

Policy Coordination and Outreach Branch

Ministry of Energy and Electrification

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Toronto, ON

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Re: Integrated Energy Resource Plan Consultation – [ERO #019-9285](#)

December 13, 2024

The Atmospheric Fund (TAF) appreciates the opportunity to provide feedback to the Ministry of Energy to inform Ontario's first Integrated Energy Plan (IEP). This is a necessary step toward modernizing energy planning with a long-term path to guide Ontario's energy transition. This is a vital opportunity to shape the province's energy future by reducing emissions, promoting economic growth, and ensuring energy affordability for all Ontarians.

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?

[Ontario's Affordable Energy Future](#) makes clear that the province's clean grid has already put Ontario on the path to reduce province-wide emissions through electrification and establishes emissions reductions as a key aim of the IEP. Building on this foundation, the IEP should establish clear, economy-wide emissions reduction targets and technology-specific targets through the IEP process. These should include milestones for 2035 and 2050, with interim targets aligned with the five-year review cycle. Technology-specific targets should guide the adoption of key decarbonization technologies like heat pumps and electric vehicles with clear benchmarks for progress. These targets should be set and monitored by an independent body of non-elected officials aligned with the province's [long-term vision](#). This is a critical step in aligning Ontario's energy sector with the urgent need for decarbonization, strengthening the province's ability to attract businesses with low-carbon mandates, and securing the investment needed for the energy transition.

In order to achieve an affordable energy future, the IEP should set a clear target of achieving all cost-effective energy efficiency potential in Ontario. Electricity energy efficiency continues to be, by far, the lowest-cost energy source. The IESO's most recent Energy Efficiency Report shows that current programs are delivering energy at a levelized cost of only 2 cents per kilowatt hour, with \$3 of energy system benefits for every dollar of program spending. A policy commitment to maximizing cost-effective energy efficiency potential should also be reflected in the new Electricity Energy Efficiency Framework, along with a process to continually review achievable potential in the context of evolving technology and economic factors. There is also enormous potential to scale up energy efficiency in the use of natural gas, including but not limited to through beneficial electrification. Finally, energy efficiency can also be secured through regulatory instruments. For example, energy efficiency requirements in the Ontario Building Code have not been updated since 2017 and are increasingly out of date.

Ensuring widespread and open access to key energy datasets is a key red tape reduction measure that the government can act on immediately to benefit a wide range of stakeholders and investors. The IEP will introduce new authorities around technical information and reporting, offering an opportunity to address the energy sector's current lack of data accessibility and transparency. The IEP should extend Ontario's open-by-default approach to data and streamline access to energy planning data. This will cut red tape and create efficiencies by ensuring staff are focused on high-value tasks rather than responding to data requests, improve stakeholder decision-making, and enhance investment opportunities.

Planning for Growth

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?

Of the report's 29 recommendations, the following five have the greatest need for prioritization:

- **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. Expansion of natural gas distribution infrastructure should be seen as a last resort, given the risk of stranded assets resulting from the energy transition, and the resulting cost implications for ratepayers and /or taxpayers. Energy affordability issues in areas without access to gas distribution can often be more cost-effectively addressed through targeted programs to support energy efficiency, heat pumps, and/or distributed energy resources (e.g. solar). Stronger processes are needed to ensure the cost of gas distribution infrastructure expansion is compared against feasible alternatives that can achieve the same affordability outcomes.
- **Recommendation 7:** The Ministry of Energy should develop a strengthened framework for local energy planning and decision-making and take steps to facilitate its implementation,
- **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 17:** To make full use of the innovation in distributed energy resources and the electricity distribution sector, the OEB and IESO must continue to find ways within their existing mandates and in anticipation of the clean energy economy policy commitment (Recommendation 1) to provide proactive and transparent thought leadership on regulatory policy and critically review and revise their existing policies and processes.
- **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.

3: The government's priority is to ensure Ontario has the energy resources it needs to support growth. Are there opportunities to enhance the province's approach to procuring electricity generation supply to better serve this priority?

In ensuring the province has the energy resources necessary to meet demand, Ontario should enhance its electricity procurement approach by prioritizing non-emitting energy sources and securing its clean energy advantage. Investing in renewable and low-cost energy sources like wind and solar alongside storage solutions will help Ontario maintain its position as a clean energy leader and achieve its emissions reduction targets. We also strongly recommend that Ontario prioritize the development of programs and incentives to promote the development of small- and medium-scale non-emitting generation beyond net metering. Many of these resources (e.g. rooftop solar) can be located within transmission-constrained urban areas and would not require dedicated land.

Despite being among the most cost-effective strategies available, demand-side optimization through energy efficiency and demand-responsive DERs have been underutilized in Ontario. [Ontario is well behind many other jurisdictions](#) in North America in energy efficiency, representing untapped opportunities to reduce electricity consumption, lower costs for consumers, and enhance grid resilience. We look forward to the introduction of the 2025 – 2036 Electricity Energy Efficiency Framework, which should form a key part of the strategy outlined by the IEP. The IESO should be empowered and resourced to pursue the widespread deployment of DERs, which can improve grid reliability, reduce the need for costly infrastructure upgrades, and provide greater flexibility in balancing supply and demand. We are encouraged by the inclusion of consideration for leveraging DERs within the consultation on the IEP and provide more detailed feedback to these specific questions below.

4: 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?

TAF provided input to the Ministry of Energy's proposal to update cost responsibility rules for electricity system connections in response to [ERO #019-9300](#). We welcome changing the current cost allocation and recovery structure which poses barriers to widespread electrification. In brief, our recommendations include:

- **Enable Local Distribution Companies (LDCs) to rate-base costs:** Allowing LDCs to rate-base the costs of upgrades would provide the flexibility to socialize grid upgrade costs across all ratepayers, and remove a significant impediment for consumers looking to connect new loads.
- **Introduce a financial risk cap mechanism:** Establishing a financial risk cap mechanism can limit the potential for ratepayer exposure to exceptionally high upgrade costs.
- **Ensure accessible and transparent data:** Providing clear and transparent forecasting data would help align infrastructure investments with actual and projected needs, ensuring resources are allocated effectively.

These changes will encourage the adoption of low-carbon technologies and electrification by improving cost fairness, preventing early adopters from bearing a disproportionate share of upgrade costs. It also promotes consistent and planned upgrades, enhancing the grid's reliability and capacity to handle increased demand.

5: 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?

The government should set a policy direction to phase out the use of conventional natural gas for heating and hot water by or before 2050. This is needed to provide clarity to utilities, businesses, and consumers, creating the market conditions needed to drive investment in clean energy technologies and infrastructure. Setting a clear policy direction to phase out natural gas will also prevent the overbuilding of new gas infrastructure in developments that result in stranded assets or costly retrofits. Clear policy direction will enable and encourage the development of a cost-effective transition plan that minimizes stranded assets while ensuring energy system reliability and affordability. For example, plans are needed in the long term for which sections of the gas distribution grid will be decommissioned and when, and which sections will be repurposed to carry other fuels such as renewable natural gas (RNG) or hydrogen. While RNG and hydrogen are important to Ontario's energy future, the quantity available by 2050 is expected to be an order of magnitude less than current natural gas consumption. These alternative fuels are also unlikely to be cost-effective for general heating applications. In the long-term they are best reserved for meeting other energy needs in hard to decarbonize areas including certain industrial and backup power generation applications.

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?

The lack of data accessibility and transparency in Ontario’s energy sector creates inefficiencies that impact resource allocation, customer experience, and consumer choice. It also hinders effective planning, limits investment opportunities, and burdens the IESO and OEB with time-consuming data requests, detracting from their core responsibilities. The IEP offers an opportunity to enhance data accessibility and transparency, which is critical for effective energy planning and decision-making in Ontario. TAF recommends the following key actions:

- **Regular publication of high-quality data:** Regulations should prioritize regular publication of high-quality, up-to-date datasets in standard, machine-readable formats to support stakeholders such as regulators, customers, and project developers.
- **Alignment with leading jurisdictions:** Ontario lags behind other jurisdictions that provide greater transparency, including detailed energy market and infrastructure data and formal processes for accessing confidential information.
- **Open-by-default data:** Adopting an “open-by-default” principle, with appropriate security measures for sensitive data, would align Ontario with leaders like Alberta, California, and New York. Proactive data sharing would strengthen Ontario’s investment potential, improve system efficiency, and maximize the value of the IESO’s market design investments. Access to comprehensive data would empower stakeholders, enhance market participation, and support electricity demand growth.

Affordable and Reliable Energy

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

We support the creation of a single program delivery window for residential customers to access natural gas and electricity energy efficiency programs that is being pursued via the 2025 – 2036 Electricity Energy Efficiency (EE) Framework. This will simplify access to EE programs, leading to better program coordination and delivery, lower program costs, expanded reach, clearer market signals, and lower transaction costs for consumers.

As this program is developed, we underscore the importance of ensuring all households across the province, regardless of fuel source, have access to residential efficiency programs. We recommend that heat pumps are prioritized as central to residential energy efficiency initiatives, as they offer significant potential for savings, with the ability to deliver heating energy at efficiencies of more than 300%. While Ontario offers heat pump incentives, they are currently fractured into different programs based on income and current heating fuel source, leading to market confusion and significant gaps in eligibility.

Ontario should also improve the implementation of its Energy and Water Reporting and Benchmarking (EWRB) initiative and Ontario Regulation 506/18. Energy benchmarking ensures businesses and other stakeholders have access to comprehensive information about their energy usage and how it compares to similar properties and best practices. However, compliance with O. Reg. 506/18 remains low, and property owners continue to face significant barriers to accessing their own utility data in order to comply. More effort is needed to encourage compliance in general and to encourage or require utilities to enable automated uploading of energy data to the EWRB reporting software (ESPM) on customer request. Automated data uploading would also improve data quality, which is an ongoing problem. Improved compliance with EWRB would not only provide valuable information to building operators, but also provide utilities, municipalities, and other stakeholders with critically valuable data that can be used to design and implement better, smarter energy efficiency programs.

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

With the province planning to build 1.5 million new homes over the next decade, it is essential to proactively equip multi-unit residential buildings with electric vehicle (EV) charging infrastructure to support Ontario's EV transition. The government can advance this transition by promoting EV-ready parking spaces equipped with outlets for future Level 2 chargers. This ensures accessible and affordable charging infrastructure for a growing number of EV users in the homes they will live in for the coming decades, while also reducing long-term costs. A [study by the Clean Air Partnership](#) found that installing EV-ready parking at the time of construction is three to four times cheaper than retrofitting later, with costs dropping from \$10-20,000 per spot to \$2-3,000 per spot. The province should also encourage upgraded electricity panels in all new homes to accommodate the increased energy demand of EV charging, avoiding expensive future electrical upgrade costs.

The province should actively endorse and promote the adoption of 100% EV-ready requirements in municipal by-laws, using the City of Toronto's model as an example. By encouraging municipalities to adopt consistent standards for EV-ready parking, the province can play an important role in developing charging networks and accelerating the EV transition across Ontario.

TAF supported the province's introduction of the ultra-low overnight (ULO) rate plan in 2023 and encourage future innovations to rate design in Ontario to incentivize EV owners to shift their charging schedules and increase utilization of distribution and transmission grid infrastructure.

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

The November 2024 ministerial directive recognizing the value of DERs is a welcome step towards improving accessibility to innovative technologies. A local generation program will empower municipalities, businesses, and customers to participate more actively in the electricity system. Building on this momentum, further regulator and policy changes can maximize the potential of DERs and enable and empower customers to generate and store energy more effectively.

The Distribution System Code (DSC) requires modernization to align with the province's decarbonization goals and advancements in DERs. Elements of the DSC impose barriers preventing customers and LDCs from optimizing clean energy benefits. Addressing these barriers will support Ontario's energy transition, and TAF recommends that the OEB conduct a hearing to review and resolve the following key issues:

Inconsistent fees and approval timelines for microgeneration interconnection: Individuals pursuing small-scale renewable energy projects face challenges due to inconsistent connection fees and limited transparency across LDCs. Fees for connections and project approvals vary widely, leading to confusion and unpredictability for consumers. We recommend that the Ontario Energy Board hold a generic hearing to standardize fees for microgeneration connections across LDCs. This process should aim to improve transparency, streamline approvals, and create clear mechanisms for project rejections. It should also consider introducing batch applications to reduce administrative barriers for groups of customers applying together. Finally, further work is needed to ensure consistent approval timelines. While the DSC and related guidelines mandate certain response times, the interpretation of how response times are to be measured and reported is variable, resulting in highly divergent customer experiences across different LDCs.

10 kW microgeneration limit: Ontario's outdated 10 kW microgeneration limit constrains viable microgeneration projects. The limit forces unnecessary downsizing of projects and restricts benefits for consumers and the electricity system. In other provinces, such as Alberta and British Columbia, higher limits between 100 – 150 kW allow more flexibility and greater energy contributions. The OEB should review and update the microgeneration threshold, aligning Ontario's regulations with those in other jurisdictions and reflecting advancements in solar and battery storage technology economics and efficiency that enable larger, hybrid projects. This would help homeowners and businesses maximize the potential of distributed energy.

Restrictions on group solar applications: Ontario's community net metering (CNM) regulations enable residents and businesses to share excess electricity credits. However, barriers to implementation include administrative complexity, inadequate allocation mechanisms, and non-refundable fees. Current rules also place a significant burden on a single lead customer, discouraging collective solar projects. To address these challenges, the OEB should allow batch applications for group solar projects and introduce group pricing and rebates. Additionally, the DSC should be amended to [raise the net metering generation](#) threshold from the current one percent of an LDC's peak load to at least three percent.

Community net metering restrictions: CNM enables multiple individuals or entities within a community to share the benefits of a renewable energy system. Excess electricity generated by these systems is fed back into the grid, and participants receive credits to offset future electricity consumption. While Ontario's current behind-the-meter solar capacity was only [250 MW](#) – far behind New York State's [3,500 MW](#) capacity and growing – expanding CNM can significantly enhance renewable energy adoption. Currently, CNM is limited in Ontario, with the Sifton development in London serving as a pilot. Learnings from this project should inform the implementation of similar initiatives province-wide.

15-metre setback for ground-mounted solar installations: Ontario Regulation 350/12 requires a 15-metre setback between ground-mounted solar panels and property boundaries, making installations in urban or suburban areas with smaller plots impractical. Since the regulation's introduction in 2012, solar technology has advanced significantly – panels are now more efficient, compact and adaptable to various landscapes. Updating O. Reg. 350/12 to eliminate the 15-metre setback would better reflect technological advancements and enhance access to solar energy. Distances should be determined by municipal zoning by-law; where municipalities do not specify a setback, a default of 5 metres should apply across the province.

10: What specific actions could position the integrated energy resource plan to best leverage distributed energy resources (DER) that enhance local and province wide grids to support energy system needs reliably and at the lowest cost?

Expanding the use of smart devices and distributed generation is a cost-effective strategy for meeting Ontario's future capacity needs using existing grid infrastructure. The [IESO's DER Potential Study](#) indicates that DERs could meet all incremental peak capacity needs over the next decade, with a return of up to seven dollars per dollar invested.

The IESO and OEB are implementing initiatives to integrate and compensate DERs for their value to both transmission and distribution grids. While some resources, like load shedding from large industrial users, are already compensated via the Industrial Conservation Initiative and annual capacity auctions, the IERP should also focus on enabling small-scale DERs that are unlikely to participate in the IESO-administered market (IAM). This includes behind-the-meter consumer generation and storage, which can enhance local distribution grids by providing flexibility, reducing strain during peak demand, and increasing grid resilience. By incorporating small-scale DERs, the IEP can fully leverage their potential to meet Ontario's energy and capacity needs, while also supporting the EE Framework's goal of enhancing LDC engagement in energy efficiency programming.

To develop a robust and effective DER ecosystem, the government should:

- **Identify gaps in DER participation and compensation:** Recognize the types and scales of DERs unlikely to participate in the IAM and are unable to secure predictable and adequate compensation for the potential value they provide to the bulk system and local grids.
- **Develop targeted programs and incentives:** Create initiatives to address these gaps, encouraging cost-effective DER deployment in locations and at scales that add maximum value to the electricity system.
- **Publish local avoided cost estimates:** Provide geographically detailed avoided cost estimates (including energy, capacity, transmission, and distribution costs) to guide ratepayers, developers, and program administrators in optimizing DER placement and use.

- **Adopt a default “opt-out” model for demand flexibility programs for new construction:** Automatically enroll customers in programs such as Peak Perks that enable and incentivize demand response for newly built homes. Focus on seamless, user-friendly customer service to maximize participation.

The success of the Peak Perks program highlights the critical role of demand management in the province’s energy system. With over 125,000 households participating, Peak Perks demonstrates the potential for broader engagement in DER programs. By expanding to include more residential load types and automatically enrolling new homes, the program’s overall benefits could be further amplified.

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

To support widespread and sustainable adoption of DERs, the government should consider the following policy and regulatory changes:

- **Expand CNM regulation** to ensure access to distributed energy for all, including renters, condominium residents, and other non-property owners to access renewable energy through shared ownership or other models, while encouraging projects at the most efficient sites and scale.
- **Enable LDCs to access Global Adjustment (GA) funding** to mitigate revenue risks associated with new distributed energy projects. Enabling LDCs to share financial risks with ratepayers creates a more secure and predictable environment for advancing DER adoption.
- **Mandate transparent and granular grid data publication** by requiring the IESO and LDCs to publish detailed operational and planning datasets. These datasets should include information on grid constraints, capacity needs to help developers and consumers identify areas where DER projects can deliver the greatest benefit to the grid.

12: With the energy sector evolving and distributors considering new roles in serving customers, what barriers exist that limit local distribution companies from taking on new duties that could enable more efficient grid operations, leverage new technologies and further the integration of DERs?

To further support emissions reductions, we also recommend that the IEP enable the IESO to pursue and integrate DERs as part of its strategy for promoting all cost-effective energy efficiency measures. Clarity should be provided to local distribution companies (LDCs) that they have the ability to pursue DERs and that the IESO can provide funding for these initiatives. This approach would ensure that energy development is responsive to local community needs, reduces delivery costs, and adds valuable resources to the grid at minimal cost to ratepayers and the Government of Ontario. Supporting local energy solutions will strengthen grid resilience and contribute to a more flexible, sustainable energy future for Ontario with greater consumer choice.

Finally, TAF also supports the proposed direction for local flexibility within the framework. Allowing LDCs to tailor programs to meet the needs of their customers is crucial for addressing regional energy challenges effectively. LDCs should be given maximum flexibility to include DERs, ensuring that communities can leverage resources well-suited to local circumstances. Further, while we

agree that local LDC programming should not duplicate province-wide programming, LDCs should have the flexibility to provide local enhancements to province-wide programs (including additional incentives) where the same measures can meet localized needs.

13: What actions can the government take to enhance collaboration between the OEB, the IESO, local distribution companies, industry stakeholders, and local communities to support the investment and integration of DER?

The government should update mandates to provide clear guidance to LDCs that they are able to pursue DERs, coupled with assurances that the IESO will fund related initiatives.

Further, improving data sharing and transparency between the OEB, IESO and LDCs to optimize system planning, resource allocation, and customer engagement strategies will help ensure all stakeholders can make informed decisions.

14: What further actions could the government take to maintain an affordable energy system for Ontarians throughout the energy transition?

Ensure that demand-side measures, such as energy efficiency, demand flexibility, and local generation resources, are evaluated directly alongside incremental utility-scale supply-side procurement. This approach ensures a level playing field, allowing for a full comparison of costs and benefits between demand and supply-side solutions. By prioritizing all cost-effective demand-side resources, the electricity system can achieve enhanced affordability, reliability, and resilience. This not only reduces the need for costly infrastructure investments, but also improves grid efficiency, empowers consumers, and supports the transition to a more sustainable energy system.

Sincerely,
Bryan Purcell



VP of Policy & Programs
The Atmospheric Fund

About the Atmospheric Fund

The Atmospheric Fund (TAF) is a regional climate agency that invests in low-carbon solutions for the Greater Toronto and Hamilton Area (GTHA) and helps scale them up for broad implementation. Please note that the views expressed in this submission do not necessarily represent those of the City of Toronto or other GTHA stakeholders. We are experienced leaders and collaborate with stakeholders in the private, public and non-profit sectors who have ideas and opportunities for reducing carbon emissions. Supported by endowment funds, we advance the most promising concepts by investing, providing grants, influencing policies and running programs. We're

particularly interested in ideas that offer benefits in addition to carbon reduction such as improving people's health, creating local jobs, boosting urban resiliency, and contributing to a fair society.