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via Regulatory Electronic Submission System (RESS)

October 4, 2024

Ms. Nancy Marconi, Registrar
Ontario Energy Board
PO Box 2319
2300 Yonge Street, 27th floor
Toronto, ON M4P 1E4

Dear Ms. Marconi:

Re: OEB File No. EB-2023-0195, Toronto Hydro-Electric System Limited ("Toronto Hydro")
2025-2029 Custom Rate Application for Electricity Distribution Rates and Charges –
Reply Submission

In accordance with Procedural Order No. 7, please find enclosed Toronto Hydro's Reply Submission.

Sincerely,

Daliana Coban

Digitally signed by Daliana Coban
DN: cn=Daliana Coban, c=CA, email=dcoban@torontohydro.com
Date: 2024.10.04 15:01:38 -04'00'

Daliana Coban
Director, Regulatory Applications & Business Support
Toronto Hydro-Electric System Limited

Cc: Charles Keizer and Arlen Sternberg, Torys LLP; all intervenors

EB-2023-0195

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 Sch. B (the "Act");

AND IN THE MATTER OF an application by Toronto Hydro-Electric System Limited ("Toronto Hydro") for an Order or Orders made pursuant to section 78 of the Act, approving or fixing just and reasonable rates for the distribution of electricity.

TORONTO HYDRO-ELECTRIC SYSTEM LIMITED

REPLY SUBMISSION REGARDING PROPOSED INNOVATION FUND

October 4, 2024

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1.0 INTRODUCTION AND OVERVIEW

Innovation Fund Proposal

1. Consistent with the Ontario Energy Board (OEB) objective to facilitate innovation in the electricity sector, Toronto Hydro seeks approval for a dedicated fund to support the design and execution of innovative pilot projects during the 2025-2029 rate period. The proposed Innovation Fund is part of the utility's broader strategy to enable the grid's readiness for the energy transition. If approved, the Innovation Fund will focus on piloting emergent technologies, such as electric vehicle (EV) demand response, flexible Distributed Energy Resources (DER) connections and advanced microgrids, which require further testing and development before they can be scaled for deployment as grid solutions.

2. The Innovation Fund is designed to help Toronto Hydro overcome key funding and flexibility challenges associated with innovation in the context of a multi-year custom rate term. Currently, the existing funding mechanisms and prudence standards favor investment in mature technologies with proven cost-benefit outcomes. The Innovation Fund, however, will support investment in more nascent technologies and solutions, whose benefits may not be immediate or guaranteed. Nevertheless, these initiatives are essential for demonstrating the potential of new technologies and solutions, and for unlocking the capabilities that Toronto Hydro needs to enable a more cost-effective and reliable energy transition.[1]

3. Another challenge the Innovation Fund aims to address is the difficulty in providing definitive project definitions or budgets years in advance, and classifying expenses as capital or operating costs, to enable recovery through rates. The proposed fund offers Toronto Hydro dedicated funding and flexibility to identify, research, develop, and pilot emerging technologies and solutions in real time. This approach enables the utility to manage uncertainty and tailor projects to the evolving needs of the grid and customers, driven by technological advancements and the energy transition.[2]

4. Toronto Hydro carefully evaluated the appropriate level of funding to prioritize innovation during the 2025-2029 rate period. Research conducted by the utility shows that comparable investments in other leading jurisdictions typically range from

[1] Exhibit 1B, Tab 4, Schedule 2 at pages 2-4.
[2] Exhibit 1B, Tab 4, Schedule 2 at page 4.

0.3% to 1% of total revenues. Based on this analysis, Toronto Hydro proposed allocating 0.3% of its base revenue requirement for 2025-2029—approximately $16 million as indicated by the pre-filed evidence—to the Innovation Fund. Positioned at the low end of the range, this amount is demonstrably reasonable and represents a doubling of Toronto Hydro's efforts to advance innovation objectives in the upcoming rate period. It underscores a strong commitment to driving progress toward unlocking the capabilities required for a cost-effective and reliable energy transition, while carefully balancing medium-term rate impacts for customers.

Governance Framework

5. The governance framework for the Innovation Fund is designed to spur innovation while ensuring transparency and accountability for the work undertaken and funds used. The framework is comprised of four phases – pilot selection, design, execution and evaluation. A steering committee of senior Toronto Hydro leaders will be responsible for approving key decisions, including scope, budget, and timelines.[3]

6. To inform the pilot project selection process, Toronto Hydro will engage broadly with external stakeholders to present ideas and solutions under consideration for the Innovation Fund. These engagements will help Toronto Hydro assess technical and financial feasibility while gaining valuable insights into potential innovation needs and opportunities. External engagements will include industry stakeholders, including OEB and Independent Electricity System Operator (IESO) innovation teams, energy service companies, clean technology vendors and suppliers, government agencies like Natural Resources Canada (NRCan), other Ontario distributors, ratepayers representative groups and companies in other jurisdictions with relevant experience.[4]

7. Toronto Hydro will produce three types of reports for each pilot project: a project selection report, milestone reports, and a final pilot evaluation and learnings report.[5] All of these reports will be publicly available on Toronto Hydro's website, with appropriate redactions for sensitive information. This approach ensures transparency

[3] Exhibit 1B, Tab 4, Schedule 2 at pages 8-9; Technical Conference Transcript Day 4 at page 132, line 8 to page 134, line 19.
[4] Exhibit 1B, Tab 4, Schedule 2 at pages 9-11; 1B-CCC-46(a); 9-PP-50(b); Technical Conference Transcript Day 5 at page 34, line 7 to page 36, line 7.
[5] Exhibit 1B, Tab 4, Schedule 2 at pages 12-16; 1B-CCC-46(e).

and supports the broader goals of advancing innovation across the energy sector by sharing valuable insights and lessons learned.

Proposed Rate Treatment

8. Toronto Hydro proposes to recover the revenue necessary to enable the Innovation Fund through a rate rider. This provides funding certainty for prioritizing innovation investments and offers enhanced transparency by appearing as a separate line item on the tariff sheet. Additionally, this approach allows the Innovation Fund to be created independently of Toronto Hydro's base revenue requirement, providing the utility with the flexibility to determine expenditures as either capital or operational based on the specific nature of work required to execute the selected projects.[6]

9. Toronto Hydro proposes to establish a new variance account—the Innovation Fund Variance Account—to record variances between the amounts collected by the rate rider and the actual costs incurred to deploy the selected pilot projects. The variance account would also ensure customers get the benefit of any external funding that Toronto Hydro is able to secure from sources such as Natural Resource Canada (NRCan) or the IESO's Grid Innovation Fund.[7]

Parties' Positions

10. On September 18 and 19, 2024 the OEB received submissions from ten parties regarding the proposed Innovation Fund.

11. Four parties (AMPCO, VECC, CCC and Energy Probe) oppose the Innovation Fund for various reasons, which are summarized and addressed below in section 2. Six parties (OEB staff, SEC, DRC, Environmental Defence, Pollution Probe and BOMA) generally support the need for a custom funding mechanism for innovation, subject to a number of conditions and modifications, which are addressed below in section 3.

12. SEC expresses the support as follows: "*SEC is generally supportive of utility innovation, which may include funding pilot projects to evaluate new and innovative technologies that can benefit customers. The electricity sector is evolving, requiring utilities to explore new ways of delivering services to meet customers' needs in a cost-*

[6] Exhibit 1B, Tab 4, Schedule 2 at page 16.
[7] Exhibit 1B, Tab 4, Schedule 2 at page 10; 1B-CCC-47; 2B-AMPCO-46(b) and (c); Technical Conference Transcript Day 4 at page 96, lines 14-15; Technical Conference Transcript Day 5 at page 39, line 25 to page 40, line 17.

effective manner. An Innovation Fund, as proposed by Toronto Hydro, is one way to achieve this within the context of a 5-year Custom IR term."[8]

13. BOMA, DRC, Environmental Defence and Pollution Probe point to energy transition and decarbonization objectives as the underlying rationale for their support.

- BOMA states: "*The energy transition has already begun. Ontario's electricity distribution system will undergo substantial changes as electrification takes place. Innovation research is key to enable utilities to explore and find better options to implement these significant investments effectively and efficiently."*[9]

- DRC notes: "*The Innovation Fund represents an important effort that supports Ontario's efforts to decarbonize in a way that offers potential long-term affordability, reliability and access benefits to Toronto Hydro's rate payers."*[10]

- Environmental Defence states: "*The innovation fund is an important step to help reduce costs in the face of the looming energy transition, including the huge growth in demand that is expected to occur due to electrification*."[11]

- Pollution Probe points to Toronto Hydro's unique role and opportunity to advance innovation in support of the energy transition: "*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."*

14. OEB staff's submission concludes as follows: "*Despite disagreeing with the filed proposal, OEB staff is inclined to support Toronto Hydro in formulating a reasonable mechanism to support innovation where no other mechanism exists."*

[8] SEC Submission at page 1.
[9] BOMA Submission at page 1.
[10] DRC Submission at pages 6-7.
[11] Environmental Defence Submission at page 1.

2.0 TORONTO HYDRO'S RESPONSE TO THE OPPOSING SUBMISSIONS

15. AMPCO, VECC, CCC, and Energy Probe oppose the need for the Innovation Fund for several reasons. First, they argue that this work should be funded through regular operations, not through a custom mechanism. Second, they question the ratepayer value proposition of funding experimental innovation investments. Third, they express concern that approving the Innovation Fund would set a "costly precedent" for the sector. Fourth, they argue that Toronto Hydro lacks expertise and is not the right party to advance innovation. Lastly, AMPCO advocates for a generic proceeding to determine whether electricity distributors should have access to incremental revenue for innovation projects. For the reasons outlined below, Toronto Hydro respectfully submits that these arguments should be dismissed by the OEB.

16. In addition to the arguments above, the non-supporting parties raise a number of concerns that overlap with the submissions of the supporting parties. These concerns are canvassed and addressed below in section 3.

The Need for a Custom Funding Mechanism for Innovation

17. AMPCO asserts that the Settlement Proposal already provides funding to support electrification and grid modernization, enabling customers' electrification goals and the connection and management of DERs. However, AMPCO overlooks the critical distinction between mature technologies that have been scaled into utility operations and nascent, developmental technologies that require further testing and piloting before they can be scaled.

18. The Settlement Proposal provides funding for mature technologies, such as Advanced Metering Infrastructure (AMI) 2.0, and an Advanced Distribution Management System (ADMS).[12] Additionally, the proposal includes funding for *demonstrated* non-wires solutions, such as grid-side energy storage to enable renewable generation and local demand response to address capacity constraints at various stations.[13]

19. The Settlement Proposal does not allocate funding for investments in emergent technologies and solutions, such as EV demand response and advanced microgrids, as these are more nascent innovations that require additional development before scaling to deployment at the level of distribution system solutions. As detailed in the

[12] Exhibit 2B, Section D5; Toronto Hydro Settlement Proposal, August 16, 2024 ("Settlement Proposal") at pages 18-19 and 56.
[13] Exhibit 2B, Section E7.2; Settlement Proposal at pages 19 and 56.

evidence, these pilot project concepts were excluded from the 2025-2029 capital and operational investment plans and do not form part of the program budgets that underpin the Settlement Proposal.[14] OEB staff recognizes "*that it is reasonable for there to be difficulty in providing definitive project definition or budgets years in advance."*[15]

20. CCC questions the necessity of the Innovation Fund, citing the internal innovation sandbox that Toronto Hydro established during the 2020-2024 period. CCC specifically challenges why Toronto Hydro cannot sustain its innovation initiatives through this internal sandbox, as it has done in the past.[16]

21. In the current rate period, Toronto Hydro undertook incremental financial risks to establish a self-funded internal innovation sandbox in order to encourage employees across the business to bring forward novel ideas and foster a solution-oriented culture, where challenges are addressed through creative problem-solving.[17] To continue building this culture and advancing innovation in alignment with the OEB's evolving expectations outlined in the Framework for Energy Innovation, Toronto Hydro must intensify its efforts in the upcoming rate period.[18]

22. Relying on the status quo, as proposed by CCC, would necessitate that developmental innovation pilot projects compete for funding against normal capital and operational investments in system renewal and maintenance, or more mature innovative technologies that have been proven to provide benefits. This perspective underscores a significant challenge in advancing innovation—the ability to prioritize investment in innovation alongside other urgent and necessary work to address customer service, legal and regulatory compliance, grid safety and reliability needs.

23. CCC also raises concerns about how external funding from NRCan and the IESO Grid Innovation Fund (GIF) would impact the proposal, noting that "*the opportunities for outside funding have not yet been confirmed*"[19] and that it is *"unclear to what extent further funding from the IESO would be available going forward.*"[20] A similar cloud of doubt is cast by CCC over the opportunity to explore joint funding with other

[14] Exhibit 1B, Tab 4, Schedule 2 at pages 7-8; 1B-Staff-99(c).
[15] OEB Staff Submission at page 6.
[16] CCC Submission at page 5.
[17] Exhibit 1B, Tab 4, Schedule 1 at page 2; 1B-Staff-99(d).
[18] Exhibit 1B, Tab 4, Schedule 2 at pages 1-5; 1B-Staff-99(d).
[19] CCC Submission at page 4.
[20] CCC Submission at page 5.

utilities.[21] AMPCO echoes that there is uncertainty regarding the level of GIF funding going forward.[22]

24. CCC and AMPCO's concerns touch on a key challenge the Innovation Fund is designed to address—ensuring access to a predictable source of funding that allows Toronto Hydro to plan and prioritize innovation investments within a multi-year rate framework. While Toronto Hydro's evidence highlights its strong track record and ongoing commitment to seeking external funding for innovation—and the ability to leverage such funding is an explicit project selection consideration—it is unrealistic to rely on external sources of funding when preparing a long-term investment plan.[23] However, if and when Toronto Hydro successfully secures external funding, it will be applied as an offsetting credit to the Innovation Fund Variance Account, reducing the overall cost of the pilot project for ratepayers.[24]

25. VECC argues that engineering innovation should be a normal part of a utility's operations, and states that insofar as energy transition goes "*that there are no challenges to be solved in the immediate terms which would require a particular utility to confiscate "special funds" from the captured group of customers it serves.*"[25] Toronto Hydro agrees that engineering innovation is a normal part of utility operations, and points to its achievements over the last decade in leveraging technology to gradually modernize the grid and its operations.[26] However, as emphasized above, that is not the type of mature innovation that the Innovation Fund intends to address. In section 3 below, at paragraphs 68 and 69, Toronto Hydro further explains how the pilot projects as part of the Innovation Fund are differentiated from mature innovation work that is already funded in base rates.

26. Toronto Hydro faces the growing demands of an energy transition that is gradually unfolding across the City of Toronto. The key challenge in this energy transition is finding the lowest-cost most reliable way to meet up to two and a half times more peak demand over the next two decades.[27] To manage this uncertainty and avoid building a grid that is two to three times larger than the current one, Toronto Hydro

[21] CCC Submission at page 5.
[22] AMPCO Submission at pages 4-5.
[23] Exhibit 1B, Tab 4, Schedule 2 at page 10; 1B-CCC-47; 1B-Staff-10; 2B-AMPCO-46(b) and (c).
[24] Technical Conference Transcript Day 4 at page 96, lines 14-15; Technical Conference Transcript Day 5 at page 39, line 25 to page 40, line 17.
[25] VECC Submission at page 3.
[26] See generally Exhibit 1B, Tab 4, Schedule 1; Exhibit 2B, Section D5; Exhibit 2B, Sections E7.1, E7.2 and E7.3.
[27] Exhibit 2B, Section D4, Appendix A and B.

must invest in developing new capabilities and solutions that increase grid efficiency and flexibility. The Innovation Fund plays a critical role in this effort, enabling Toronto Hydro to test and pilot emerging technologies and solutions that can support the grid's readiness to enable a cost-effective and reliable energy transition.[28]

Ratepayer Value Proposition

27. VECC and CCC question the value proposition of the Innovation Fund. VECC states that "*just and reasonable rates should only support investments which provide measurable benefits to the utility's ratepayers*,"[29] and argues that "*the proposal lacks any specificity as to what value it offers customers.*"[30] CCC expresses concern over whether the pilot project concepts would truly benefit ratepayers, cautioning that these investments are not justified by rigorous business case analysis and may not deliver the expected value.[31]

28. Along the same vein, AMPCO states that the Innovation Fund proposal is risky because of the inherent uncertainty relating to innovation work – it is at an early stage, exploratory and developmental in nature without a guarantee of immediate benefits or success.[32] Energy Probe criticizes the Innovation Fund for lacking accountability for failure of projects.[33]

29. The perspectives offered by AMPCO, CCC, Energy Probe and VECC highlight a key challenge around innovation, which is that "e*xisting mechanisms tend to support spending where the beneficial outcomes are more proven or certain*."[34] As further discussed in section 3 below at paragraphs 55 to 58, the modified prudence standard with respect to outcomes and results is specifically designed to overcome this barrier.

30. The value proposition of the Innovation Fund lies in Toronto Hydro's ability to test and pilot emerging technologies and solutions, such as microgrids, flexible DER connections and EV demand response, that have the potential to support greater customer choice and a more cost-effective and reliable energy transition in the coming decades. While the benefits of individual projects may not be immediate or

[28] Technical Conference Transcript Day 4 at page 21, line 17 to page 22, line 7.
[29] VECC Submission at page 3.
[30] VECC Submission at page 3.
[31] CCC Submission at page 5.
[32] AMPCO Submissions at page 2.
[33] Energy Probe Submissions at page 2.
[34] Exhibit 1B, Tab 4, Schedule 2 at page 4; 1B-Staff-99(f).

guaranteed, and some initiatives may be more fruitful than others, this type of work is essential in exploring emerging technologies and approaches that have the potential to unlock significant benefits for customers in the long-term.[35]

31. Toronto Hydro acknowledged and embraced the reality that risk and uncertainty is inherent to innovation,[36] by balancing its proposal with a number of characteristics to moderate the level of risk:

- **Reasonable Funding Level:** The proposal sets a modest funding level of 0.3% of the revenue requirement, aligning with the lower end of funding levels in other jurisdictions that are prioritizing innovation.[37] As noted by OEB staff, Toronto Hydro's historical innovation project expenditures have been much lower without having access to this type of dedicated funding.[38] OEB staff and the other parties supporting the Innovation Fund agree that the proposed funding level is reasonable.[39]

- **Pilot Project Focus:** By concentrating on pilot projects, Toronto Hydro can test and evaluate new technologies in a controlled, small-scale environment.[40] As noted by the DRC: "*This reduces the risks associated with large-scale deployments while still offering the opportunity to gather valuable insights regarding emerging technologies.*"[41]

- **Alignment with Regulatory Expectations**: The focus on pilot projects that align with the OEB's expectations—as outlined in the Framework for Energy Innovation (FEI) report and Filing Requirements—ensures that Toronto Hydro develops capabilities that are aligned with the OEB's policy objectives.[42]

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[35] Exhibit 1B, Tab 4, Schedule 2 at page 4; 1B-Staff-99 (c) and (f); VECC argues, at page 4 of their submission, that if ratepayers are funding these projects, they should also have ownership rights over any intellectual property developed, which is not guaranteed in the proposal. Toronto Hydro states that it is premature and unnecessary to consider the complexity of IP ownership at this stage of the proposal. Any benefits that come out of projects, including IP rights, can and will be reviewed in the next rebasing application.
[36] 1B-CCC-46(b).
[37] Exhibit 1B, Tab 4, Schedule 2 at pages 5-6; 1B-DRC-06(c); 1B-Staff-11(b).
[38] OEB Staff Submissions at page 9.
[39] OEB Staff Submission at page 10; BOMA Submission at page 1; Pollution Probe Submission at page 5; SEC Submission at page 5.
[40] Exhibit 1B, Tab 4, Schedule 2 at page 6.
[41] DRC Submission at page 7.
[42] Exhibit 1B, Tab 4, Schedule 2 at pages 1-3; Ontario Energy Board, Framework for Energy Innovation: Setting a Path Forward for DER Integration (January 30, 2023); Ontario Energy Board, Filing Requirements for Electricity Distribution Rate Applications (Chapter 2) at Section 2.1.7.

- **Stakeholder Engagement**: Engaging a broad range of external stakeholders early in the process will provide diverse insights that help identify potential challenges and opportunities.[43] This collaboration will refine project objectives and generate practical feedback, highlighting practical issues and usability concerns.

32. VECC further argues that if ratepayers are funding these projects, they should have ownership rights over any intellectual property (IP) developed, which is not guaranteed under the current proposal.[44] Toronto Hydro contends that it is premature and unnecessary to address the complexity of IP ownership at this stage. The utility submits that the implications of any benefits arising from the projects, including IP rights, will be reviewed during the next rebasing application, taking into account the specific facts and circumstances of the projects.

33. In addition to the broader ratepayer value concerns highlighted by AMPCO, VECC and CCC, Energy Probe asserts that the Innovation Fund should not be approved because it has not been proven that electrification readiness and facilitating DER integration will benefit all customers, particularly those customers that do not own rooftop solar panels or that live in apartment buildings and cannot own rooftop solar panels.[45] Toronto Hydro submits that this narrow argument should be dismissed for two reasons.

34. First, Energy Probe's argument overlooks the potential for DERs, and other demand-side measures, to unlock a lower-cost pathway to electrification which can provide economic benefits to all customers.[46] Second, Energy Probe fails to appreciate that the proposed Innovation Fund is not limited to DER-related projects. It encompasses a variety of initiatives, such EV demand response and microgrids which can support the electrification journey of all customers including those living in multi-unit residential buildings.[47]

Toronto Hydro's Role and Expertise in Innovation

35. VECC contends that utilities like Toronto Hydro do not have the expertise to engage in rigorous development work because they are not research or academic institutes.[48]

[43] Exhibit 1B, Tab 4, Schedule 2 at pages 10-11; 1B-CCC-46(a); 9-PP-50(b).
[44] VECC Submission at page 4.
[45] Energy Probe Submission at page 2.
[46] Exhibit 1B, Tab 4, Schedule 1 at pages 5-6; Exhibit 2B, Section E7.2.1: Flexibility Services.
[47] Exhibit 1B, Tab 4, Schedule 2, Appendix A at pages 5 – 8; Appendix B at page 4; Exhibit 2B, Section D5 at pages 45 and 83-87.
[48] VECC Submission at page 3.

VECC also highlights a concern of duplication if all utilities are pursuing innovation funding. AMPCO echoes the concern of duplication "*not only with other utilities but commercial entities who are also testing innovative technologies and solutions*."[49] To deal with these concerns VECC argues that innovation efforts should be coordinated by the IESO, which is better positioned to disseminate learnings to the sector, and socialize the costs of innovation across all Ontario ratepayers.[50]

36. CCC similarly argues that a centralized approach, through the IESO and OEB, is necessary to minimize the risk of duplication.[51] To that end, CCC points to the jurisdictional research which shows that similar funds are administered by the regulator or state departments.

37. Toronto Hydro acknowledges that other jurisdictions have adopted centralized governance models for innovation, and notes that the purpose of the jurisdictional research was to inform how much funding should be prioritized for innovation investment, not to determine the governance framework.[52] With respect to governance, Toronto Hydro stands by the merits of its proposal to be fully responsible for developing, stakeholdering, selecting, designing, executing and integrating innovation pilot projects and learnings into its grid and network operation.

38. Toronto Hydro serves a dense urban city, characterized by space restrictions and congestion that pose unique challenges in building infrastructure necessary to enable energy transition.[53] As the steward of this distinct grid and electricity service provider to over a million end-users, Toronto Hydro possesses extensive knowledge of its distribution system and maintains direct relationships with the diverse customer base it serves.[54] Leveraging this experience and information, the utility is uniquely position to work with academic, research and technology partners to develop pragmatic innovative solutions that are tailored to its grid and customers' needs.[55]

39. Furthermore, Toronto Hydro has a proven track record of collaboration with a diverse range of stakeholders—including technology providers, academic institutions, researchers, and customers—to develop and test new technologies and solutions.[56]

[49] AMPCO Submission at page 2.
[50] VECC Submission at page 3.
[51] CCC Submission at page 4.
[52] Technical Conference Transcript Day 5 at page 65, Line 1–21; Undertaking JT5.24.
[53] Exhibit 1B, Tab 3, Schedule 3 at pages 2-9; Exhibit 1B, Tab 4, Schedule 3 at page 6; Exhibit 2B, Section D2 at pages 1 – 7.
[54] Exhibit 1C, Tab 1, Schedule 1 at page 1.
[55] Exhibit 1B, Tab 4, Schedule 1 at pages 5-9 and 12; Environmental Defence Submissions at page 2.
[56] Exhibit 1B, Tab 4, Schedule 1 at pages 5-6; 9-PP-50(c).

This rich ecosystem of partnerships not only enhances Toronto Hydro's capacity for innovation, but also ensures that the solutions developed are practical, relevant, and scalable.

40. Toronto Hydro values the role that the IESO plays in advancing innovation to support bulk-system outcomes and works closely with the IESO through industry forums, such as the Transmission-Distribution Working Group (TWDG). In these forums, Toronto Hydro offers a much-needed distribution-level perspective and expertise, to help the IESO develop new capabilities and solutions for a better integrated and more efficient energy system.[57]

41. Energy Probe argues that there is a significant risk of duplicating work, claiming that "*Toronto Hydro does not intend to collaborate with Ontario utilities.*"[58] This perspective unfortunately misrepresents Toronto Hydro's approach. As outlined in evidence, Toronto Hydro is committed to engaging with external stakeholders, including other utilities, during the pilot project selection process. Through these engagements, along with ongoing participation in industry forums such as the TWDG, Toronto Hydro gathers insights and explores ideas being developed across the sector. These collaborative efforts mitigate the risk of unnecessary duplication of work.[59]

42. Energy Probe further submits that the technical challenges of grid electrification and DER integration are common across global electricity distribution utilities. Energy Probe states that "[*i*]*t is unlikely that Toronto Hydro will find some innovative solution that has not been tested or used somewhere else*." They claim that other utilities around the world may already have relevant findings to share at no cost.[60]

43. Toronto Hydro agrees that urban utilities face common challenges with respect to electrification and DER integration, and intends to leverage the lessons learned and perspectives acquired by other urban utilities to inform the pilot selection process. This includes engaging with other regulated entities and energy companies in other jurisdictions that have relevant experience with the technologies or solutions that Toronto Hydro is exploring.[61] However, relying solely on this approach is not a realistic strategy for acquiring the depth of information and experience needed to

[57] 1B-Staff-40(b); 1B-Staff-88(e).
[58] Energy Probe Submission at page 2.
[59] Exhibit 1B, Tab 4, Schedule 2 at page 10; 1B-CCC-46(a); Technical Conference Transcript Day 4 at page 100, lines 8-24.
[60] Energy Probe Submission at page 2.
[61] Exhibit 1B, Tab 4, Schedule 2 at pages 10-11; 1B-CCC-46(a); Technical Conference Transcript Day 4 at page 100, lines 20 – 24; Technical Conference Transcript Day 5 at page 34, lines 15 – 21.

develop technologies and practices that can be safely and reliably integrated into Toronto Hydro's distribution system.

44. For example, Toronto Hydro is exploring flexible connections which could allow customers to more cost-effectively connect distributed generation on constrained parts of the grid.[62] While other jurisdictions have explored this, Toronto Hydro needs to develop the necessary technological tools and commercial offerings and test them through pilot projects to ensure that they are suitable to its grid and operations.

45. As highlighted in the Innovation Fund evidence, adopting solutions from other utilities is not a "cut-and-paste" task; it requires comprehensive exploration and rigorous testing. [63] Each distributor operates under unique conditions, and this is particularly true for Toronto Hydro, which serves a diverse urban customer base and operates a complex distribution system composed of six former municipal utilities.[64] For Toronto Hydro to succeed in scaling innovative solutions and technologies, it must be able to account for its distinct challenges and operational characteristics.

Considering the Innovation Fund Proposal on its Own Merits

46. AMPCO, CCC and VECC state that approval of the Innovation Fund would set a costly precedent leading to similar funding requests for incremental funding from other utilities.[65] With respect, this argument is flawed for two reasons.

47. First, the courts, the OEB is not bound by precedent. The Board has discretion and the mandate to assess utility proposals on their individual merits. Second, Toronto Hydro's Innovation Fund proposal is designed to meet the utility's specific needs and circumstances within a custom rate framework focused on least regrets investments to enable the energy transition and manage uncertainty.[66]

48. Penalizing Toronto Hydro for presenting a custom forward-thinking approach that could also yield valuable insights for the entire industry, based on the unfounded fear of setting a "costly precedent" is unjustified. Furthermore, Toronto Hydro respectfully submits that if the OEB were to validate the parties' concern about setting a precedent, it could discourage Toronto Hydro and other utilities from

[62] Exhibit 1B, Tab 4, Schedule 2, Appendix A; Exhibit 2B, Section D5 at page 45
[63] Exhibit 1B, Tab 4, Schedule 2 at page 3; 2B-AMPCO-46(a); 1B-DRC-06(g).
[64] Exhibit 1B, Tab 3, Schedule 3 at pages 2 – 9; Exhibit 2B, Section D2 at pages 1 – 7.
[65] AMPCO Submission at pages 1-2; VECC Submission at page 4; CCC Submission at page 4.
[66] Exhibit 2B, Section D4 at pages 8-10; Exhibit 2B, Section D5 at page 43.

developing innovative custom solutions and proposals for consideration in future rate applications.

Addressing the Innovation Fund Proposal in an Efficient and Effective Way

49. AMPCO advocates for a generic proceeding to determine whether electricity distributors should have access to incremental revenue for innovation projects. AMPCO argues that "*a Generic Proceeding has the potential to minimize duplication and facilitate utility innovation activities that are adopted more widely across the province.*"[67]

50. Toronto Hydro opposes AMPCO's recommendation to defer this issue to a generic proceeding. The OEB ruled in Procedural Order No. 7 that the proceeding has provided ample opportunity for parties to test Toronto Hydro's evidence,[68] and that this evidence is "*sufficient for the determination of the remaining issue.*"[69]

51. Toronto Hydro submits that a generic proceeding would introduce unnecessary regulatory costs and burden, potentially impairing the OEB's ability to consider the specific evidence required to address each distributor's unique circumstances and innovation needs. This approach would also create regulatory uncertainty and delay Toronto Hydro's ability to advance critical innovation efforts in the next rate period.

3.0 TORONTO HYDRO'S RESPONSE TO THE SUPPORTIVE SUBMISSIONS

52. OEB staff, SEC, DRC, Environmental Defence, Pollution Probe and BOMA generally support establishing a custom funding mechanism for innovation, subject to a number of conditions and modifications related to: (i) the applicable prudence standard, (ii) the scope of eligible work, (iii) reporting and oversight, and (iv) the fund's quantum and mechanics. Toronto Hydro is committed to aligning with these proposed conditions wherever feasible and consistent with the goals of its Innovation Fund. The following section identifies the agreed-upon modifications, as well as the proposals that Toronto Hydro respectfully rejects for the reasons outlined.

[67] AMPCO Submission at page 2.
[68] This include 174 pages of detailed pre-filed evidence, 70 written responses to interrogatories and undertakings. In addition, the parties questioned Toronto Hydro's witnesses about the Innovation Fund on Days 1, 3, 4 and 5 of the Technical Conference.
[69] EB-2023-0195 Procedural Order No. 7 (August 26, 2024) at page 2.

Modified Prudence Standard

53. SEC, BOMA and Pollution Probe submit that expenditures under the Innovation Fund must be subject to an OEB prudence review.[70] Toronto Hydro agrees, and respectfully notes that the parties have misrepresented the evidence when stating that it is "*Toronto Hydro's position that there would never be a prudence review on the actual costs.*"[71] At the Technical Conference, Toronto Hydro confirmed that the Innovation Fund must be subject to a prudence review, and that costs could be disallowed by the OEB based on such a review in the next rebasing.[72]

54. The evidence misrepresented by the parties goes on to describe the challenge of applying a traditional prudence standard as *"…having to demonstrate, in rate applications, the prudency of innovation-driven pilot projects on the basis of costs and benefits which are not always certain at the outset, and which projects are early stage, exploratory and/or developmental in nature.*"[73]

55. The challenge of applying the traditional prudence standard to evaluate innovation pilot projects is also discussed in the response to interrogatory 1B-CCC-46 part (b):

> *Toronto Hydro is requesting funding for the Innovation Fund which is purposefully not conditional on the ultimate degree of success for individual pilot projects. Inherent in the pursuit of innovative solutions, which Toronto Hydro is doing consistent with provincial and OEB policy objectives, is the risk that some efforts will be more or less successful than others, but also the understanding that there is value in the learning that comes from the efforts regardless of the outcome.*

56. Given the nature of investment in innovation projects which are early stage, exploratory and/or developmental, the costs and benefits will be uncertain.[74] Indeed, that is a key purpose of pursuing innovation pilots – to test whether the proposed

[70] SEC Submission at page 4; BOMA Submission at page 4; Pollution Probe Submission at page 6. Opposing parties, CCC and AMPCO, also highlight this criticism in their submissions. AMPCO, at page 3 of their submission, argues that if the Innovation Fund is approved, it must be subject to a prudence review. VECC, at page 3 of their submission, claims that there is "*no proposed mechanism to guard against wasting money on ideas of little merit and little value.*" Energy Probe, at page 2 of their submission, critiques the proposal for not having "*any accountability for failure of projects.*"
[71] SEC Submission at page 4.
[72] Technical Conference Transcript Day 4 at page 36, lines 10-19.
[73] 1B-CCC-46(d).
[74] Environmental Defence Submissions at page 2.

technology or solution is a prudent investment that can be safely, reliably and cost-effectively scaled into normal operations in the future.[75]

57. OEB staff understood the nuances of Toronto Hydro's evidence with respect to the challenges of demonstrating prudence for innovation projects, and proposed a modified approach, which is characterized as follows in its submission:

- At page 9: *"OEB staff submits a modified approach to prudence review regarding outcomes, that is focused on sound selection and execution would be appropriate for pilot projects that seek to establish developing distribution system solutions."*[76]

- At page 4: *"A modified prudence review regarding results that requires Toronto Hydro to demonstrate that there was a reasonable prospect for learning valuable lessons at the time of project selection and that this prospect did not diminish over the course of execution."*[77]

58. Toronto Hydro agrees with the proposed modified prudence standard, and thanks OEB staff for providing a practical solution to the challenge described in the evidence. The utility submits that the modified standard outlined effectively addresses all of the parties' concerns with respect to prudence and accountability for investments under the Innovation Fund.

Project Selection

59. Toronto Hydro agrees with OEB staff's recommendation to focus the prudence review in the next rebasing on sound project selection:[78]

> *OEB staff submits that a prudence review of project selection must demonstrate that Toronto Hydro selected projects with a reasonable expectation of scalability, identifying the expected lessons to be learned*.
>
> *Toronto Hydro should be required to … explain the criteria used to select projects, including business value, feasibility, scalability, and external funding.*

[75] Exhibit 1B, Tab 4, Schedule 2 at page 4; 1B-Staff-99(c).
[76] OEB Staff Submission at page 9.
[77] OEB Staff Submission at page 4.
[78] OEB Staff Submission at pages 8-9.

60. OEB staff's recommendation is aligned with Toronto Hydro's evidence which states that the utility would select pilot projects on the basis of the following key considerations: [79]

- ***Potential Business Value*** *– informed by market readiness based on industry trends and technological advancements, as well as lessons learned from the implementation of similar projects and initiatives by Toronto Hydro or other entities.*

- ***Feasibility*** *– selected pilot project(s) can be designed, executed, and completed by the end of the 2025-2029 rate period, as informed by primary research or reference to similar projects undertaken by other utilities.*

- ***Opportunity for scalability*** *based on parameters such as functional compatibility with existing core technology; feasibility of integration with existing control systems; compliance with minimum safety, operating, and cyber security standards; and financial viability and sustainability.*

- ***Opportunity to leverage external funding*** *– where possible Toronto Hydro would seek alignment with areas of research and development being funded by organizations such as Natural Resources Canada or other government agencies, including programs that are aimed at supporting the energy transition and climate policies.*

61. As noted in the evidence, the pilot selection report will describe the selected projects and provide the rationale for selecting them in accordance with the criteria set out above.[80] For the rationale section of this report, Toronto Hydro agrees with OEB staff's recommendation to focus on the expected lessons to be learned, and explain "*how each project has the potential to provide value to ratepayers through the reduction of future capital investments, reduction in OM&A budgets, increased efficiency of its existing system, and increase opportunities for customers, including the ability to better manage usage to reduce overall consumption or shift periods of usage and the ability to increase level of customers to connect DERs.*"[81]

[79] Exhibit 1B, Tab 4, Schedule 2 at pages 9-10.
[80] Exhibit 1B, Tab 4, Schedule 2 at page 11.
[81] OEB Staff Submission at page 9.

62. SEC states that Toronto Hydro should be required to submit for OEB approval a document outlining specific project eligibility and selection criteria, in order for the OEB, customers, and the sector at large, to understand which types of innovation projects are appropriately funded in this way.[82]

63. Toronto Hydro submits that its evidence already sets out the project eligibility and selection criteria that will guide the pilot selection process.[83] And as noted above, Toronto Hydro agrees to adopt various recommendations made by OEB staff with respect to project selection. In an effort to be helpful and responsive to SEC's submission, as an Appendix to this Reply, Toronto Hydro has put together a brief document that summarizes the pilot project eligibility and selection criteria.

Project Execution

64. OEB staff does not make any specific recommendations with respect to prudent execution. Toronto Hydro infers from this, and agrees, that the proposed governance framework supports prudent project execution. The evidence in this regard states:

> *During the pilot execution phase, the pilot project owners would be responsible for executing the work plan and implementing each of the pilot projects in accordance with the activities, expenditures, and milestones contained in the project scopes. The milestones set out for each pilot project would play a vital role as they would provide a "gated" approach to controlling funding and expenditures. Mainly, the steering committee would be responsible for reviewing milestone reports created by the project owners, including the funding of activities that were completed in order to achieve the milestone.* [84]

Scope of Work Limitations and Conditions

65. The supportive parties have raised concerns about the scope of projects eligible for the Innovation Fund. They have suggested several conditions to clarify the distinction between Innovation Fund projects and normal course innovation work funded through base rates.[85] They have also suggested conditions related to the eligibility of

[82] SEC Submission at page 4.
[83] Exhibit 1B, Tab 4, Schedule 2 at pages 9-13.
[84] Exhibit 1B, Tab 4, Schedule 2 at page 14.
[85] OEB Staff Submission at page 7; BOMA Submission at page 2.

capital investments and recommendations for prioritizing specific types of work or issues.[86] Toronto Hydro addresses these concerns in the following paragraphs.

Differentiating Between Mature Innovation Investments Funded in Rates

66. BOMA and OEB staff highlight a concern around the potential overlap between projects under the proposed Innovation Fund and normal innovation work funded by base rates.[87] They both note that some level of innovation is expected to be part of the normal course of business for a utility. With this concern in mind, OEB staff recommends that Toronto Hydro redefine "innovation" for the purposes of eligibility for the Innovation Fund, noting that:[88]

> *Where OEB staff does see Toronto Hydro providing a more distinct idea of the scope is in Toronto Hydro's statements regarding* ***emergent technologies that could still be in the development stage****. Toronto Hydro states that these types of technologies likely* ***require additional development before scaling to deployment at the level of distribution system solutions.*** *OEB staff does see merit in this type of work and submits that it is reasonable for there to be difficulty in providing definitive project definition or budgets years in advance.* [emphasis added]

67. OEB staff further submits that the "*decision to use a custom funding mechanism for these innovation expenditures must be supported by developed business cases for demarcating the work from the operating and capital expenditures funded by base rates*."[89] Similarly, BOMA argues that any expenditures from the proposed Innovation Fund must be supported by evidence to demonstrate that the scope and nature of the projects are distinct from what is funded by base rates.[90]

68. In considering whether Innovation Fund projects are distinct from work funded in base rates, Toronto Hydro reiterates that the expenditures funded in base rates as outlined in the Settlement Proposal relate to investments in mature grid modernization technologies, such as Advanced Metering Infrastructure 2.0 (AMI 2.0),

[86] OEB Staff Submission at page 15; SEC Submission at pages 2-3; DRC Submission at pages 8-9; Pollution Probe Submission at Page 5; OEB Staff Submission at page 7.
[87] OEB Staff Submission at page 7; BOMA Submission at page 2; CCC and Energy Probe present similar concerns at pages 5 and 2, respectively, of their submissions.
[88] OEB Staff Submission at page 7.
[89] OEB Staff Submission at page 7.
[90] BOMA Submission at page 2.

and the Advanced Distribution Management System (ADMS).[91] Additionally, the Settlement Proposal includes funding for *demonstrated non-wires solutions* such as grid-side energy storage to enable renewable generation and local demand response to address capacity constraints at various stations.[92]

69. Innovation projects related to technologies and solutions that are featured as part of the 2025-2029 Distribution System Plan or 2025 OM&A plan, would not form part of the Innovation Fund because this work is clearly funded through base rates, and related variance account mechanisms set out in the Settlement Proposal.[93] However, as noted above, the Settlement Proposal does not allocate funding for investment in emergent technologies and solutions, such as EV demand response, flexible connections, and advanced microgrids, as these are nascent innovations that require additional development before scaling to deployment at the level of distribution system solutions.[94]

70. Toronto Hydro also notes that OEB staff appear to hold the view that the Innovation Fund should not be available to finance projects involving technologies or solutions that the utility has previously undertaken. OEB staff support this position by referencing the EV demand response initiative from the 2020-2024 rate period as an example. They suggest that, since this project has already been explored, it should be funded through base rates in the future, rather than through the Innovation Fund.[95]

71. The EV Demand Response pilot project conducted during the current rate period focused on understanding EV charging patterns and customer behavior.[96] The next phase will explore how EV demand responses can be used to provide cost-effective distribution system services. This new scope is outlined in the Innovation Fund and

[91] Exhibit 2B, Section D5; Settlement Proposal at pages 18-19 and 56.
[92] Exhibit 2B, Section E7.2; Settlement Proposal at pages 19 and 56. The innovation-related work programs were also highlighted in Toronto Hydro's response to interrogatory 1B-CCC-43. Referencing this interrogatory response, Energy Probe accuses Toronto Hydro of deliberately withholding the information from pre-filed evidence. Toronto Hydro rejects this accusation, and notes that all of the programs and expenditures highlighted in 1B-CCC-43 formed part of Distribution System Plan (Exhibit 2B) and OM&A evidence (Exhibit 4). Furthermore, these innovation-related investments were highlighted in the Facilitating Innovation Evidence at Exhibit 1B, Tab 4, Schedule 1, which preceded the Innovation Fund Proposal in Schedule 2 of the same exhibit.
[93] Settlement Proposal at page 27 – Demand Related Capital Variance Account and Non-Wires Solution Expenditures Variance Account.
[94] 1B-Staff-99.
[95] OEB Staff Submission at page 5.
[96] Exhibit 1B, Tab 4, Schedule 1 at page 8.

Grid Modernization evidence, and is not included in any of the base capital or operational program budgets.[97]

72. Toronto Hydro disagrees with OEB staff's suggestion to restrict innovation funding eligibility solely to projects involving technologies or solutions that have not been previously explored. Innovation is inherently iterative, especially when addressing complex and multifaceted challenges such as the integration of EVs and DERs within Toronto Hydro's unique urban setting and diverse customer base. Technologies and solutions explored in past pilots, like EV demand response, still require further testing to assess their scalability and feasibility for integration into the utility's grid.

73. For instance, Phase 1 of the EV demand response pilot allowed Toronto Hydro to gather crucial data and validate a key assumption: that customer EVs can be leveraged to help shape electrical load. By enrolling customers and remotely controlling their charging equipment, Toronto Hydro proved the feasibility of this approach.[98] Phase 2 now shifts to testing the scalability of this emerging technology through operational integration. The second phase of the pilot focuses on identifying viable demand response models that facilitate coordinated charging to support network needs such as alleviating peak loading on overloaded system assets.[99]

74. The utility submits that prior investments in a specific aspect of an emerging technology or solution should not restrict future investments in other aspects of the same technology or solution as part of the Innovation Fund. Establishing such a condition would disregard the value of building up practical knowledge and experience with new technologies, and would impede the utility's ability to develop and refine cost-effective, scalable distribution system solutions.

75. To conclude this section and effectively address OEB staff and BOMA's concerns with respect to demarcating Innovation Fund projects from other work funded in rates, Toronto Hydro presents a two-part test for determining whether an innovation project should be funded via the Innovation Fund. This test would be applied as part of the project eligibility criteria (summarized in Appendix A), and would be further documented in the pilot selection report.

[97] Exhibit 1B, Tab 4, Schedule 2, Appendix A at pages 5-6; Exhibit 2B, Section D5 at pages 83-85.
[98] Exhibit 2B, Section D5 at page 45; Exhibit 1B, Tab 4, Schedule 1 at page 8.
[99] Exhibit 2B, Section D5 at page 45; Exhibit 1B, Tab 4, Schedule 2, Appendix A at pages 5-6.

- Is the project related to a grid technology or distribution solution included in the 2025-2029 Distribution System Plan or the 2025 OM&A test year budget? If the answer is yes, the project is presumptively not eligible for the Innovation Fund, and should be funded through base rates.

- Does the project involve an emergent technology that has not been previously tested by Toronto Hydro, or that requires further testing before it can be scaled to full deployment as a distribution system solution? If the answer is yes, the project is presumptively eligible to be considered by the Innovation Fund.

Prohibiting Recovery of Capital Expenditures

76. OEB staff and SEC oppose allowing capital investment under the Innovation Fund, arguing that only operational expenditures should be eligible.[100] Respectfully, this position overlooks a key practical consideration that Toronto Hydro cannot fully determine the nature of the costs until each pilot project is fully scoped and designed. This is one of the challenges the Innovation Fund is designed to address:

> *The Innovation Fund assists Toronto Hydro in overcoming the challenges of pursuing innovation in the context of a rate cycle that generally requires investment planning to be carried out far in advance and that requires spending to be classified either as a capital or operating expense.* [101]

77. Staff and SEC's concern is that capital expenditures would attract depreciation and return on capital costs beyond the rate term, potentially leading to investments of up to $75 million.[102] Toronto Hydro submits that these concerns are overstated and can be addressed without limiting the Innovation Fund's flexibility. For example, any concerns related to the amount of investment can be managed by capping total eligible expenditures, regardless of the type.

78. Additionally, concerns that the utility might earn a return on capital beyond the rate term can be addressed by setting the expectation that the useful life of capital investments should not exceed the duration of the pilot project, unless the utility can demonstrate economic benefits to justify including the assets in its rate base in the

[100] OEB Staff Submission at page 15; SEC Submission at pages 2-3; AMPCO, at page 3 of their submission, opposes the Innovation Fund, but argues that if it is approved, only operational expenditures should be permitted.
[101] Exhibit 1B, Tab 4, Schedule 1 at page 20.
[102] OEB Staff Submission at page 12; SEC Submission at page 2; CCC presents a similar concern at page 4 of their submissions that costs may exceed the requested funding level because of the inclusion of capital expenses.

next application. This would allow the OEB to review and decide whether the assets should be included in the rate base during the next rebasing application.

79. The OEB should reject Staff and SEC's proposal to prohibit capital expenditures as part of the Innovation Fund. Limiting eligible expenditures to operational costs diminishes the necessary flexibility of this custom funding mechanism, and hinders the development and integration of innovative technologies into the grid.

Prescribing Specific Types of Work

80. DRC, Pollution Probe and OEB staff request that the OEB impose conditions prescribing the specific types of work to be undertaken, or issues to be prioritized, through the Innovation Fund.[103]

81. While DRC supports each of the proposed pilot concepts put forward in the evidence,[104] it requests that any approval of the Innovation Fund explicitly requires Toronto Hydro to include pilots for multi-unit residential charging, "Bring Your Own Cord" street charging, and an electric school bus pilot among priority pilots. Additionally, the DRC requests that the approval include a specific condition to support bi-directional charging innovation among its priority projects.[105]

82. Pollution Probe submits that Innovation Fund projects must focus on and prioritize issues related to demand side opportunities in the service territory with an early focus on DER opportunities, including behind the meter.[106] In a similar vein, OEB staff submits that "*any custom mechanism must be aligned with the principle of pursuing initiatives that obviate capital solutions*" [107] suggesting that this principle trumps the broader set of considerations that the utility must evaluate in selecting projects.

83. Toronto Hydro acknowledges that the suggested projects and study areas can be explored during the pilot selection process. However, the utility cautions against the OEB mandating specific types of projects or issues to be prioritized within the Innovation Fund. Such conditions could limit Toronto Hydro's flexibility in selecting pilot projects that offer the greatest potential value to ratepayers.[108]

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[103] DRC Submission at pages 8-9; Pollution Probe Submission at page 5; OEB Staff Submission at page 7.
[104] DRC Submission at page 9.
[105] DRC Submission at pages 2, 9-11 and 16.
[106] Pollution Probe Submission at page 5.
[107] OEB Staff Submission at page 12.
[108] 1B-CCC-46(c); Exhibit 1B, Tab 4, Schedule 2 at pages 9 – 13.

84. Environmental Defence and BOMA propose that project selection criteria should require a review of similar projects in North America or Ontario to avoid duplication. Toronto Hydro agrees with the value of considering relevant projects undertaken by other organizations.[109] The utility's evidence indicates that the pilot selection and design phases will include a jurisdictional review to incorporate "lessons learned" from similar projects by other entities.[110] However, Toronto Hydro does not support a condition that would prohibit or make it more difficult to undertake projects similar to those already implemented in other jurisdictions. Such a restriction would unduly limit its ability to develop innovative solutions tailored to its grid and customer needs. Further, as discussed above at paragraphs 38 and 72, given the utility's unique operating conditions, proven technologies need to be properly tested and integrated into Toronto Hydro's grid to ensure feasibility and the potential for scalability.[111]

85. Toronto Hydro commits to engaging with other utilities and project partners when undertaking similar projects, ensuring that valuable insights from their pilot projects are applied to inform project scoping and execution. The utility contends that this commitment effectively addresses all concerns raised by parties regarding the need to minimize duplication and maximize the use of relevant learnings and knowledge from the broader sector.

Reporting and Oversight

86. A common theme among the submissions of both supporting and opposing parties is the need for additional reporting and oversight of the Innovation Fund.[112] Toronto Hydro's evidence outlines a number of proposals in this respect:

- Prepare reports at key stages of the project lifecycle – pilot selection report, milestone reports, and pilot evaluation and learnings report.[113]

- Inform the pilot project selection process by engaging with relevant external stakeholders to gain a better understanding of what is technically and financially feasible and the range of potential innovation needs and opportunities.[114]

[109] Environmental Defense Submissions at page 3; BOMA Submissions at page 2.
[110] Exhibit 1B, Tab 4, Schedule 2 at pages 9-10.
[111] Exhibit 1B, Tab 4, Schedule 2 at page 8; 2B-AMPCO-46(a); 1B-DRC-06(g).
[112] SEC Submission at pages 3-5. BOMA Submission at pages 2-3. Environmental Defence Submission at page 3. Pollution Probe pages 5-6. DRC Submission at pages 11-12, 14; OEB Staff Submission at page 8. VECC also raises similar concerns at page 3.
[113] Exhibit 1B, Tab 4, Schedule 2 at pages 11, 14 and 16; 1B-CCC-46 (d).
[114] Exhibit 1B, Tab 4, Schedule 2 at pages 10-11.

- Canvass what initiatives and solutions utilities and regulators in other jurisdictions have tested, piloted, and scaled, and explore these case studies.[115]

- Participate in relevant industry forums such as the TWDG, and collaborate with others entities through these forums.[116]

- Leverage funding sources from organizations such as NRCan, where possible and rely on these contributions to offset pilot project costs.[117]

87. Additionally, where appropriate, in the paragraphs that follow, Toronto Hydro has accepted proposals from the parties in respect of additional reporting measures.

Pilot Project Reporting

88. All of the supporting parties advocate for expanded public disclosure of the reports outlined in the governance framework: 1) pilot selection reports detailing project selections and their rationale; 2) milestone reports monitoring internal progress and expenditures throughout each project's lifecycle; and 3) pilot evaluation and learnings reports summarizing outcomes and lessons learned, assessing the future of each pilot.[118] SEC proposes that all the reports be posted on the utility's website.[119]

89. Environmental Defence and BOMA further propose that Toronto Hydro post project findings and any "detailed data" resulting from the pilot projects to Toronto Hydro's website.[120] Pollution Probe proposes that Toronto Hydro share project information and results with stakeholders, including relevant LDCs and the OEB's DER Connections Working Group.[121]

90. Toronto Hydro agrees to make all three categories of pilot project reports publicly available on its website, with the necessary redactions for commercially sensitive and confidential information, such as customer data. Public posting of these reports will

[115] Exhibit 1B, Tab 4, Schedule 2 at pages 9-11; 1B-CCC-46(a).
[116] 1B-Staff-40(b); 1B-Staff-87(e).
[117] Exhibit 1B, Tab 4, Schedule 2 at page 10; Exhibit 2B, Tab 4, Schedule 2, Appendix B; 1B-CCC-47; 2B-AMPCO-46(b) and (c); Technical Conference Transcript Day 4 at page 96, lines 14-15; Technical Conference Transcript Day 5 at page 39, line 25 to page 40, line 17.
[118] SEC Submission at pages 4-5; BOMA Submission at page 3; Environmental Defence Submission at page 3. Pollution Probe page 6. DRC Submission at pages 13-14; OEB Staff Submission at page 8.
[119] SEC Submission at page 5.
[120] BOMA Submission at page 3; Environmental Defence Submission at page 3.
[121] Pollution Probe at page 6.

provide all interested stakeholders access to project information and results, as recommended by SEC, Pollution Probe, Environmental Defence and BOMA.

91. However, Toronto Hydro cannot commit to releasing "detailed data" publicly given the high likelihood that pilot projects will involve information regarding specific customers or groups of customers, as well as potentially sensitive system planning data. Toronto Hydro has statutory obligations and licensing conditions requiring the utility to keep such data confidential.[122]

92. DRC and Pollution Probe submit that Toronto Hydro should be required to report on a scorecard assessing the Innovation Fund's effectiveness in the areas of: (i) net benefits, (ii) customer enablement of DERs, (iii) reliability impacts, (iv) GHG reductions, (v) cyber security impacts, (vi) the Future Energy Scenario model and (vii) regional planning net demand forecast. They also propose that Toronto Hydro report on the Innovation Fund in its annual rate filing and post that report on its website. [123]

93. Toronto Hydro acknowledges the importance of the areas highlighted by DRC and Pollution Probe and agrees to include an impact assessment regarding these areas in the pilot evaluation and learning report, as applicable to each project.

94. Toronto Hydro rejects the request from DRC and Pollution Probe for annual public reporting. The utility reiterates that it has agreed to make all three categories of pilot project reports publicly available on its website, with necessary redactions for commercially sensitive and confidential information. Toronto Hydro believes this approach provides sufficient transparency and shares key developments and learnings with interested stakeholders. The utility argues that any additional annual reporting would be redundant and thus inefficient.

Role of External Stakeholders

95. Under Toronto Hydro's proposal, the Innovation Fund will be led by a steering committee of senior leaders from different parts of the company.[124] The steering committee will oversee the governance framework and will be responsible for approving key decisions with respect to a pilot project, including selection, scope,

[122] ED-2002-0497, Electricity Distribution License - Toronto Hydro Electric System Limited at Section 15; Toronto Hydro Conditions of Service at Section 2.5; *Municipal Freedom of Information and Protection of Privacy Act, RSO 1990, c. M.56*.
[123] DRC Submission at page 14; Pollution Probe Submission at page 6.
[124] Exhibit 1B, Tab 4, Schedule 2 at page 9.

budget and timelines.[125] External stakeholders will play an important role by providing feedback on potential pilot projects. This feedback will inform the pilot selection process by helping Toronto Hydro gain a better understanding of what is technically and financially feasible, and additional perspectives with respect to the range of potential innovation needs and opportunities.[126]

96. Multiple intervenors (SEC, DRC, Pollution Probe, and BOMA) are calling for an unprecedented shift in how the Innovation Fund is governed, advocating for external stakeholders to be given decision-making power in how the fund is administered. They propose that 40% to 100% of the steering committee consist of external voices, including representatives from the IESO, OEB, City of Toronto, key industry leaders from the OEB DER Working Group, and ratepayer groups with expertise in the types of projects this fund will support.[127]

97. It is important to highlight that OEB staff did not recommend any amendments regarding external stakeholder involvement. After reviewing the governance models of innovation funds from other jurisdictions—where external stakeholders like utility commissions or state departments of public service decide how funding is allocated—OEB staff concluded that added measures, such as "*focused prudence reviews and timely public reporting,*" are sufficient to enhance accountability.[128] This suggests that OEB staff sees these actions as offering a more suitable approach than modifying the governance structure to provide decision-making authority to external stakeholders.

98. Toronto Hydro strongly opposes the parties' proposals to mandate external stakeholder participation on the Innovation Fund steering committee. Providing decision-making power to external stakeholders with competing (and perhaps conflicting) interests and divergent mandates would completely undermine the core purpose of the Innovation Fund – to remove barriers and create more flexibility to innovate within a multi-year rate plan. It would create inefficiency and subject the utility to an unprecedented level of micromanagement. What is intended to be a fast-moving, barrier-breaking initiative would instead become bogged down in

[125] Exhibit 1B, Tab 4, Schedule 2 at pages 11 and 14; 1B-DRC-06(a); 1B-DRC-06(i); Technical Conference Transcript Day 4 at page 132, line 8 to page 134, line 19.
[126] Exhibit 1B, Tab 4, Schedule 2, page 10-11. Exhibit 2B, Section D5 at page 85; 1B-CCC-46(a); 1B-DRC-06(i).
[127] DRC Submission at pages 11-12; BOMA Submission at page 2; SEC Submission at page 3; Pollution Probe Submission at page 5.
[128] OEB Staff Submission at page 8.

administrative hurdles and complexity, making it significantly more burdensome—and potentially impossible—to effectively select, design, and execute pilot projects.

99. Furthermore, since Toronto Hydro is ultimately accountable to the OEB and its customers for the prudent selection, design, and execution of projects, it would be inappropriate for external stakeholders—who have limited or no accountability to the OEB or customers—to play a governing role in administering the Innovation Fund. Their involvement in decision-making could introduce conflicting interests and undermine the utility's ability to effectively manage innovation initiatives in the best interest of ratepayers.

100. Toronto Hydro submits that the concerns underlying this problematic proposal are effectively addressed through proactive stakeholder engagement during the idea initiation and pilot selection phase, as proposed in the evidence. Toronto Hydro commits to making this engagement broad and accessible to all relevant stakeholders, including ratepayer representative groups.[129] This engagement, combined with appropriate accountability measures (prudence review and incremental reporting as discussed above) enables stakeholders to thoroughly review and scrutinize the utility's decisions and actions in administering the fund.

101. To the extent the OEB is inclined to mandate external stakeholder participation in steering the Innovation Fund, Toronto Hydro respectfully submits that it should be limited to representatives from the IESO Grid Innovation Fund and OEB Innovation Sandbox, with delegated authority to review and approve prudent project selection and execution in order to provide regulatory certainty and improve efficiency.

Quantum and Mechanics

102. All supportive parties, except for one, are satisfied with the proposed funding level. The DRC is advocating for a higher amount. While there is general agreement on the funding level, the parties have suggested several conditions and modifications regarding funding caps, and the proposed rate rider and variance account.

[129] In their opposing submissions, VECC and CCC (at pages 4 and 3 respectively) critique the proposal for lacking input from customers/ratepayers or their representatives. While the evidence did not specifically identify ratepayer representatives in the list of external stakeholders to be engaged, the parties also did not put this question Toronto Hydro during the discovery process. Toronto Hydro certainly did not intend exclude customer and ratepayer representatives from participating in the feedback process that will inform pilot selection.

103. In the following section, Toronto Hydro has presented recommendations aimed at addressing the concerns raised by the supportive parties, where feasible.

Funding Flexibility

104. OEB staff, along with SEC, BOMA, and Pollution Probe, support the proposed funding level of 0.3% of Toronto Hydro's revenue requirement, equating to approximately $15.4 million based on the Settlement Proposal.[130] DRC advocates for a higher funding level, proposing that the Innovation Fund be set at 0.5% of the revenue requirement.[131]

105. OEB staff, SEC, and Pollution Probe submit that the Innovation Fund should be capped at the proposed level, with OEB staff supporting a "soft limit" for expenditures exceeding this amount, provided they are not due to taking on additional projects.[132]

106. Toronto Hydro maintains its request for flexibility to invest beyond the proposed funding limit to pursue additional pilot projects that could deliver incremental value to ratepayers. This flexibility is essential to prioritize new innovation opportunities that may emerge during the five-year rate term, recognizing the rapid pace of technological advancements and the potential for an accelerated energy transition.[133] Any investments beyond the proposed funding limit would not be funded by the rate rider, but will be subject to the modified prudence standard outlined above.

107. If the OEB is inclined to impose a cap on the Innovation Fund, Toronto Hydro recommends that the cap be set at 0.5% of the revenue requirement outlined in the Settlement Proposal. This aligns with DRC's position and represents the midpoint of the range of innovation fund investments identified through jurisdictional research.[134] Such a cap would reconcile the need for flexibility to support innovation investment, while remaining within a reasonable and predictable funding framework.

[130] Settlement Proposal at page 13.
[131] DRC Submission at pages 15-16.
[132] OEB Staff Submission at page 4; SEC Submission at page 3; Pollution Probe Submission at page 5.
[133] 9-Staff-342(a); Technical Conference Transcript Day 4 at page 94, lines 6-22; Technical Conference Transcript Day 5 at page 95, lines 14-20 and page 96, lines 1-4.
[134] DRC Submission at pages 15-16; Exhibit 1B, Tab 4, Schedule 2 at page 5; 1B-Staff 11(b).

Funding Mechanism

108. OEB staff favour a *capped deferral account* as an alternative to the proposed Innovation Fund rate rider. Staff also suggests that if a rate rider is approved, it should include a claw-back provision if Toronto Hydro fails to demonstrate the prudence of its Innovation Fund expenditures.[135] Toronto Hydro is agreeable to OEB staff's proposal for a provision to claw-back funding should Toronto Hydro fail to meet the modified prudence standard discussed above. However, for the reasons that follow, the utility respectfully disagrees with OEB staff's position regarding the deferral account, and maintains its request for a rate rider coupled with a variance account as outlined in the evidence.[136]

109. Toronto Hydro submits that a custom funding mechanism should enable innovation investments to be treated on par with capital and operational budgets, providing sufficient funding to prioritize these initiatives. A deferral account fails to meet this objective because it requires Toronto Hydro to invest in innovation during the 2025-2029 rate period without enabling cash flows, placing incremental burden on the utility's balance sheet. This approach should be rejected as it perpetuates financial challenges that hinder innovation investment.

110. Toronto Hydro submits that a rate rider, coupled with a variance account, is the optimal custom funding mechanism.[137] This proposal provides the necessary funds and flexibility to prioritize investment in innovation, while allowing for detailed reconciliation between the revenues collected from ratepayers through the rate rider and the actual costs incurred for pilot projects. Furthermore, a variance account mechanism enables the utility to account for any offsetting contributions from external funding sources such as NRCan and the IESO's GIF, in the event that Toronto Hydro is able to secure such funding. Overall, this approach provides a fair and balanced way to enable innovation investment in the 2025-2029 rate period.

Project-Based Materiality

111. OEB staff accepts the envelope approach for determining materiality when establishing the funding mechanism, but reserves the right to argue for a project-

[135] OEB Staff Submission at page 4.
[136] Exhibit 1B, Tab 4, Schedule 2 at pages 16-17.
[137] VECC submits at page 3 that Toronto Hydro has not provided any detail about cost allocation of the proposed rate rider. This is incorrect. Toronto provided information on the proposed Innovation Fund rate class allocation at Exhibit 9, Tab 1, Section 1 at page 38 and in Undertaking JT5.13 Appendix B, Tab 3, Section 1 – Rate Rider Table.

based materiality test at the time of disposition.[138] Toronto Hydro disagrees with this approach, as it could lead to the exclusion of certain projects from rate recovery simply because they fall below the $1 million materiality threshold.

112. Leaving the door open for an after-the-fact disallowance based on project-specific materiality undermines Toronto Hydro's confidence in pursuing smaller projects that could deliver potential benefits to ratepayers at a lower cost. Toronto Hydro submits that if a project meets the eligibility and selection criteria outlined in Appendix A and is executed prudently, it should qualify for rate recovery without any further materiality assessment.

4.0 CONCLUSION

113. Toronto Hydro's proposed Innovation Fund is a key part of the utility's broader strategy to ensure grid readiness to support the energy transition. The proposal is enabled by a custom funding mechanism aimed at providing the utility the financial resources and flexibility needed to invest in testing and piloting emerging technologies and solutions during the 2025-2029 rate term.

114. Investments made through the Innovation Fund will focus on technologies with the potential to be scaled and deployed as cost-effective distribution solutions in the future. These investments will be governed by a robust framework that ensures effective project selection, execution, and evaluation, incorporating input from relevant external stakeholders. This framework includes appropriate safeguards to provide clear insights into the projects and ensure the funds are used prudently.

115. Toronto Hydro has carefully considered the concerns raised by the four parties opposing the Innovation Fund and respectfully submits that their objections should be dismissed by the OEB for the reasons outlined in section 2 of this document.

116. Six parties have filed submissions in support of the Innovation Fund, subject to certain conditions and modifications which are discussed in section 3. After conducting a comprehensive review of these proposed conditions and modifications, Toronto Hydro has accepted several adjustments that align with the fund's objectives. The result is a strengthened proposal with additional transparency and oversight

[138] OEB Staff Submissions at page 13.

measures, ensuring accountability while avoiding barriers that would compromise the Fund's objectives and hinder innovation progress in the 2025-2029 rate period.

117. In conclusion, Toronto Hydro submits that the Innovation Fund reflects a balanced and reasonable proposal that should be approved as outlined.

– **ALL OF WHICH IS RESPECTFULLY SUBMITTED** –

APPENDIX A: INNOVATION FUND ELIGIBILITY AND SELECTION CRITERIA

Project Eligibility Criteria

Projects will be considered for selection based on the following yes/no criteria:

1. Does the technology or solution explore a new distribution capability connected to one or more of the following OEB expectations for adapting to fundamental change in the energy landscape? If yes, proceed.

    - Evolving and enhancing load forecasting, considering DER adoption;
    - Making enabling investments such as system monitoring and data analytics;
    - Adjusting operational practices to incorporate and manage DERs on the system, including dispatching and use as non-wires-alternatives;
    - Modifying planning processes to identify, assess, and implement non-utility owned DER solutions; or
    - Developing skills and knowledge, and acquiring talent.

2. Does the technology or solution have the potential to be scaled into standard capital or operational work programs? If yes, proceed.

3. Is the project related to a proven technology or demonstrated solution included in the 2025-2029 Distribution System Plan or 2025 OM&A test year budget? If no, proceed.

4. Does the project involve an emergent technology or solution that has not been previously tested by Toronto Hydro, or that requires further testing before it can be scaled to full deployment as a distribution system solution? If yes, proceed.

Project Selection Criteria

Pilot projects will be selected to proceed based on the following criteria, which will be scored on a scale from 1 (Low) to 5 (High):[139]

1. **Potential Business Value** – identify the expected lessons to be learned, to be informed by market readiness based on industry trends and technological

[139] Exhibit 1B, Tab 4, Schedule 2 at pages 9-10.

advancements, as well as lessons learned from the implementation of similar projects and initiatives by Toronto Hydro or other entities.

2. **Potential Ratepayer Value** – explain how the project can provide value to ratepayers including but not limited to: reduction of future capital investments, reduction in OM&A budgets, increased efficiency of its existing system, and increase opportunities for customers, including the ability to better manage usage to reduce overall consumption or shift periods of usage and the ability to increase level of customers to connect DERs.[140]

3. **Feasibility Assessment** – selected pilot project(s) can be designed, executed, and completed by the end of the 2025-2029 rate period, as informed by primary research or reference to similar projects undertaken by other utilities

4. **Opportunity for Scalability** – a demonstration of why the selected projects have a reasonable expectation of scalability to be considered based on parameters such as functional compatibility with existing core technology; feasibility of integration with existing control systems; compliance with minimum safety, operating, and cyber security standards; and financial viability and sustainability.

5. **Opportunity to Leverage External Funding** – where possible Toronto Hydro would seek alignment with areas of research and development being funded by organizations such as Natural Resources Canada or other government agencies, including programs that are aimed at supporting the energy transition and climate policies.

6. **Alignment with Stakeholder Feedback** – engage broadly with external stakeholders to get feedback on technologies and solutions that are being considered and to understand what may be technically feasible and potentially beneficial based on others' experience. Assess the degree of alignment with stakeholders' feedback and explain how it informs project selection.[141]

[140] Exhibit 1B, Tab 4, Schedule 2 at page 12.
[141] 1B-CCC-46(a).