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Ontario Energy Board  
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September 18, 2024

**EB-2023-0195 – Toronto Hydro-Electric System Limited (Toronto Hydro)  
2025-2029 Custom Rate Application  
Pollution Probe Submission on Innovation Fund**

Dear Ms. Marconi:

In accordance with OEB direction for the above-noted proceeding, please find attached Pollution Probe's submission on Toronto Hydro's proposed Innovation Fund. Overall, Pollution Probe supports the establishment of an Innovation Fund for the period of 2025-2029, subject to the conditions and improvements noted in the Recommendation section below.

Introduction

The primary issue pertaining to the proposed Innovation Fund is **Issue 2.4 - Is the proposed Innovation Fund appropriate?** Additional issues related to the proposed Innovation Fund are:

- 1.3 - Are the rates and bill impacts resulting from Toronto Hydro's application appropriate?
- 1.4 - Did Toronto Hydro appropriately consider customer needs and preferences in the formulation of its proposed spending?
- 9.1 - Are Toronto Hydro's proposals for rate design (including, but not limited to, fixed / variable split, loss factors, retail transmission service rates, specific and other service charges, and rate mitigation proposals) appropriate?
- 10.2 - Are Toronto Hydro's proposals for the establishment of new accounts, closing of existing accounts or continuation of existing accounts appropriate?

The Innovation Fund details are outlined in Exhibit 1B, Tab 4, Schedule 2 and more specifically<sup>1</sup>:

In alignment with the Ontario Energy Board's ("OEB") statutory objective to facilitate innovation in the electricity sector, Toronto Hydro proposes to establish an Innovation Fund to support the design and execution of innovative pilot projects over the 2025-2029 rate period. The pilot projects to be deployed through the Innovation Fund would focus on

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<sup>1</sup> Exhibit 1B, Tab 4, Schedule 2, Page 1.

testing new technologies, advanced capabilities, and alternative strategies that are responsive to the OEB's expectations expressed in the Framework for Energy Innovation ("FEI") report:

*The OEB expects distributors to modify their planning and operations to prepare for DER impacts on their systems, including integrating these resources cost-effectively, while maintaining reliable service for their customers. Distributors are also expected to consider DER solutions as NwAs when assessing options for meeting system needs.*

Toronto Hydro proposes to allocate approximately \$16 million to the Innovation Fund to be collected through a rate rider, rather than through base rates, in order to provide greater transparency to ratepayers on the bill and flexibility to the utility to determine how the funds should be allocated across capital and operational expenditures on the basis of the selected projects. In addition, Toronto Hydro proposes to establish a new variance account to record variances between the amounts collected by the rate rider and the actual costs incurred to execute projects as part of the Innovation Fund.

#### Need for Toronto Hydro Innovation

Toronto Hydro is in a unique position to deliver long-term value to its ratepayers, aligned with strategic issues such as Distributed Energy Resources (DERs) or other relevant opportunities that align with consumer/system energy needs, integrated resource planning and leading edge technology solutions. Pollution Probe believes that Toronto Hydro and its related territory is one of the best opportunities in Ontario to consider and implement innovative energy solutions in support of the Energy Transition. Through careful collaboration and effective governance, the Innovation Fund can lead to valuable advances that benefit Toronto Hydro customers and can be leveraged more broadly by the OEB, IESO and other LDCs. Toronto Hydro has confirmed that it intends to collaborate with parties including IESO and the OEB over the rate term<sup>2</sup>. By including specific conditions in the OEB Decision, this will provide comfort to all parties that Toronto Hydro will take all reasonable efforts to collaborate and build it into the formal governance process that was not included in the Toronto Hydro evidence.

The Toronto Hydro evidence does a good job of outlining the broader need and value of their proposal for the Innovation Fund. These include alignment with OEB and government interests to advance innovation in the sector and implement real solutions that will unlock beneficial solutions as the Energy Transition continues to accelerate. The City of Toronto is one of the highest value locations to apply these tools and leverage the outcomes (innovative solutions and lessons learned) more broadly in Ontario. As outlined in the Settlement Proposal filed with the OEB<sup>3</sup>, continuing to innovate and collaborate on leading edge customer-focused solutions over this rate term is an important component to remain aligned with the Energy Transition and the City of Toronto TransformTO Net Zero by 2040 target. Toronto is one of the best opportunity to apply Innovation Funding in an efficient manner. This is why IESO selected Toronto as the target area for a Regional DER Potential Study<sup>4</sup> which is

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<sup>2</sup> REVISED Final Transcript for EB-2023-0195 TC5 April 12 2024, page 35.

<sup>3</sup> THESL\_Settlement Proposal\_20240816, page 56 of 57.

<sup>4</sup> THESL\_Settlement Proposal\_20240816, page 55 of 57.

complimentary to Innovation Fund opportunities over the rate term and beyond<sup>5</sup>. The timing is good since the IESO DER Potential Study (Toronto Region) has been launched in collaboration with Toronto Hydro and is forecasted to be completed in spring 2025.

Toronto Hydro has been a leading LDC in OEB innovation and collaboration activities including the OEB’s DER Connections and Regional Planning Process Review Consultation (RPPAG). In fact, Toronto Hydro Chaired the RPPAG’s Load Forecasting Subgroup which focused on opportunities to improve net load forecast coordination with municipal and regional planning. The Innovation Fund can enable implementation of real projects that bridge gaps identified through the process in collaboration with the local energy and emissions plan.

Toronto Hydro has already taken the important step of initiating and building the baseline Future Energy Model that will enable it to enhance demand modeling opportunities (including DERs) and over the rate term can align this modeling with the demand model used for Regional Planning over the term. Targeted advancements through the Innovation Fund will provide real project results that can be leveraged to mature the model and related inputs. The Toronto Hydro evidence includes many examples of how this is proposed to be done and below is one summary diagram which outlines these opportunities and the approach Toronto Hydro proposes to use.

Figure 1: Future of Energy System Diagram<sup>6</sup>

## Future of the energy system (2030? 2050?)

### Decarbonization

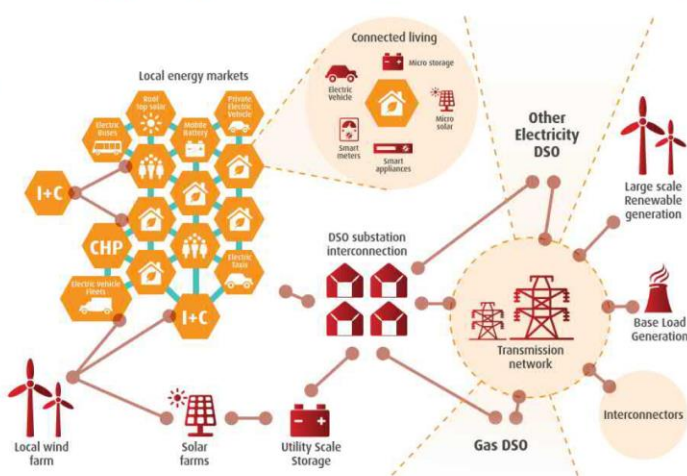
- Electrification of Heat and Transport
- Increased Distributed Renewable Generation
- Micro generation and storage
- Grid Scale Storage

### Digitalization

- Grid IT/OT
- Smart Homes
- Virtual Power Plants
- Flexible Connections

### Decentralization

- Microgrids
- Local Energy Markets
- Community Energy

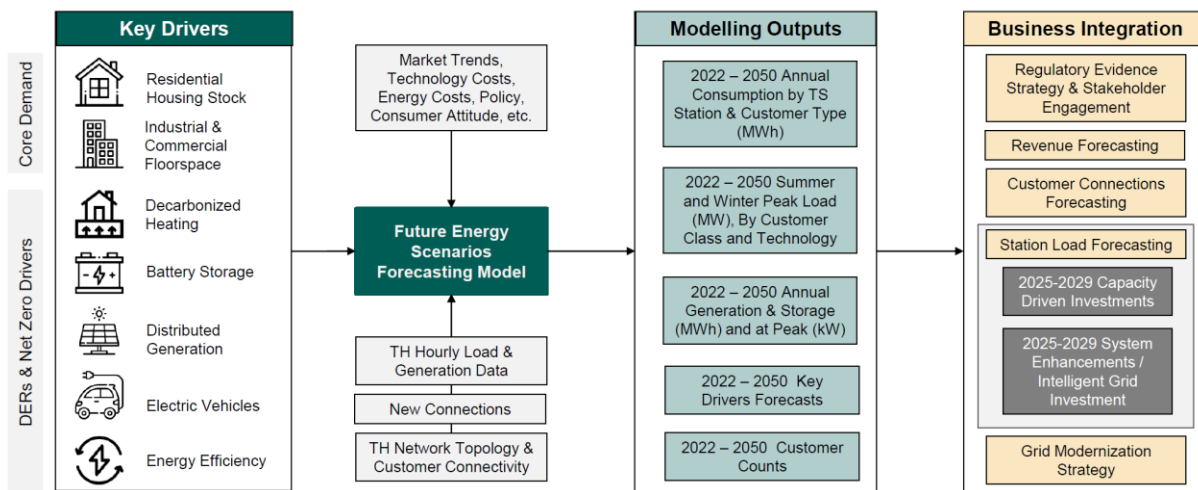


Source: UK Power Networks, Future Smart Consultation Report

<sup>5</sup> The Regional DER Potential Study will identify technical, economic and achievable potential and targeted Innovation Fund projects can help increase the penetration of DER potential.

<sup>6</sup> 2B-Staff-156 Appendix A Slide 3

Figure 2: Integration of Energy Transition Drivers to Modelling and Business Integration<sup>7</sup>



### Challenges

There are several challenges based on Toronto Hydro’s current proposal and supporting evidence. It is likely that some parties will highlight (real or perceived) challenges as a reason to deny the Innovation Fund and to throw the baby out with the bath water, rather than make minor adjustments to resolve any minor gaps. This approach would close the door to urgently needed innovation and the benefits that are expected to accrue. Pollution Probe recommends that the OEB approve the Innovation Fund and include in the Decision the recommendations in this submission.

Some parties may interpret approval of an Innovation Fund for Toronto Hydro over the 2025-2029 term as a precedent that it is appropriate for all utilities to have a similar Innovation Fund. This assumption is incorrect. Pollution Probe notes that approval of an Innovation Fund for Toronto Hydro over a discrete period of time (i.e. the rate term) should not be interpreted as a broader precedent that it is appropriate for all utilities to automatically seek approval for a similar approach. The Decision is specific to Toronto Hydro and any other utility would need to provide specific details based on their circumstances if they choose to file an application including incremental innovation funding with the OEB.

The devil is in the details, like often typical with innovation funds and similar initiatives. This is no surprise. Expectations are high for the outcomes that Toronto Hydro is expected to achieve via the Innovation Fund. Toronto Hydro and parties are aware that funding must be spent in a prudent manner and that the onus is on Toronto Hydro to document that their approach is prudent. The recommendations below have been developed to enhance the governance, collaboration and transparency for the Innovation Fund. Toronto Hydro may believe that many of the elements are already implicitly included in their proposal, but including them explicitly in the OEB Decision will ensure

<sup>7</sup> 1B-PP-11

clarity and transparency to all parties. They also align with industry best practice to ensure that the outcomes of such a fund achieve the intended objectives.

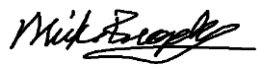
## Recommendations

Pollution Probe makes the following recommendations.

- The OEB should accept the Innovation Fund proposal with the improvements noted below.
- To the extent that other parties identify incremental challenges or opportunities, that the OEB simply add conditions to resolve any valid issues rather than delaying the Innovation Fund implementation.
- Rather than allocating 0.3 percent of Toronto Hydro's revenue requirement (which is variable and therefore hard to manage), set the limit at \$16 million over the rate term, unless otherwise approved by the OEB. Pollution Probe supports the rate rider approach proposed.
- Focus and prioritize Innovation Fund projects on issues related to the electricity and demand side opportunities in the service territory with an early focus on DER opportunities (including behind the meter (BTM) in alignment with the IESO Regional DER Potential Study finding).
- Information and outcomes from projects should be leveraged to enhance Toronto Hydro's Future Energy Model to include net demand opportunities from a broader set of DERs (including CDM/DSM, solar/battery, managed EV programs, bi-directional EV benefits, etc.). [Note: It is important to leverage in the future net DER opportunities vs. gross demand information going into the Toronto Hydro demands forecast as the Energy Transition continues to accelerate. Current demands forecasts exclude important net DER opportunities].
- Toronto Hydro should avoid duplication of relevant projects already completed in North America (including IESO and other LDCs) and ensure effective mechanisms to split project funding with organizations where possible (e.g. IESO innovation funding, LDCs, NGOs, etc.)
- The following Innovation Fund governance enhancements should be made:
  - Toronto Hydro shall establish a Steering Committee for the Innovation Fund prior to selecting and projects and no later than six months following the OEB Decision.
  - The Steering Committee will approve project proposals recommendations, review Innovation Fund governance and Innovation Fund reporting/communications on an annual basis.
  - The Steering Committee shall be composed of one representative from each of the following: Toronto Hydro, IESO, OEB, the City of Toronto, and three or more industry representatives active on the OEB DER Working Group or equivalent broader industry knowledge. Where a stakeholder has been invited to participate and declines, a suitable replacement is to be determined.
  - Toronto Hydro shall make reasonable efforts to ensure that the Steering Committee through its members possesses sufficient expertise across topics including DERs (grid and BTM), energy and emissions planning, cost-effectiveness tests (OEB BCA Framework including societal costs test), Regional Planning and net demand forecasting. Steering Committee members who are not employees of Toronto Hydro or representatives of government organizations already compensated for their time shall be entitled to compensation at applicable OEB rates.

- Toronto Hydro shall complete a report in its annual rate filing including input, review and approval by the Steering Committee on an annual basis and post the report and any detailed data resulting from the projects on its website so that other utilities benefit from the lessons learned and conduct their own analysis using the data. The default presumption shall be that project results will be public, subject to confidentiality claims for which Toronto Hydro may apply to the OEB.
- Toronto Hydro will work with, IESO, OEB and the Steering Committee to share project information and results with stakeholders (including relevant LDCs). Sharing of results shall include but not be limited to the OEB's DER Connections Working Group.
- Toronto Hydro in collaboration with the Steering Committee shall develop a scorecard to measure the effectiveness of the Innovation Fund including, but not limited to:
  - Net benefits (over the project and forecasted into the future)
  - Customer enablement of DERs (system and BTM) by number and percentage (over the project and forecasted into the future)
  - Reliability impacts (over the project and forecasted into the future)
  - Scope 1, 2 and 3 GHG reduction impacts (over the project and by 2040 in alignment with the City of Toronto Net Zero by 2040 objective)
  - Cybersecurity impacts
  - Improvements for Toronto Hydro's Energy Future Model and net demand forecast used for Regional Planning.
- Toronto Hydro should leverage the Steering Committee and existing communication vehicles (including IESO innovation bulletins, OEB DER or other working groups, etc.) to share updates, results and lessons learned on a regular basis (no less than annually).
- Funds spent under the Innovation Fund shall be subject to an OEB prudence review. This could be during the next rebasing proceeding or other appropriate timing determined by the OEB.

Respectfully submitted on behalf of Pollution Probe.



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