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December 13, 2024

Policy Coordination and Outreach Branch
Ministry of Energy and Electrification
77 Grenville Street
Toronto, ON
M7A 2C1

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

Peel Region appreciates the opportunity to comment on the Integrated Energy Resource Plan Consultation and commends the Ministry for conducting this consultation and asking important questions about Ontario's energy future. Peel Region is the second largest municipality in Ontario and home to Canada's largest airport, Toronto Pearson International Airport. As such, Peel is a hub for industry and commerce, serves a population over 1.5 million, and is growing at a rate of approximately 25,000 people per year.

In 2019, Regional Council approved Peel's first Climate Change Master Plan (CCMP) which provides organization-wide direction and a pathway of actions needed to achieve the Region's 2030 climate change outcomes. The Plan's focus is to lead by example to influence and enable the community's low carbon and resilient transformation. The CCMP has two primary outcomes:

- Reduce corporate GHG Emissions to 45 per cent below 2010 levels by 2030.
- Be prepared by providing a safe, secure, and connected community through ensuring Regional services and assets are more resilient to extreme weather events and future climate conditions.

At the time of approving the CCMP, Council also approved the longer-term GHG reduction target of 80% corporate GHG emissions reduction below 1990 levels by 2050. Later, in 2021, Council approved the resolution to advocate for a phase out of natural gas from Ontario's electricity grid (Resolution Number 2021-451):

That the Region of Peel advocate to the Premier of Ontario, the Minister of the Environment, Conservation and Parks and the Minister of Energy, Northern Development and Mines to set the legislative and policy framework to phase-out all fossil natural gas-fired electricity generation as soon as possible;

And further, that the Minister of Energy, Northern Development and Mines be requested to provide Ministerial directives to the Ontario Energy Board and Independent Electricity System Operator to assist in the development of a plan to phase out fossil natural gas-fired electricity generation in the Province while meeting Ontario's electricity needs reliably, competitively, transparently, efficiently and at lowest cost;

And further, that copies of this resolution be sent to the City of Brampton, Town of Caledon, City of Mississauga and Peel-area MPPs for their awareness and support.

As part of the Region's influence on community GHG emissions, the Region, together with the local municipalities, produced Peel's Zero Emission Vehicle

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Strategy and is currently partnering with the Centre for Community Energy Transformation to enable home energy retrofits that promote fuel switching. Peel Region's response to ERO #019-9285 draws from these current commitments and approved position and is focused on supporting the outcomes of the CCMP and longer-term climate target while aligning with the Province's agenda on sustainable growth, affordable energy, a clean and reliable grid to support a clean and growing economy.

PEEL REGION STAFF COMMENTS

Question 1: What policy options and actions should the government consider in the integrated energy resource plan to achieve Ontario's vision for meeting growing energy needs, keeping energy affordable and reliable, ensuring customer choice and positioning us to be an energy superpower?

Response:
There are a number of institutional challenges to implementing diversified energy systems which give customers more choice, address growing energy needs, keep energy reliable and affordable. Some examples include policy, ownership structure, buy-in from stakeholders, contracts and rates. This presents risks to developing diversified energy infrastructure and can stall progress and lock in more new development using conventional energy for decades to come. Policy clarity and direction from the government is needed to grow Ontario's clean energy advantage, foster innovation and realize the opportunities of the low-carbon economy. Some examples that the government can consider include:

- Innovation: Continue to support and expand innovation by utilities and new market entrants through platforms, such as the Grid Innovation Fund and the Innovation Sandbox program and ensure appropriate resourcing of these programs.
- Competitiveness: Review how costs are shared and recovered for different energy connections in order to remove any differences in up-front payments that provides an unfair advantage.
- Resilience: Assess physical climate change risks and vulnerabilities of the electricity grid. Develop a plan to address any material gaps and improve reliability and resilience of the system.

Question 2: Building on the recommendations of the EETP's final report, what actions should be prioritized to enhance planning across natural gas, electricity, and other fuels?

Response:
Peel Region's Climate Change Master Plan and the Province's Electrification and Energy Transition Panel (EETP) final report are aligned on many topics. From the report's 29 actions the following eleven recommendations have the greatest need for prioritization:

- **Recommendation 1**: The provincial government should develop and communicate a commitment and associated policy principles for achieving a clean energy economy for Ontario by 2050.

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- **Recommendation 2:** The provincial government should convene an internal clean energy economy planning and implementation body, such as an existing committee of Cabinet.
- **Recommendation 4:** The Ministry of Energy should develop and communicate an energy transition policy vision that is inclusive of Indigenous perspectives and informed by clean energy economy policy principles.
- **Recommendation 5:** The Ministry of Energy should develop and release on a regular cycle an integrated long-term energy plan that will guide Ontario's development of technical energy plans, strategies and actions to support the transition to a resilient and affordable clean energy economy.
- **Recommendation 6:** The Ministry of Energy should provide policy direction on the role of natural gas in Ontario's future energy system as part of its next integrated long-term energy plan.
- **Recommendation 10:** The Ontario Energy Board (OEB) and Independent Electricity System Operator (IESO) should take steps to enable the effective evolution of innovative business models in line with clean energy economy goals and to help consumers benefit from electrification and the energy transition.
- **Recommendation 12:** The OEB should employ all tools within its existing mandate to implement activities consistent with Ontario's goals for a clean energy economy and the requirements of the energy transition for Ontario.
- **Recommendation 13:** In the years following release of the energy transition policy vision (Recommendation 4), the provincial government should undertake a review of the OEB's activities in respect of achieving objectives within the policy vision to determine if potential legislative and/ or regulatory changes are needed to implement the vision effectively.
- **Recommendation 15:** The OEB should conduct reviews of cost allocation and recovery policies for natural gas and electricity connections, as well as natural gas infrastructure investment evaluations to protect customers and facilitate development of the clean energy economy.
- Recommendation 16: **The Ministry of Energy, working with the OEB, IESO, LDCs (local** distribution companies), municipalities and gas utilities, should develop a formal and transparent co ordination framework that sets out the scope and objectives for enhanced planning and co ordination at the bulk, regional and distribution levels.
- **Recommendation 27:** The government should explore mechanisms to support broad adoption of fuel switching, decarbonization and supportive technologies, including active engagement and communication on benefits and risks as well as mechanisms to help customers manage up-front costs.

Question 3: What actions should government consider to promote greater access to electricity and accelerate grid-connections that will support economic growth, connecting new homes, and electrifying transportation and heating?

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The transition to low-carbon energy will require substantial investments in energy generation to keep up with demand from fuel switching that is already underway in Peel Region and across Ontario (i.e. electrification) and population growth. As with all major infrastructure investments, low-carbon energy systems require significant initial investments to pay for capital construction costs. The long payback periods often associated with these systems present challenges to attract private sector investment. Governments can play a key role in reducing uncertainty for investors. In turn, Peel residents and businesses will benefit from reduced costs from a fair and competitive energy market and greater access to electricity to meet growth.

The Ontario Energy Board's (OEB) Transmission System Code (TSC), which establishes rules for allocating the costs of electricity transmission upgrades, typically places the responsibility for covering the up-front costs of connection upgrades on customers. These costs can be significant and a major determinant in investment decisions that could bring regional economic and environmental benefits.

The Ontario Electrification and Energy Transition Panel Report highlights a difference in how up-front capital costs are handled for natural gas versus electricity connections. Gas utilities can spread these costs over up to 20 years for large industrial customers, while electricity transmitters use a shorter period of 10-15 years. This results in higher up-front costs for electricity infrastructure. Furthermore, gas utilities can collect the capital contribution as a surcharge on gas rates, while transmitters are obligated by the TSC to collect capital contributions upfront.

The cost discrepancy of connecting customers and ratepayers could inhibit investments in electrification that have long term sustainability and economic development benefits. For example, the upfront cost discrepancy might dissuade a residential developer from developing an 'all electric' or low carbon neighbourhood, and persuade them to instead build a traditional, natural gas-connected development to keep upfront costs manageable.

The government has an opportunity to review the discrepancies between the governance frameworks for natural gas and electricity to ensure that the energy market is competitive between the two sources of energy and facilitates electrification and accelerates grid-connections.

Question 4: What policy guidance should the government provide to the Ontario Energy Board (OEB) with respect to the long-term role of natural gas in Ontario's economy and opportunities for low-carbon alternatives in the gas system?

Response:
In addition to reviewing the governance frameworks for natural gas and electricity, the government can consider providing the OEB with the following policy guidance:

- **Supporting a Clean Electricity Grid**: In 2021, Regional Council approved the resolution to advocate for a phase out of natural gas from Ontario's electricity grid (Resolution Number 2021-451). A significant portion of GHG reduction actions in the CCMP are related to fuel switching systems from natural gas to electricity (e.g. installing heat pumps) and replacing internal combustion engine fleet vehicles with electric vehicles (EVs). The potential of

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these impactful fuel switching actions will be reduced if grid continues to get dirtier as the proportion of natural gas electricity generation increases and emissions associated with electricity consumption continue to rise. The trend of increasing of natural gas combustion for electricity generation puts Peel's 2030 and 2050 GHG reduction targets at risk by making fuel switching actions less impactful. If Peel, and other customers in Ontario, are to achieve their climate change goals, there is a need for the Province to provide clean electricity.

- **Supporting Grid Reliability**: In electricity systems, reliability is the ability to supply uninterrupted power amid disturbances (demand, resources, weather). Renewable power is critical to the energy transition, and variable sources such as wind and solar are expected to be the primary technologies. However, because they are variable, they need support from another energy source or technological solutions. Improvements in battery technology and demand-side management can go a long way to meet short-term fluctuations. However, natural gas generation will most likely be required to help renewable power manage long-duration storage needs and unexpected interruptions to supply. The government's policies on the long-term role of natural gas for electricity generation should consider supporting its use as a last resort/emergency fuel option to ensure the reliability of electricity system with the preference being to utilize non-fossil fuel sources of energy or technological solutions as a first response.
- **Optimizing Home Energy Efficiency Retrofits and Supporting Customer Choice**: Energy affordability is especially critical to low-income and rural households, which pay a disproportionate amount of household income on heating. This is pronounced in rural areas of Ontario that have much higher home energy costs than their urban counterparts, largely due to less access to natural gas, which to this point has been the most cost-effective energy source for home heating relative to heating oil and inefficient electric heating systems. Together with energy efficiency retrofits to reduce energy consumption and save money, these homes have the potential to leapfrog natural gas to other sources of energy, such as high efficiency electric heat pumps, should the electrical infrastructure allow for it. Importantly, it would also avoid locking into a significant investment in natural gas infrastructure for decades to come. The Government should consider exploring policy mechanisms to optimize energy efficiency retrofits, foster more choices for heating systems and help Ontarians, especially low-income households, make the necessary investments.
- **Supporting Sector-based Climate Change Plans**: Ontario's Indigenous and public and private sector leaders have climate change plans and/or environmental, social and governance (ESG) commitments that call for reducing natural gas demand or fuel switching altogether. As such, it is important that input is solicited from these stakeholders and considered for natural gas projects and long-term energy planning to ensure there is alignment with climate plans and to avoid the risk of stranding assets.

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Question 5: How can provincial planning processes be enhanced to support high growth regions, ensure greater coordination between energy resources, and better integrate municipal, distributor and regional planning processes?

Response:
In order to ensure that there is alignment and coordination across all stakeholders on important planning processes, enhancing transparency around decision-making and sharing of data and information while being mindful of privacy and security concerns are opportunities for continuous improvement. Information transparency plays an important role in driving decision making, validating actions taken and measuring progress. Access to relevant data is increasingly important for the Region's climate change response as it serves to benchmark current conditions and better understand the impacts of future decisions.

While the Region has access to useful internal data, there is a growing need for data from other levels of government and government agencies to help fill important gaps in information that the Region is not able to collect itself, develop key performance indicators (KPIs) and ensure that good climate and energy planning decisions are being made.

Furthermore, there is a need for guidance on how to translate, apply and down-scale complex data to inform decisions at the municipal level and resources are needed as this is beyond the capability of most end-users. Some examples of information that would support decision making include the financial risks of the current electricity generation, transmission and distribution system, assumptions made in long-term energy forecasting, the number of electric vehicles (EVs) on the road, and success of innovative technologies.

Question 6: What types of technical information and forecasts would best support sector participants and energy consumers as the system is built out for growth and the economy increasingly electrifies?

Response:

Technical information and forecasts are important for ensuring that all stakeholders are aligned by drawing from the same set of assumptions and information to make decisions about investments and find efficiencies in how their communities are planned. Below are some considerations for technical information and forecasts that would help sector participants make informed decisions as Ontario's grid expands.

- **Data on DER Hosting Capacity by Distribution Zone**: Information on the capacity of each distribution zone to host additional (Distributed Energy Resources (DERs) without significant upgrades would enable municipalities and developers to efficiently identify optimal locations for deploying DERs.
- **Detailed EV Charging Load Projections and Distribution Needs**: Projections on expected load increases from EV charging in specific areas, coupled with plans for distribution system upgrades, would inform public charging infrastructure placement and help regions like Peel better prepare for transportation electrification.

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- **Forecasted Price and Emissions Impacts from Renewables Integration**: Projections on how increased renewable integration and local DERs will affect hourly price (HOEP) volatility and the GHG emissions intensity of grid electricity at different times of day would help the Region make informed energy management decisions.
- **Real-Time Data on Grid Resilience and Reliability Metrics**: Access to detailed data on power outages—*including frequency, duration, cause, and impacted areas*—would be invaluable in identifying locations and infrastructure most susceptible to disruptions. This information could highlight where aging infrastructure or climate-vulnerable areas would benefit most from investments in grid resilience and DER/back-up power deployments.

Question 7: What further steps should the government take to enable households and businesses to manage and make informed decisions about their energy use?

Response:
Buying a house is a huge investment and it is important that residents have access to all available information. The government can enable this through the implementation of an energy labelling program to empower households to understand their energy use and make informed decisions to reduce their energy costs and GHG emissions. Best practices from across the world can be referenced to ensure that such a program is carefully designed and is able to succeed. According to the Smart Prosperity Institute, some important principles for the program to be successful include:

- **Accuracy**: The labels must accurately assess the home's energy efficiency and carbon footprint. Inaccurate or misleading labels will erode public confidence.
- **Actionable**: Providing an efficiency rating is insufficient; homeowners must be given information, recommendations and resources on improving their homes' energy efficiency.
- **Attainable**: Homeowners must be able to obtain an audit and label in a reasonable amount of time.
- **Affordable**: Well-designed programs can keep the out-of-pocket costs low, or zero, to help homeowners on a fixed income.
- **All-Inclusive**: To provide homeowners with details on their expected energy usage and greenhouse gas emissions, labels should also include expected energy usage, and GHG emissions from transportation, as where a home is located is a critical factor in a family’s energy use and GHG emissions from transportation.

Question 8: What actions could the government consider to ensure the electricity system supports customers who choose to switch to an electric vehicle?

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Below are examples of how the Province can support customers who want to switch to EVs.

Expand Funding for Charging Infrastructure: The provincial government can expand funding programs to support the installation of EV charging infrastructure in key areas, such as multi-unit residential buildings, municipal buildings, transportation corridors, high-traffic destinations, and public transit hubs.

Prioritized or enhanced funding offerings can also be considered for:

- Fast charging hubs in strategic locations;
- Charging designed with accessibility features for persons with disabilities;
- Chargers that are integrated with distributed energy resources *(e.g. renewable generation and battery energy storage systems)*
- Charging infrastructure that enables V2X *(e.g. grid, load, building, etc.) that* can allow vehicles batteries to supply electricity when it is advantageous to do so.

Implement Innovative Rate-Designs for Fast Charging Providers: Pilot and implement new rate structures to reduce financial risks for fast charging developers. Consider offering time-of-use (TOU) rates to innovate around current peak demand charges and help fast-charging hubs maintain cost-effectiveness, especially in the early stages of EV adoption when charging equipment may have a low utilization ratio.

Examples of utilities implementing TOU rates and/or reduced demand charges for EV charging hubs include:

- California - Pacific Gas & Electric's **Business Electric Vehicle (BEV) Rate**
- **California -** Southern California Edison's TOU EV Rate
- New York - Con Edison's Rider Rate for DC Fast Charging
- Minnesota - Xcel Energy's EV Charging Pilot Rate
- **Massachusetts -** Eversource and National Grid**'s EV Make-Ready Program and Incentives**
- **Hawaii - Hawaiian Electric** - Commercial Public Electric Vehicle Charging Facility Service

Accelerate Grid Upgrades: Increase funding and coordination with local distribution companies (LDCs) to expediently upgrade grid infrastructure to handle higher electricity demands. This is especially important for Peel Region, which is experiencing rapid EV adoption and notes in its Zero Emission Vehicle Strategy that as vehicles with longer driving ranges and bigger batteries become available, customers seeking faster and higher-powered home chargers can cause significant electricity grid constraints.

Consider Making EV Charging Readiness a Requirement for New Developments: Peel Region's Zero Emission Vehicle Strategy considers barriers to EV uptake and notes that many non-EV owners are concerned about charging and vehicle range. Particularly, charging at home is a notable challenge for residents who live in apartments or condos without charging stations. The Government should consider revisiting mandatory EV charging readiness requirements for residential

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developments, so local distribution companies can adequately size and plan for necessary grid infrastructure to support future EV uptake. Smart charging solutions, to manage peak demands, should be a primary consideration when prescribing 'EV charging readiness,' so electrical services are not oversized at the site level and grid infrastructure upgrades are optimized for cost effectiveness for the ratepayer.

Question 9: What actions should government consider that would empower customers to install innovative technologies to generate or store energy on-site to reduce costs and improve resiliency?

Response:
To increase uptake of innovative technologies by customers, the government can consider the following actions:

- **Funding to reduce risks for early adopters**: Early adopters can face financial challenges when implementing innovative technology. The government can consider introducing funding programs which would alleviable financial burdens and reduce risks. Importantly, funding programs should be designed with a focus on equity to ensure there is a diversity of solutions.
- **Regulatory burdens**: Early adopters can face challengers due to regulatory barriers which hinder the integration of new technology into existing systems. The government can help address these barriers to market entry and participation by periodically reviewing its regulations and taking the long-view in terms of anticipating what kinds of changes will be needed to enable the energy transition. Where regulations are required, the government should ensure that they fair and encourage competitive markets.
- **Sandbox solutions**: The market will ultimately determine the success of innovative solutions, however, the government can be an incubator for companies that want to enter the energy transition space. An innovation sandbox (or similar policy tool) can help remove non-technological barriers to innovation and encourage learning-by-doing while protecting consumers. This in turn can create a more favourable environment for the development and scaling of innovative energy solutions that can support electrification and the energy transition.
- **Continued investments in the skilled trades**: There are a finite number of workers which the entire energy transition industry is competing to acquire and this pool needs to be expanded if we are to meeting our goals for transitioning for a low-carbon economy. The government should continue to invest in the skilled trades and prioritize access that is representative of Ontario's diverse population, to ensure that the workforce grows and has the necessary literacy and resources to succeed in the energy transition.

Question 10: What policy or regulatory changes should government consider to address financial risks and support adoption of DER in the long-term?

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DERs are able to improve the management of electricity resources, maximize value to customers, and minimize overall system costs. They can also contribute to emissions reduction while supporting reliability and increasing resilience at the local level. To maximize the cost-effective potential of DERs, the market models and regulatory frameworks by which the distribution sector is managed, and the ways in which the bulk electricity system is planned and managed, will need to evolve. To address the financial risks of DERs and supports broader adoption, the government can consider the following actions:

- **Clarity on roles**: Some DERs, like district energy systems, are typically run as a utility that operates all the plants and networks, ensures service and manages the metering and billing of the services. In order to provide clarity, formality and validity to the process of establishing district energy systems, it would be helpful for the Ministry of Energy and Electrification to delegate authority to who can provide district energy services as a regulated utility. Having clarity around authority would also serve to de-risk the perceived financial risks of investing in district energy systems and concerns around quality, reliability and continuity of service for the community.
- **Strategic Alignment**: Incorporate DER infrastructure into larger Provincial projects, whether it be through manufacturing sector investments or in planned highway corridors, so the benefit of the project can be more easily achieved. The synergies or possible in-kind contributions can make DERs be more cost-effective solution and possibly a project incentive.
- **Customer base**: To get started, a district energy system requires a stable base load of customers. The first phase of most district energy systems is often the most challenging as significant capital needs to be deployed with only a portion of anticipated density or customer base. Phasing, scalability of systems and commitment from developers, building owners and homeowners to connect to the system are critical to establishing a stable customer base and as such, mandatory connection provisions for existing property owners and new developments through appropriate acts or regulations from the Province would be helpful.
- **Clarity on current state**: In order to make a business case for DERs and to address the perceived risks of adoption, the government can consider sharing information the current system. Information about the financial and service continuity risks of the current system, the downtime that the current system experiences and future vulnerabilities would enable a full understanding of the costs and risks of the centralized system and allow for a better comparison with DERs.

CONCLUSION

Peel Region supports the Ministry's efforts to build out of an affordable, reliable and clean energy system to meet the exceptional growth needs of Ontario and asks that the above comments be considered. If additional information or clarification is required, please contact Jeremy Schembri, Manager, Office of Climate Change and Energy Management, at jeremy.schembri@peelregion.ca.

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Thank you,

Signed by:
Christine Tu
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