRs (e.g. in Ontario, this could include amending regulation to classify SMRs as a rate-regulated asset and therefore allow for recovery of construction costs). Federal support will be critical to advancing a pan-Canadian SMR initiative.
- If Canada fails to move quickly on SMRs, it risks having its leadership overtaken by other countries, such as the United States – where the federal government recently made financial announcements to support SMR development and deployment.

❖ **Carbon capture, utilization, and storage (CCUS):** CCUS technologies trap carbon dioxide before it is released into the atmosphere and either store it permanently underground or use it in industrial processes such as steel and cement production.
- The high costs associated with CCUS have limited its applications in Ontario to date.
- However, given Ontario's geographical placement atop two of the largest sedimentary basins in eastern North America, further development of CCUS has significant potential to reduce carbon emissions in the province.

❖ **Green bonds:** Ontario is largest issuer of Canadian dollar Green Bonds. Among other things, Ontario's Green Bonds have been used to finance low-carbon public transit projects and energy efficiency and conservation projects.
- Examples of projects that have been funded using Ontario Green Bonds include the Eglington Crosstown Light Rail Transit and GO Expansion projects.
- Ontario remains committed to the Green Bond market and expects to continue issuing Green Bonds in the coming years.

Conclusion

Ontario's business community is ripe with potential to invest in the kinds of innovation that will advance both decarbonization and long-term economic recovery.

In Fall 2021, the OCC will launch a Climate Action Series focused on private sector leadership around developing a more climate positive economy. For more details about this project, please contact Claudia Dessanti, Senior Manager of Policy (claudiadessanti@occ.ca).