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IESO Pathways to Decarbonization Study

Ministry of Energy

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3. **The IESO's Pathways Study shows that natural gas-fired generation will need to continue to play an important role in the system for reliability in the short to medium term. The IESO's assessment shows that most of the projected Ontario demand in 2035 can be met with the build out of non-emitting sources, but some natural gas will still be required to address local needs and provide the services necessary to operate the system reliably.**

Do you believe additional investment in clean energy resources 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 system and ratepayers? What are your expectations for the total cost of energy to customers (i.e., electricity and other fuels) as a result of electrification and fuel switching?

The David Suzuki Foundation believes that clean, reliable, affordable electricity is a right that everyone in Ontario and Canada deserves to have access to. We unequivocally disagree with the premise that electrification of the system to one that prioritizes non-emitting sources will inherently be more expensive or that fossil fuels are required to play an "important role" beyond 2035.

In May 2022, the David Suzuki Foundation's landmark "Shifting Power" report showed that moving to 100 per cent zero-emissions electricity by 2035 — while phasing out all natural gas electricity — would lead to a lower levelized cost of electricity than the business-as-usual case in Ontario and across Canada.

A zero-carbon electricity system is the affordable and secure solution that Ontario requires. Many Canadian and international studies have shown that household energy costs go down for everyone as the grid becomes zero-emissions, and as households move away from fossil fuels for home heating, transportation and other energy services.

Keeping household energy costs affordable and ensuring electricity system costs remain as low as possible benefits everyone in Ontario. In fact, the sooner Ontario phases out fossil fuel electricity generation, the sooner households in Ontario will see the benefits of this transition. In September 2022, the Canadian Climate Institute released an important study titled "Electricity Affordability and Equity in Canada's Energy Transition." It showed that as households move away from fossil fuels toward more clean electricity, their energy costs go down across all income categories. In March 2023, the Canadian Climate Institute followed up this work and showed that household average energy costs will be 12 per cent lower by 2050 by moving away from fossil fuels to clean electricity.

Investments in non-emitting electricity generation such as wind, solar, energy storage and interprovincial transmission are crucially important in the short term to actualize the transition. All electricity pathways benefit from prioritizing renewable electricity sources because they have become the cheapest sources of electricity in history. Wind and solar are markedly below the prices for natural gas, with much more predictable and stable pricing in the coming years and decades in Ontario. Further, in February 2023, Clean Energy Canada explored specific pathways that compare the cost of renewables and battery storage providing flexible, reliable electricity resources that are cheaper than natural gas in Ontario. Even without carbon pricing, wind power is set to be 40 per cent cheaper than gas-fired power in Ontario by 2030.

No electricity system will ever address energy poverty only by choosing low-cost electricity sources. This is why an energy poverty strategy with focused supports for low- and middle-income households will be important regardless of the electricity system mix. The David Suzuki Foundation explored specific solutions that are relevant to Ontario and Canada in its October 2022 report titled "Keeping the Lights On."

6. **The IESO's Pathways Study recommends greater investment in new non-emitting supply, including energy efficiency programs.**

Following the end of the current 2021-2024 energy efficiency framework how could energy efficiency programs be enhanced to help meet electricity system needs and how should this programming be targeted to better address changing system needs as Ontario's demand forecast and electrification levels grow?

The expansion of energy-efficiency programming for households throughout Ontario is a key strategy to support clean electrification and to lower household costs.

Along with board demand-side-management programming, the DSF believes specific supports are required for low- and middle-income households to unlock the health, comfort and cost benefits of energy efficiency programming. These include incentives for high-efficiency electric heat pumps, home energy retrofits and other residential efficiency measures. Efficiency Canada's "Efficiency for All" and "Canada's Retrofit Mission" offer important tools for policy-makers in Ontario.

Incentives for energy efficiency need to be innovative. Traditional financing strategies, such as rebates, have failed to accumulate large-scale public support as they pose a barrier to access by requiring availability of cash flow upfront. All supportive financing schemes should be developed and implemented with an equity lens to ensure fair inclusion of all Canadians in the clean energy transition. Moreover, program incentives need to be paired with favourable measures and policies across all levels of government to boost demand for energy efficiency.

Successful efficiency programming needs to be equitable, robust and well-aligned with other procedures and policies to address limitations and strengthen community resilience.

7. **The IESO's Pathways Study includes a scenario for over 650 MW of new large hydroelectric capacity to meet system needs in 2050.**

A recently released assessment estimates that there may be potential to develop 3,000 to 4,000 megawatts of new hydroelectric generation capacity in northern Ontario and 1,000 megawatts in southern Ontario.

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 a hundred years?

No, the DSF does not support investing in large scale hydroelectric assets. Our "Shifting Power" report, dated May 2022, demonstrated modelling pathways that move Ontario and Canada to affordable, reliable, 100 per cent zero-emissions electricity by 2035 that does not include any new large hydroelectric capacity.

We believe that wind and solar electricity, which are stable, least-cost and proven generation sources, provide the best opportunity for Ontario's future electricity generation mix. We believe that the largest opportunity for benefits lies in renewables being paired with energy storage, interprovincial and in-province transmission developments, board energy-efficiency measures and clean electrification programs.

This also applies to high-cost, unproven nuclear technologies such as small modular nuclear reactors. Simply put, these reactors are not required for Ontario to achieve 100 per cent zero-emissions electricity by 2035 and beyond. They only add costs to this transition, will not be ready in time to meet climate goals and are not worth the risk to communities in Ontario.

8. **The IESO's Pathways Study suggest that significant transmission capacity will be needed to help balance intermittent sources of electricity (e.g., wind and solar) and to ensure cost-effective supply can be delivered to meet growing demands from electrification and economic growth.**

Transmission will also be required to balance intermittent supply with dispatchable supply (such as natural gas and energy storage) and meet demand in regions with retiring assets.

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?

New interprovincial transmission connections and upgrades to existing transmission corridors and distribution systems will be critical for achieving 100 per cent zero-emissions electricity in Ontario and across Canada by 2035. Greater grid connectivity adds to Canada's advantage in the clean energy transition.

The DSF believes that Indigenous communities must have every opportunity to lead, own and benefit directly from all clean electricity projects, including new and upgraded transmission infrastructure. As such, in the spirit of reconciliation, Indigenous rights and title must be forefront. All stakeholders in the clean energy transition should centre Indigenous voices and uphold free, prior and informed consent for all Indigenous communities whose territories will be affected by upgrades to existing infrastructure or by new transmission line projects.

New transmission lines will require interprovincial cooperation. As such, the federal government has to play a key role to support this development quickly and cost-effectively. To begin, Ontario should leverage existing transmission lines with neighbouring provinces and increase their import capacity; i.e., bring in more clean, affordable hydropower from Quebec. Additionally, the federal government should

support, through funding and related studies, new transmission line developments between Ontario and neighbouring provinces.

Indigenous leadership and the federal government's support will be an important piece to achieving 100 per cent zero-emission electricity by 2035 for Ontario.

9. **Do you have any additional feedback on the IESO's "no-regret" recommendations?**

It is critical to note that IESO's Pathways Study fails to align with the national Clean Electricity Regulation framework. The CER and complementary federal measures seek to reach net-zero emissions by 2035 across Canada. The lack of interim targets between now and 2035 and disparity from the national standard are huge gaps in IESO's study and pose a risk to long-term and integrated clean energy transition planning in Ontario.