THE ATMOSPHERIC FUND'S RECOMMENDATIONS FOR BUDGET 2023

- **Recommendation 1: That the government allocate at least $2 billion over four years to implement a widely available incentive framework for heat pumps.**

- **Recommendation 2: That the government recapitalize the Smart Renewables and Electrification Pathways program with at least $600 million and create a funding stream for Distributed Energy Resources.**

- **Recommendation 3: That the government provide funding of at least $500 million over five years for a distinct funding stream to support electric vehicle-ready infrastructure in multi-unit residential buildings through an expansion of the Zero Emission Vehicle Infrastructure Program.**

Recommendation 1: That the government allocate at least $2 billion over four years to implement a widely available incentive framework for heat pumps.

For Carbon Reduction

Fossil-fuel heating systems are the largest source of emissions in the building sector. Canada's recent Green Buildings Strategy Discussion Paper identifies that most buildings in Canada need to be transitioned to electric heat pumps. To align with Canada's binding 2030 and 2050 climate targets, heat pumps need to be installed in over half a million homes and buildings per year on average. Achieving this pace requires immediate and sustained federal investment, and any delay only compounds the difficulty of getting on track for Canada's climate targets.

For the Economy and Energy Affordability

The Government of Canada should prioritize climate investments that also serve to manage the impacts of inflation. Rapid uptake of heat pumps will help insulate Canadians from future gas price increases, while creating new local jobs. For example, Canada Green Building Council estimates the green buildings industry could support about 1.5 million direct jobs and $150 billion in GDP by 2030.

Industries associated with scaling up heat pumps urgently require clear signals of the pace of demand to enable the necessary market transformation. A multi-year funding program for heat pump adoption, with funding that increases year-over-year, will provide the necessary market certainty. Such a heat pump program would align with President Biden's decision to use executive authorities to promote domestic manufacturing for heat pumps in the United States. Paired with the Inflation Reduction Act, the U.S. is projected to install 7.2 million heat pumps. It is vital that the Government of Canada take action to scale up the supply and installation of heat pumps and ensure the benefits of the technology are available to Canadians of all incomes.

Fuel switching to heat pumps will also help insulate Canadians from inflation and the rising cost of fossil fuels like natural gas. While the Canada Greener Homes program provides some support, it excludes millions of Canadians who are in multi-family housing, as well as the 1.6 million low-income homeowners who can't afford the upfront costs or take additional debt burdens. The program should be equitable, tailored to reach all Canadians. To this end, we also support Efficiency Canada's recommendation to invest in improving energy efficiency for low-to-moderate income Canadians.

For Resilience

Widespread deployment of heat pumps will also help the country adapt to our changing climate and address the growing occurrence of heat-related mortality and morbidity, as demonstrated by the devastating heat dome in British Columbia in 2021. Over 600 Canadians died in that event, with 93% of deaths occurring indoors in a residential setting without air conditioning. Toronto Public Health has estimated that heat-related mortality claims an

average of 120 lives per year in Toronto alone, with that number expected to triple by 2050 without intervention. Heat pumps provide efficient cooling and heating and can eliminate heat-related mortality in retrofitted buildings. The heat pump incentive framework should prioritize those most vulnerable to heat-related mortality, including seniors and those with chronic cardiovascular or respiratory diseases.

We support the two-pronged proposition in the Government of Canada's Green Buildings Strategy Discussion Paper, with its long-term regulatory approach to phasing out fossil fuel heating systems, enabled by immediate investments in an incentive framework to prepare the market. Allocating funding is now necessary to increase industry capacity to supply and install heat pumps in advance of future regulations.

We commend the federal government for its recent announcements of $500 million over four years for retrofitting low-income oil-heated homes with heat pumps through the Low Carbon Economy Fund and the Oil and Heat Pump Affordability Grant. In addition to sustaining this commitment, further funding should target a transition away from other heating fossil fuels besides oil, and other building types, in order to help more Canadians switch to electric heat pumps.

Recommendation 2: That the government recapitalize the Smart Renewables and Electrification Pathways program with at least $600 million and create a funding stream for Distributed Energy Resources.

For the Transition to Net-Zero Electricity

Clean, abundant, and affordable electricity is at the heart of the transition to a net-zero economy. The Government of Canada has committed to a net-zero electricity system by 2035, a target shared by key allies and trading partners including the U.S. and the U.K. The proposed Clean Energy Regulations (CER) will be critical to achieving this target but is not sufficient in isolation; the CER performance standards are not proposed to come into effect until 2035, meaning it will have limited impact on emissions over the next decade. Achieving near-term benefits, and getting on track for net-zero electricity, requires immediate investment. While Canada has ambitious clean energy targets, investment is not keeping pace. In contrast, the U.S. is investing over $100 billion in clean electricity through the Inflation Reduction Act.

For Managing Impacts of Inflation

A key part of our energy transition is to produce, store, and manage clean electricity close to where it is needed through Distributed Energy Resources (DERs). Compared to centralized infrastructure solutions, DERs are faster and easier to site and build, require less investment in enabling transmission and distribution infrastructure, and provide direct economic benefits to the businesses, households and communities that host them. Ontario's Independent Electricity System Operator (IESO) recently published a study on DER potential, showing that DERs have a vital and cost-effective role to play in meeting our energy needs. The study shows

economic potential for DERs to meet 100% of Ontario's incremental capacity needs over the next decade, with up to seven dollars in economic benefits for every dollar invested. This supports local economies, carbon reductions, and does not require lengthy and costly approval processes. Nevertheless, DERs are an emerging approach to meeting system needs, and innovation and capital investment is needed to convert the economic potential into deployment at scale.

For the Clean Energy Economy

Federal government support for innovators across Canada could play a critical role in unlocking the potential of DERs and accelerating private investment. Budget 2022 allocated $600 million to expand the Smart Renewable and Electrification Pathways (SREP) program. However, this program excludes most DERs due to the minimum project sizes of four megawatts of generation or one megawatt of storage, and is already oversubscribed despite its expansion. **We recommend allocating at least an additional $600 million to recapitalize the SREP program, and creating a dedicated DER stream** (or a new DER funding program). Rather than contracting directly with hundreds of individual DER hosts, the DER stream should be deployed through third-party delivery organizations that develop and aggregate individual DERs and flow through federal funding to ultimate recipients. This would be like Natural Resources Canada's approach with the delivery organizations stream of the Zero Emissions Vehicle Infrastructure Program. Delivery organizations might include municipalities, utilities, provincial agencies, and/or private companies. Delivery organizations are better placed to reach individual DER hosts and would relieve the federal government of the administrative burden associated with funding relatively small individual DER projects.

A clean electricity grid with low or no carbon emissions, such as the one being pursued by the U.S. through the IRA, will reduce the cost of electricity in the U.S. by between 5.2 to 6.7% over the next decade. Canada must undertake similarly ambitious efforts, and there is an important role for the Government of Canada in staving off inflationary pressures in our electricity system, and ensuring the transition to a net-zero grid is managed in a way that enhances energy affordability.

Recommendation 3: That the government provide funding of at least $500 million over five years for a distinct funding stream to support electric vehicle-ready infrastructure in multi-unit residential buildings through an expansion of the Zero Emission Vehicle Infrastructure Program.

For Equitable Access to EVs

EVs cost less to own and operate in the long run, and represent new economic opportunities, so they need to be available to everyone.

Roughly one third of Canadians live in multi-family buildings (MURBs), and a disproportionate number of lower income households specifically. MURBs have significant barriers to installing chargers due to higher costs and increased complexity when compared to installing chargers

in single-family homes. With 80% of electric vehicle charging happening at home, serving apartments and condos is the only way to enable a large swath of the population to go electric. Natural Resources Canada estimates we'll need 500,000 more EV chargers in existing multi-residential parking lots by 2025 to meet Canada's charging needs, and only 50,000 of the needed chargers are installed today.

The current ZEVIP program represents an important first step to supporting EV charging installation in MURBs. However, eligibility is limited to supporting the installation of discrete EV charging stations; MURBs cannot presently use ZEVIP funding to invest in the electricity upgrades and associated construction costs required to provide additional parking spaces with an energized outlet which can then support more Level 2 charging stations down the road ("EV readiness"). Without the available funds to design their EV charging infrastructure in a forward-looking way or to invest in the required electricity upgrades upfront, most buildings are likely to implement a series of incremental electrical renovations as EV demand grows in the coming years. This delays total installations, drives up total costs, increases the chance of stranded assets, and makes it more difficult for residents to switch to EVs.

For Future Proof Buildings

Funding specifically designed to promote comprehensive (at or near 100%) EV-ready retrofits in MURBs could avoid these challenges and enable widespread EV adoption much more cost-effectively than an incremental approach to adding EV charging. Although the cost of undertaking a comprehensive EV-ready retrofit in an existing MURB involves a larger upfront investment, this investment is much more economical in the long run than undertaking multiple projects to install a small number of charging stations at a time. This point is reinforced in a Natural Resources Canada-funded report, which recommends that MURBs plan their EV charging installation in a way that sets "the building up for future success (e.g., 'future proofing') over the coming 10 to 20 years, rather than focusing on solutions that solely meet immediate needs."

The CleanBC Go Electric funding program is a North American leader in promoting EV-readiness in MURBs and should be replicated federally. This program provides funding not only for EV chargers but also for EV-ready planning by qualified consultants and for making each parking space EV-ready. The EV-ready installations supported under this program to date have been about twice as cost-effective as incremental EV charging installations. If the Government of Canada were to introduce an EV-ready funding model to support MURBs across Canada, it would accelerate the uptake of EVs among MURB residents while making more efficient use of public dollars.

We therefore support the recommendation by Electric Mobility Canada to introduce a funding program that enables at least one million parking spaces in existing MURBs to become EV-ready within the next five years. The simplest way to achieve this would be to expand the successful federal Zero Emission Vehicle Infrastructure Program and create a dedicated EV-ready MURB stream. Informed by TAF's own experience delivering the program, the need and demand is clear and still unmet. Our EV Station Fund was fully subscribed within six months,

with more applications from multi-family buildings than funding available. With federal sales targets for EVs now shifting the market, the government is responsible for supporting adequate charging access for everyone.

Sincerely,

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VP of Policy & Programs
The Atmospheric Fund

About The Atmospheric Fund

The Atmospheric Fund (TAF) is a regional climate agency that serves the Greater Toronto Hamilton Area. Above we have outlined our recommendations for the federal government's 2023 budget. We narrowed the broad scope of possible climate recommendations down to three asks with potential to dramatically reduce Canada's carbon emissions. These also have the potential to improve the health and livelihoods of many Canadians by improving air quality and by reducing costly energy and transportation burdens. For more information visit taf.ca