ONTARIO GREENHOUSE VEGETABLE GROWERS

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December 13, 2024

Hon. Stephen Lecce
Ministry of Energy and Electrification
10th Floor
77 Grenville St.
Toronto, ON M7A 2C1

Re: Integrated Energy Resource Plan Consultation

Dear Minister Lecce,

Ontario Greenhouse Vegetable Growers (OGVG) strongly support the creation of Ontario's first integrated energy resource plan. OGVG members have contributed to Ontario by growing at a rate of 6% year over year for the past decade. The contribution to the growth from 170 greenhouse-farming families tending to over 4,000 acres of fresh cucumbers, peppers, and tomatoes, includes farmgate revenue of $1.6B and employment of over 32,000 people in high-quality jobs across the agri-food value chain in Ontario.

After careful review, OGVG strongly recommends the following actions in support of Ontario's first integrated energy resource plan:

- Remove the Agricultural Impact Assessments (AIA), and reverse the prohibition of energy projects in specialty crop areas, specifically for integrated on-farm generation projects with no impact on agricultural use, such as combined heat and power (CHP) replacements of boilers
- Support on-farm energy generation, storage, and alternate fuel projects including renewable natural gas (RNG) and hydrogen projects,
- Provide of a framework for the establishment of DERs to ensure the fair connection assets across territorial distribution boundaries
- Accelerate grid level transmission projects to support growth
- Extend the cost recovery period for new customer connections over a 40-year period
- Invest in carbon capture, purification, and concentration technologies to provide a supply of CO2 for agriculture, academia, and industry

<u>Enabling Integrated, On-Farm, Distributed Greenhouse Electricity Generation:</u>

OGVG members are ideally positioned to support Ontario's integrated energy resource plan though on-farm, integrated energy generation. OGVG members strongly urge the support of on-farm electrical generation by removing the need for Agricultural Impact Assessments (AIA) and reversing the prohibition of energy projects in specialty crop areas for integrated on-farm generation. The AIA is an essential tool to identify and evaluate the impacts of non-agricultural uses; energy generation integrated with the farm, is a non-agricultural use in name only and should be supported rather than avoided. Integrated assets, such as combined heat and power (CHP) units replacing boilers, enable on-farm power generation without

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additional land use to protect Ontario's valuable farmland and generate needed electricity. The modular nature and quick response of CHP units allow for grid balancing, while new CHP units run on natural gas, hydrogen, or blends thereof. Notably, the demand for CO_2 as a greenhouse farming input positions integrated on-farm generation as a means of supplying clean energy and support the wider energy transition and emerging hydrogen economy.

Diversifying farm operations to include power generation supports the financial stability of farms and distributes energy generation in support of a Distributed Energy Resource (DER) strategy. Providing a framework at the distribution level for cross boundary DERs, especially between local energy distributors and Hydro One distribution, is essential to ensure connections occur in a fair and non-exclusionary manner. Decentralization of power generation at the distribution level introduces more players in energy markets which drives competition to reduce costs to the benefit of the ratepayer and growth. Integrating DERs into the wider grid also increases the climate resiliency of high-growth areas where storm events cause damage to transmission corridors. The geographic constrains of the Windsor-Essex peninsula mean all transmission lines into the region exist along a less than 20 km wide corridor making it vulnerable to adverse weather events that typically cause significant electrical transmission disruption in neighbouring Michigan. Connecting greenhouse integrated generation in a DER framework decentralizes generation and provides climate resiliency to the agrifood sector which would otherwise face a significant loss of productivity and spoilage in the event of a prolonged power disruption.

Transmission and Energy Growth:

Supporting transmission level infrastructure to enable supply of electricity across the province is also critical. While DERs connect local power generation, ensuring transmission capacity is essential for base load and to allow DERs to participate in, and balance, the larger provincial grid. By 2035, the Independent Electricity System Operator (IESO) anticipates energy demand to quadruple in the region serviced by the Longwood to Lakeshore 500 kV transmission line. The Longwood to Lakeshore transmission project, on track for 2030, will add over 1,000 megawatts (MW) of transmission to the Windsor-Essex and Chatham-Kent region. Accelerating construction of the first line before the anticipated 2030 service date or building the anticipated second 500 kV line in parallel are two possible efforts to support grid level transmission. The high concentrations of greenhouses in Kingsville, Leamington, and Chatham-Kent not only provide significant demand for electricity from supplemental lighting, but with available transmission capacity, greenhouses could provide significant supply to support electrification.

While the IESO has projected electricity demand to grow by 75% by 2050, the IESO's Pathways to Decarbonization report, released in 2022, explored a scenario with a high pace of electrification of the economy and found that this could lead to a potential tripling of required electricity capacity by 2050. By contrast, Ontario's total 2020 end-use energy demand was 2,751 petajoules (PJ), or 764 terawatt-hours (TWh), which is more than 5 times the 2023 electrical energy demand of 137 TWh. The numbers suggest that the risk of overbuilding and stranded assets is less likely due to the ongoing demand of electrification. Building transmission assets will allow for currently underutilized integrated on-farm generation to support the electrical grid.

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Cost Allocation and Recovery:

The province should build on and prioritize recommendations 10, 15, and 25 of the Energy and Electrification Transition Panel (EETP) final report to enhance planning across natural gas, electricity, and other fuels. Following from recommendation 10, the Ontario Energy Board (OEB) and IESO should take steps to enable the effective evolution of innovative business models for diversified land uses to allow integrated energy generation and storage projects on-farm without adding red-tape. From recommendation 15, the OEB should conduct reviews of cost allocation and recovery policies, especially surrounding electricity connections where the Transmission System Code has created an anti-competitive environment. The current connection rules limit growth potential as businesses must either 1) Pay the full cost of the infrastructure upfront and wait for rebates as demand increases on the asset, or 2) Wait until neighboring competitors are ready to build to make the asset affordable. The government should clearly set out a policy vision for how electrification and the energy transition will be funded, as per recommendation 25, including a realistic assessment of the distributional impacts of funding choices on different groups.

The Role of Natural Gas:

Natural gas is a versatile, reliable, energy dense, quick response fuel that combusts to form CO_2 lowering its climate impact. Both natural gas and CO_2 are critical economic inputs that must be respected in planning for the energy transition. In the greenhouse context, natural gas is an essential fuel that provides heat and generates CO_2 which, along with supplemental lighting, is a critical input for greenhouse farming enabling higher crop production efficiencies per unit area. Investment in carbon capture, purification, and concentration technologies are critical to ensure products such as solid (dry ice), liquid, and gaseous CO_2 remain available to the economy. Support of renewable natural gas, natural gas hydrogen blending, will lower the impact of natural gas without sacrificing its utility. The OEB must ensure clear communication and public engagement for changes in the natural gas economy to ensure businesses manage and make informed decisions about their energy use. Business cannot afford to pay more for less in a globally competitive environment. Technical information about local energy capacity, timeliness of new supply, and distribution must be provided by the IESO and Hydro One to provide businesses with the confidence to expand and invest in Ontario.

Drawing on energy generation and storage from all parts of the economy, especially greenhouse farms, positions Ontario as a diversified, robust, energy superpower. Ensuring that cost responsibility rules reflect the growth potential of high-growth areas is essential to support economic development, growth, and electrification. OGVG members are experts at energy management and are ready, willing, and, with these changes made, able to further support Ontario's food security and energy needs.

Sincerely,

Richard Lee
Executive Director