

Cathrine Regan, Executive Committee Secretariat

12th floor, West Tower, City Hall

100 Queen Street West

Toronto, ON

exc@toronto.ca / tel. 416-392-4666

December 6, 2021.

Dear Executive Committee Members,

Toronto Hydro has a crucial role in the transition to net-zero, and we congratulate them on completing their first Climate Action Plan (the Plan). However, the Plan is far from perfect. Further and ongoing collaboration to refine the actions and ensure alignment with the City's Net Zero Strategy will be needed.

Critically, Part 1 of the plan should include the enormous potential of distributed energy resources, or “non-wires alternatives” to minimize infrastructure costs and ratepayer impacts. While continuing to upgrade Toronto’s electricity distribution system is a core Toronto Hydro function, business as usual is neither financially, nor environmentally, sustainable. In addition to traditional infrastructure, grid modernization must incorporate aggressive, strategic demand management, behind-the-meter and grid-connected distributed generation and storage, and active facilitation of customer participation. This will capitalize on the current technological trends and emerging technologies where costs continue to plummet, and leverage the expertise of world-class local service providers.

We agree with the staff recommendations for collaborative analysis to refine goals and actions, and to develop spatial and temporal forecasts for electricity demand. In addition to the City of Toronto staff recommendations, TAF suggests that the scope of the Q2 report back specifically include the following:

- a. Targets and strategies for maximizing the cost-effective use of non-wires alternatives;
- b. A plan for ensuring the proposed Climate Advisory Services are coordinated with existing programs run by EED and The Atmospheric Fund in order to maximize synergy and minimize duplication.

However, further analysis and research should not and need not delay climate action. Getting on track for Toronto’s 2030 and 2040 climate targets requires immediate acceleration of climate action beginning in 2022. **We urge the City to request that Toronto Hydro immediately begin refinement and implementation of elements of the Plan which**

are compelling and cost-effective, concurrently with the further analysis and study staff have recommended, specifically:

- c. the LED streetlighting conversion project, in partnership with the City, and work with the Vision Zero team to prioritize LED conversions in areas with high incidence of traffic-related injuries and fatalities;
- d. a large-scale solar and energy storage program (as part of the proposed climate investment program) that offers turnkey project delivery with no up-front costs to home and building owners and is coordinated with EED's SolarTO and financing programs;
- e. the expansion of on-street charging for electric vehicles (as part of the proposed climate investment program) building on the success of the pilot completed in 2020 in with Transportation Services;
- f. that Toronto Hydro provide EED with regular updates on the specific areas of the City where grid constraints prevent installation of distributed energy resources, and work with EED on resolving those constraints, including through joint advocacy to the Provincial Government and the Ontario Energy Board where necessary.

Background

Electrification of heating and transportation is a key strategy for achieving Toronto's climate targets and is inevitable, and therefore it is in Toronto Hydro's best interest to prepare now. The federal government is planning to implement a zero emissions vehicle mandate which will accelerate the shift from internal combustion engines by 2035. Regulation of gas-fired heating equipment is also in the works on the same timeframe and the market for heat pumps is growing rapidly. Consumers will benefit from electrification overall, as EVs have far lower fuel and maintenance costs, the rising price on carbon makes fossil fuels more expensive, and renewable electricity and storage costs continue to decline. Taking this context into account, Toronto Hydro's plan requires further consideration.

The first component of the Plan is about modernizing and expanding the grid to enable electrification of heating and transportation. This is critical work and part of Toronto Hydro's core mandate. **What's missing is the enormous opportunity to minimize ratepayer impacts** and maximize carbon reduction through the use of Distributed Energy Resources (DERs) as non-wires alternatives. While some traditional electricity infrastructure updates (e.g., expanded transformer stations) are certainly needed to add capacity or reliability, they are expensive and slow to deploy. In contrast, DERs including solar PV, storage, demand/response and conservation can be deployed much faster and strategically in electricity constrained neighbourhoods and where capacity growth is expected. This 21st century approach can achieve the desired outcome at a lower cost for ratepayers, and also generate multiple benefits including carbon reductions, system resilience, jobs and economic value from deployment of cleantech. **Toronto Hydro should maximize the use of non-wires alternatives.**

The second part of the Plan is about providing customers with climate advisory services to promote climate action. While we support Toronto Hydro's engagement in this area, we note that the proposed services overlap or intersect with services offered by the City of Toronto (e.g., Navigation Services, SolarTO, Green Will) and TAF (Retrofit Accelerator). **Toronto Hydro should coordinate closely with the City and TAF in climate advisory services to maximize synergy and minimize duplication.**

The third part of the plan is about direct investment in climate solutions, including LED streetlighting, renewable energy, and electric vehicle charging. **Toronto Hydro should move forward with these three proven, best-practice climate action investments which can deliver value and impact for Toronto.**

Recommendations:

First, the City and Toronto Hydro should move forward immediately with the proposed LED streetlighting conversion. We note that [City Council has previously requested](#) development of a plan to convert Toronto's streetlights to LED. LED streetlighting has a solid business case and will pay for itself through reduced energy and maintenance costs. It is a proven technology adopted by most major North American cities. LED streetlighting offers reduced light pollution and can greatly improve lighting quality, contributing to the City's Vision Zero goals.

Second, Toronto Hydro should build on the success of the on-street charging pilot and expand implementation in targeted locations across the City.

Third, Toronto Hydro is well placed to collaborate with the City on a large-scale solar and storage program, which could combine the City's existing SolarTO programs with Toronto Hydro's expertise in procurement, contracting, and grid connection. The City's Net Zero Strategy requires a massive ramp-up in solar and storage over the next three years and it won't be possible to hit these targets by limiting action to encouraging and advising individual building owners. A large-scale program can reduce costs through economies of scale and aligns with a robust grid modernization strategy (e.g., non-wires alternatives).

Implementing these and other elements of the Plan will allow Toronto Hydro to mobilize capital from a range of sources, including funding from the federal and provincial governments and the private sector. Funds for climate action are available but cannot be accessed without first developing and committing to implementation of high-quality programs and projects. For example, the federal government will be launching a call for proposals under its ZEVIP program to fund on-street charging in Q1 2022 and has an open program to fund large-scale renewable energy projects (NRCan's SREP program). Toronto cannot afford to let these funding opportunities pass by to pursue further research and analysis.

We look forward to reviewing the detailed actions outlined in the report back to Council in the second quarter of 2022. We also look forward to supporting Toronto Hydro as it implements

these important programs, which are vital to advancing electrification of heating and transportation and achieving Toronto's ambitious climate targets.

Sincerely,



Bryan Purcell
VP of Policy and 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.