TORONTO ENVIRONMENTAL ALLIANCE

A Greener City for All

November 29, 2023

Toronto City Hall
100 Queen Street West
Toronto, Ontario
M5H 2N2

RE: IE9.7 - City Renewable Energy Programs

Dear Members of the Infrastructure and Environment Committee,

The Toronto Environmental Alliance (TEA) strongly endorses the recommendations made in Item IE9.7: City Renewable Energy Programs. In addition to our endorsement, we have notes in two areas of the proposed motions that will help the City reach its TransformTO goals.

Dramatically increasing renewable electricity generation and storage within Toronto is critical for meeting the City's 2040 Net Zero goals. **Toronto's Net Zero Strategy Technical Report calls for a significant increase in renewable energy production and storage**, including an increase in wind capacity, solar generation on buildings, ground-mounted solar in areas such as parking lots, and an increase in onsite battery storage. Undertaking these at scale will reduce the amount of emissions from the city's electricity consumption while increasing the resiliency of the city's power grid.

This is particularly important because the City does not have full control over provincial energy policy. Emissions from Ontario's electricity grid have recently increased as a result of the province increasing the amount of fossil gas in Ontario's electricity supply. According to The Atmospheric Fund's 2022 Carbon Emissions Inventory Report released last week, **emissions from the provincial electrical grid have risen 26%**, contributing to an increase in the city's year-over-year building emissions.

Renewable electricity generation and storage

On Recommendations 1 and 2, TEA supports the City of Toronto and Toronto Hydro working together to ease the process of installing smaller-scale renewable energy and storage projects across the City. **We strongly believe that the City and Toronto Hydro must do much, much more to generate and store electricity within the City of Toronto**, particularly since the carbon intensity of the provincial electricity grid is rising.

To significantly increase the production and storage of renewable energy in Toronto, the City and Toronto Hydro must tackle the following issues:

1) **Removing barriers** that prevent Torontonians from installing small-scale renewable electricity generation and storage, particularly small-scale solar generation and battery storage;
2) **Significantly Increase marketing and education to Torontonians** about the financial benefits of producing and storing renewable electricity (especially solar power) on site;
3) **Dramatically improve monitoring and reporting** of local renewable energy production across the City;
4) **Explore innovative financing and business models** that would make it faster and easier to both produce and store renewable energy, especially solar photovoltaics.
5) **Incorporate renewable energy production and storage to support public and community buildings to become resilience hubs**, as committed to in the TransformTO Short-Term Implementation Plan. This would enable them to provide essential services during power outages due to extreme weather events.

District Energy Systems

TEA also strongly supports the exploration and expansion of district energy systems, as outlined in Recommendations 3, 4, and 5. When in the pre-planning stage, **TEA strongly advises that proper carbon accounting analyses be conducted when considering district energy solutions.**

District energy solutions can be highly efficient low carbon ways to heat and cool buildings. They are, however, both capital and carbon-intensive to build and therefore are more effective when implemented in larger-scale projects rather than smaller homes. Meanwhile, there have been considerable advancements in the affordability and availability of cold weather heat pump systems that are capable of both heating and cooling the air and water in buildings.

When assessing new district energy projects, the City of Toronto should undertake a proper carbon accounting-based cost-benefit analysis that compares them with the relative cost and carbon intensity of modern carbon-free alternatives, such as modern cold weather heat pump systems. It would not be an ideal outcome if the city were to undertake a carbon- and capital-intensive district heating and cooling system if servicing a similar number of buildings with cold weather heat pumps would be more cost- and carbon-effective.

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In conclusion, Toronto Environmental Alliance supports the recommendations made in IE9.7 with the following notes:

On Recommendations 1 and 2, TEA believes that the City of Toronto and Toronto Hydro must do much, much more to encourage the local production and storage of renewable energy, and **we outline specific issues that must be addressed, above.**

On Recommendations 3-5, **we encourage the city to do a proper carbon emissions life-cycle assessment during district energy pre-planning stages** in order to compare the carbon intensity of district energy systems with those of alternatives such as large-scale installation of cold weather heat pumps.

Thank you for your consideration.

Sincerely,

How-Sen Chong
Climate Campaigner
Toronto Environmental Alliance