

The Honourable Todd Smith, Minister of Energy

Ministry of Energy

77 Grenville Street, 7th floor

Toronto, ON

M7A 2C1

May 27, 2024

Enhanced Conservation and Demand Management Programs in Ontario

Dear Minister Smith,

The Atmospheric Fund (TAF) is a regional climate agency that invests in low-carbon solutions for the Greater Toronto and Hamilton Area. We are writing to recommend enhancing Conservation and Demand Management (CDM) in Ontario, offering our support for the ongoing development of a post-2024 CDM framework and its related energy efficiency programs.

We commend the February 2024 ministerial directive which tasked the Independent Electricity System Operator (IESO) to explore opportunities for expanded CDM programming, including programs supporting beneficial electrification and Distributed Energy Resources. We also support the direction to explore opportunities to deliver electricity and natural gas low-income and residential programs through a single-window approach. This emphasizes the importance of proactive leadership and collaboration within the energy sector to achieve Ontario's energy goals and prepare for a clean energy future.

Ontario is currently undergoing an energy transition, with significant increases in local and system-wide electricity needs expected as we electrify buildings, vehicles, and industries. Leveraging demand-side measures can greatly reduce the need for infrastructure upgrades and ensure the responsible use of ratepayer and taxpayer dollars. CDM programs directly reduce bills for program participants, while also saving money for all Ontarians through avoided generation, transmission and distribution costs. Furthermore, as you have previously noted, CDM programs "reduce our dependence on natural gas electricity generation, which is a priority for the government."

Post-2024 Conservation and Demand Management Framework

Ontario's 2021-2024 CDM Framework is nearing its end, and planning for a post-2024 framework is currently underway. In September 2023, we participated in the Ministry's engagement to scope electricity energy efficiency programming post-2024 and recommended that the province prioritize efficient electrification across sectors, pursue all cost-effective energy efficiency measures, and optimize existing grid infrastructure.

Reports by [Efficiency Canada](#) and the [IESO](#) indicate that Ontario lags comparable jurisdictions in North America in terms of energy efficiency, both in spending and in leveraging the corresponding savings. Emphasizing cost-effective energy efficiency measures over more expensive supply alternatives translates to lower costs to operate the electricity system.

We recommend that Ontario prioritize energy efficiency and increase the budget for CDM to align with its achievable potential, as calculated in the [IESO's 2022 Achievable Potential Study](#). The study's estimates are underpinned by an annual average budget of \$400 million per year over five years, and projects potential electricity savings of 28 TWh by 2042. However, we note that the APS budget did not factor in the expansion of CDM offerings to include beneficial electrification, and will therefore need to be increased to account for these new offerings. Investing in CDM offers substantial energy savings, which will significantly benefit ratepayers across the province in the form of lower electricity bills. It is crucial to allocate adequate funding to fully realize these opportunities and maximize the resulting benefits.

Single-window Program Delivery

We support the ministerial directive to establish a single-window program for electricity and natural gas low-income and residential efficiency initiatives. This will simplify access to energy efficiency 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 prioritizing heat pumps as central to residential energy efficiency initiatives. Heat pumps offer significant potential for savings, with the ability to deliver heating energy at efficiencies of more than 300%. While Ontario has 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.

We recommend that Ontario implement an [Oil to Heat Pump Affordability \(OHPA\)](#) top-up grant. Residents of Nova Scotia, Newfoundland and Labrador and Prince Edward Island can receive additional grants of up to \$5,000 through provincial co-delivery programs. Ontario has over 250,000 oil-heated homes that could benefit from the top-up.

We recommend that Ontario develop a program to deliver and leverage the federal [Canada Greener Homes Affordability \(CGHA\)](#) program. The federal government's 2024 budget allocated \$800 million over five years to support heat pump retrofits in low-to-median income households via the CGHA. Since then, the federal government has shown interest in securing partners to deliver and leverage this funding via provincial programs. Based on Ontario's share of the population, this could provide \$320 million in funding for heat pump rebates.

We recommend Ontario provide instant rebates for cold-climate heat pumps for non-income-eligible electrically heated homes. The IESO Energy Affordability Program provides funding for retrofitting electrically heated homes with heat pumps, but only for income-eligible households. We support providing deeper assistance to lower-income households but note this leaves a gap for middle class households.

Finally, we recommend that Ontario ensure all households, regardless of fuel source, have access to residential efficiency programs, including for heat pumps. Furthermore, we recommend that Ontario transition wherever possible to offering these programs through a single-window approach to streamline access and improve uptake and efficiency. The landscape of residential and low-income efficiency programs in Ontario is fractured and complex. Households are required to navigate a confusing array of programs and determine their eligibility based on fuel source, income and geography, with many households not presently eligible for any support.

New Construction Programs

Looking ahead, ensuring the affordability of the 1.5 million new homes Ontario plans to build over the next decade requires maximizing energy efficiency. Energy efficiency in new homes will not only reduce bills for new homeowners but will also substantially alleviate mid-to-long-term pressure and costs on the electricity system. The IESO's [Pathways to Decarbonization Study](#) forecasts that heating loads in new homes and buildings will be the biggest driver of Ontario's mid-term energy and capacity needs in a decarbonization scenario. However, there is currently no CDM program available for new construction.

We recommend that CDM programs for new construction be included in the upcoming framework. Historically, efficiency programs for new construction have yielded significant benefits. For example, the High Performance New Construction program provided an average of six dollars in benefits for every program dollar invested between 2016-17, making it the most cost-effective of all Ontario CDM programs over that period. Construction is the most cost-effective time to implement efficiency measures. In our experience, it is usually 3-5 times more expensive to implement measures via retrofit than at the time of construction.

CDM programming for new construction should focus on above-code levels of insulation, airtightness and HVAC system efficiency. These are critical factors in energy performance and the hardest measures to retrofit after the building is constructed. Insulation and airtightness (verified through airtightness testing) provide 30+ years of reliable low-maintenance energy savings. When paired with a high-efficiency heat pump system, they offer decades of affordability and comfort.

We also recommend that eligible measures include ground-source heat pumps (GSHPs). GSHPs can have a low incremental cost in new construction and offer up to 58% lower peak heating loads compared to air-source heat pumps.

Beneficial Electrification Programs

We were encouraged to see the ministerial directive for the IESO to explore beneficial electrification programs in the post-2024 CDM framework. Beneficial electrification is key to meeting Ontario's climate goals and transitioning to a low-carbon economy. **The Clean Home Heating Initiative is a successful model, and we support its expansion to more areas of the province, particularly northern areas where backup heating is required for an air-source heat pump.**

We recommend creating a new hybrid heating program for commercial and multi-residential buildings across the province. Combining electric heat pumps with legacy gas-fired equipment can provide tremendous savings in larger buildings. In one of our [recent multi-residential projects](#), we were able to reduce carbon emissions from heating by 60% with a hybrid system, at only one-fifth of the capital cost of a full fuel switch. A hybrid heating program for larger buildings could also evolve to include demand response fuel switching to alleviate winter peaks.

Distributed Energy Resources

We recommend that the CDM framework include all DERs that are unlikely to participate in IESO administered markets. We were encouraged to see the request for the IESO to explore DER programming in the next CDM framework. DERs have tremendous potential to

contribute to meeting Ontario's energy needs cost-effectively, as illustrated in the [IESO's DER Potential Study](#). The study shows the economic potential for DERs to meet up to 100% of Ontario's incremental capacity needs over the next decade, with up to seven dollars in economic benefits for every dollar invested.

We recommend expanding the Peak Perks program to include new homes as well as additional loads including water heaters, EV charging, and battery storage. The success of the Peak Perks program demonstrates the critical role that demand management can play in strengthening Ontario's energy system. With [over 125,000 households participating](#), this shows the potential for widespread engagement in CDM programs. By offering financial incentives to participants, the program not only enhances affordability but also empowers households to contribute to grid stability. New housing should be enrolled by default, with the option for future homeowners to withdraw without penalty. Including new homes could rapidly expand program participation and benefits.

TAF is encouraged by the progress made in advancing energy efficiency initiatives in Ontario and looks forward to the development of the post-2024 CDM framework. We would also like to reiterate our support for the single-window program delivery initiative, which will simplify access and cut costs for consumers. By prioritizing heat pumps and expanding successful programs like Peak Perks and the Clean Home Heating Initiative, Ontario can enhance the reliability and affordability of its grid. We look forward to continued collaboration on advancing CDM in Ontario for a cleaner, more efficient and prosperous energy future.

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.