February 12, 2024

Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street, P.O. Box 2319
Toronto ON, M4P 1E4

Dear Ms. Marconi,

RE: EB-2023-0195 Toronto Hydro Application for Electricity Distribution Rates effective January 1, 2025 – Energy Probe Interrogatories

Attached are the interrogatories of Energy Probe Research Foundation (Energy Probe) to Toronto Hydro in the EB-2023-0195 proceeding.

Respectfully submitted on behalf of Energy Probe.

Tom Ladanyi

Digitally signed by Tom Ladanyi
Date: 2024.02.12 15:22:16 -05'00'

Tom Ladanyi
TL Energy Regulatory Consultants Inc.

cc. Patricia Adams (Energy Probe)
Daliana Coban (Toronto Hydro)
Thomas Eminowicz (OEB Staff)
Charlotte Kanya-Forstner (OEB Staff)
Lawren Murray (OEB Staff)
Deniz Oktem (Toronto Hydro)
Intervenors of Record

EB-2023-0195

Toronto Hydro Application for Electricity Distribution Rates effective January 1, 2025

Energy Probe Interrogatories

February 12, 2024

1B-EP-1

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 2.3.2 Complex Operating Conditions, Table 1: Ontario Cities Population Density

Preamble: The population density of Etobicoke, North York, and Scarborough is similar to the population density of Mississauga, Brampton, Vaughan, Richmond Hill, Markham, Pickering, Whitby, and Oshawa.

Questions:

a) Please expand Table 1 to show the population densities of Etobicoke, North York, Scarborough, Mississauga, Brampton, Vaughan, Richmond Hill, Markham, Pickering, Whitby and Oshawa and file it.

b) Please confirm that there are large areas of agricultural land within city limits of Hamilton and Oshawa.

c) What is the population density of Mississauga if the land occupied by Pearson Airport is excluded.

1B-EP-2

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 2.3.2 Complex Operating Conditions and Table 2

Preamble: "The density of Toronto Hydro's service territory is unique even within an international context due to the ever-increasing number of high-rise buildings."

Question:

a) Please provide Toronto Hydro's definition of a high-rise building.

b) Table 2 indicates that there are 2,598 high rise buildings in Toronto. How many of those buildings use natural gas for space and water heating? How many of those buildings have a natural gas or diesel emergency power generator?

c) Please list the cost impacts that construction of high-rise buildings imposes on Toronto Hydro.

d) Does Toronto Hydro believe that existing ratepayers should subsidize developers of high-rise buildings? Please explain your answer.

e) Are developers of high-rise buildings required to pay contributions in aid of construction to offset the costs they impose on Toronto Hydro? If the answer is yes, please explain how these contributions are assessed and the total amount collected by Toronto Hydro in the most recent year for which a total amount is available. If the answer is no, please explain why not.

1B-EP-3

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 2.3.2 Complex Operating Conditions

Preamble: "In addition to high-rise buildings, this growth is also driving the development of sustainable new housing communities through the redevelopment of areas such as Downsview, the Golden Mile and the Port Lands, some of which are planned as net zero communities and to meet the highest performance measures of the Toronto Green Standard."

Questions:

a) Please provide Toronto Hydro's definition of "sustainable new housing communities."

b) Please file the Toronto Green Standard and identify the "highest performance measures."

c) Does Toronto Hydro audit claims of measurement of highest performance under the Toronto Green Standard?

d) Do sustainable new housing communities impose additional costs on Toronto Hydro than do existing communities?

e) Does Toronto Hydro believe that ratepayers in existing communities should subsidize ratepayers in new sustainable communities? Please explain your answer.

1B-EP-4

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 2.3.4 Extreme Weather

Preamble: "Extreme weather amplifies the challenge of distributing electricity to a mature, dense and rapidly growing urban city. Heat, high winds, heavy rainfall, freezing rain and heavy

snowfall can cause major system damage and result in prolonged power outages. As evidenced by recent events (outlined in Table 3 below), extreme weather has become a regular operating condition that the utility must consider and manage in its day-to-day operations and long-term planning activities. With the frequency and intensity of adverse weather increasing due to climate change, Toronto Hydro's grid and operations must become more resilient to this challenge."

Question:
Please provide Toronto Hydro's definitions of "extreme weather," "averse weather," "climate change" and "prolonged power outage."

1B-EP-5

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 2.3.1 Technology Advancements

Preamble: "Integrating DERs into the grid provides customers more tools to actively manage their energy needs and enables the grid to be supplied by locally-generated renewable electricity resources. To advance these outcomes, Toronto Hydro must address the significant challenge of accommodating electrons that flow bidirectionally within a grid that was not built for this type of supply and demand. Equipment that has a high number of DER connections is more likely to experience unstable conditions that pose significant reliability and safety risks to the system and its users. Toronto Hydro monitors all DER connections closely for these factors to ensure that the grid remains safe and reliable for customers, and is building advanced grid capabilities to mitigate against these risks and enable DER adoption by customers in the future."

Questions:

a) Please confirm that customers who own DER's impose additional costs on Toronto Hydro.

b) Does Toronto Hydro require new customers who are installing DER's to pay a contribution to offset the costs they impose on Toronto Hydro?

c) Does Toronto Hydro believe that customers who do not own DERs should subsidize customers who own DERs? Please explain your answer.

1B-EP-6

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 2.3.2 Workforce Challenges

Preamble: "Over this period, as Toronto Hydro's replenished a large wave of retirements, it also right-sized its workforce through continuous improvements in productivity, including

harmonizing key jobs to create a more agile compliment of staff, and automating manual processes to increase employee output levels"

Questions:

a) Please provide Toronto Hydro's definition of "right-sized."

b) Does the quoted paragraph indicate that Toronto Hydro has increased or decreased the total number of its employees? Please explain your answer.

c) On the average, is the compensation of a newly hired young and inexperienced employee higher or lower than of an old and experienced employee who is retiring? Please explain your answer.

1B-EP-7

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 3.3 Plan Validation and Finalization, Table 4: Summary of 2025-2029 Proposed Distribution Rate Change

Questions:

a) Are the amounts shown in Table 4 up to date? If the answer is no, please file the table with the current amounts.

b) Please expand Table 4 to show percentage rate increases (not bill impacts as shown in Exhibit 1B, Tab 1, Schedule 3, Page 1, Table 1 or Page 3, Table 3 which mask rate increases with other factors) for each year and the average. If such a table is elsewhere in the filing, please provide the reference.

1B-EP-8

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 4.2 Growth and City Electrification, Table 6: City Growth and Electrification Capital Programs

Questions:

a) Is Toronto Hydro charging developers for the costs of relocations to accommodate new high-rise developments? Please discuss.

b) Is Toronto Hydro sharing the costs of relocations for road widening, LRT construction, waterfront reconstruction construction with the City of Toronto, Metrolinx, Waterfront Toronto, and other agencies? Please discuss.

c) Is Toronto Hydro following the OEB's Distribution System Code in determining the need for contributions for new loads? Please discuss.

d) Are the amounts shown in Table 6 net of contributions or are the gross amounts?

1B-EP-9

Reference: Exhibit 1B, Tab 1, Schedule 1, Section 4.3 Grid Modernization

Preamble: "The system provides a holistic view of the grid and encompasses advanced applications such as Outage Management System (OMS), Fault Location Isolation and Service Restoration (FLISR), Volt/Var Optimization, which allow swift detection and response to outages and grid disturbances, and enable reliable and efficient management of DERs by optimizing voltage levels and reactive power flows throughout the distribution system."

Questions:

a) What percentage of expenditures on OMC, FLISR, and Volt/Var Optimization are required to enable reliable and efficient management of DERs and what percentage of expenditures are required for other reasons? Please explain your answer.

b) Are customers who own DER's required to pay a contribution to offset the expenditures that are required to serve them? If the answer is yes, please provide the total amount that is expected to be collected in 2025 from customers who own or rent DER's. If the answer is no, please explain why not.

1B-EP-10

Reference: Exhibit 1B, Tab 1, Schedule 3, Page 5, Table 5: Customer and Load Growth Changes for 2018-2029

Questions:

a) Please confirm that Toronto Hydro's evidence as presented in Table 5 shows that electrification will result in a reduction in load. Please explain your answer.

b) Please confirm that Toronto Hydro is proposing to spend more and more money to deliver less and less electricity. Please explain your answer.

1B-EP-11

Reference: Exhibit 1B, Tab 1, Schedule 3, Page 10, Table 10: Proposed Capital Structure and Cost of Capital Parameters

Questions:

a) Is Toronto Hydro proposing to use the same 40% deemed equity thickness as the other 57 distributors regulated by the OEB? Please explain your answer.

b) Is Toronto Hydro proposing to use the same 9.36% deemed return on common equity as the other 57 distributors regulated by the OEB? Please explain your answer.

c) Does the recent OEB decision in the EB-2023-0143 Getting Ontario Connected Variance account that allowed.

1B-EP-12

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 2

Preamble: "The current custom rate framework, which was established in the 2015-2019 Rate Application (EB-2014-0116), provided stability and flexibility as Toronto Hydro grappled with the significant challenge of renewing a rapidly deteriorating distribution system.
The 2025-2029 Custom Rate Framework detailed in this schedule is structurally consistent with the rate framework approved by the OEB in past applications, with purposeful evolutions to achieve the objectives summarized below.

Provide multi-year funding certainty and flexibility for Toronto Hydro to:
(i) continue to sustain a reliable grid and safe and effective operations; and
(ii) address current and emerging (externally-driven) needs and challenges that the utility faces in delivering its services and preparing the grid for the energy transition."

Questions:

a) Please explain why the current rate framework should be changed if it provided "stability and flexibility." Does Toronto Hydro no longer need stability and flexibility?

b) Does Toronto Hydro still have a "rapidly deteriorating distribution system"? If the answer is yes, why has Toronto Hydro management failed to stop the deterioration since the current custom rate framework was established?

c) Please explain what is meant by the term "structurally consistent" and how it differs from the meaning of the word "consistent"?

d) Does the 2025-2029 Custom Rate Framework meet the *OEB Filing Requirements for Electricity Distribution Rate Applications, Chapter 3, Incentive Rate Setting Applications*? If the answer is no, please explain why not.

e) Does "multi-year funding certainty" provide more funding certainty than Price Cap IR used by most Ontario Distributors? If the answer is yes, why should Toronto Hydro have

more funding certainty than other distributors? If the answer is no, please explain why not?

f) Does the proposed 2025-2029 Custom Rate Framework increase or decrease the earnings risk of Toronto Hydro compared to its current rate framework? Please explain your answer.

g) Does the proposed 2025-2029 Custom Rate Framework allow Toronto Hydro to have a higher or a lower earnings risk than Ontario distributors who use the Price Cap IR rate setting method? Please explain your answer.

1B-EP-13

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 6

Preamble: "Toronto Hydro's proposal evolves the existing custom rate-setting approach in a manner that is consistent with the RRF and aligned with the OEB's guidance in the 2016 Rate Handbook."

Question:

a) Please explain the meaning of the term "evolves" in the quoted sentence. Does Toronto Hydro's proposal meet the requirements of the 2016 Rate Handbook? Please explain your answer.

b) Does the 2025-2029 Custom Rate Framework meet the *OEB Filing Requirements for Electricity Distribution Rate Applications, Chapter 3, Incentive Rate Setting Applications*? If the answer is no, please explain why not.

1B-EP-14

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 12

Preamble: "As illustrated in Figure 1 below, the continuation of a custom-rate setting approach is necessary for Toronto Hydro as funding derived from the OEB's standard Price Cap and IRM framework is insufficient to fund the plan's imperatives of system stewardship, growth and electrification, and modernization."

Questions:

Does Toronto Hydro believe that OEB's standard Price Cap IRM framework is inadequate to fund "imperatives of system stewardship, growth and electrification, and modernization" of electricity distributors and should be changed? Please explain your answer.

1B-EP-15

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 13

Preamble:
"Under a standard IRM scenario, Toronto Hydro's 2025-2029 capital investment plan would be underfunded by approximately 35 percent or $1.5 billion. Adoption of a plan constrained by this funding envelope would force the utility into a sustainment plan that would be almost entirely reactive in nature, resulting in roughly an 8 percent deterioration in system reliability by the end of the rate period, along with increases in safety and environmental risks and reactive replacement costs due to increasing numbers of asset failures."

Questions:

a) Please file the calculation that shows the derivation of the "8 percent deterioration in system reliability".

b) Would the "8 percent deterioration in system reliability" be experienced throughout the Toronto Hydro service area? If the answer is no, please provide the percentage of deterioration in each area.

c) Is Toronto Hydro claiming that only unconstrained spending can prevent a deterioration in system reliability?

d) If $1.5 billion spending is required to prevent any deterioration in system reliability, what would be the percentage of deterioration if only $1.0 billion was spent?

1B-EP-16

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 21

Preamble: "Toronto Hydro proposes a shift in its rate-setting approach from price-cap to a revenue-cap model. Rather than escalate rates themselves each year, and use a simplistic g-factor to account for expected billing determinant growth, Toronto Hydro proposes to escalate revenue requirement each year, and design rates for each revenue requirement on the basis of forecasted customer and load growth over the rate term."

Questions:
Please confirm that under a price-cap model, a utility bears the load forecast risk while under a revenue-cap model a utility does not bear the load forecast risk. Please explain your answer.

Please confirm that the proposed revenue cap model lowers the business risk of Toronto Hydro compared to the Ontario distributors that use the standard OEB price-cap model. Please explain your answer.

1B-EP-17

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 23

Preamble: "The C-factor is an attrition relief mechanism that implements additional rate escalations 1 each year, beyond those provided for through base rates escalated at inflation less productivity, to account for the utility's growing capital-related revenue requirement as a result of implementing the multi-year capital investment plan known as the DSP."

Question:
The term "attrition relief mechanism" is not commonly used by the OEB. The noun attrition means a decrease in number size or strength. What is decreasing at Toronto Hydro that would require a relief mechanism?

1B-EP-18

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 29

Preamble: "In addition to the efficiency-factor, Toronto Hydro's rate framework proposes a proactive 0.6 percent performance incentive factor that further reduces revenues by approximately $65 million over the rate term, providing customers an additional upfront rate reduction."

Questions:
Why would a reduction in revenues provide customers a rate reduction in a revenue-cap plan or does Toronto Hydro actually mean a reduction in revenue requirement?

1B-EP-19

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 32

Preamble: "To implement the PIM, Toronto Hydro proposes a new deferral account – the Performance Incentive Mechanism Deferral Account (PIM-DA) – to record the PIM earnings. This account would be brought forward for review and disposition in the utility's next rebasing application, based on known (or forecasted) performance results for the 2025-2029 rate period.

Question:
Will the entries in the PIM-DA be audited by an independent external auditor? If the answer is no, please explain why not.

1B-EP-20

Reference: Exhibit 1B, Tab 2, Schedule 1, Page 34

Preamble: "In alignment with the OEB's 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."

Questions:

a) Please provide Toronto Hydro's definition of "innovative pilot projects."

b) Please confirm that ratepayers will bear the risk that innovative pilot projects might deliver no benefits to ratepayers.

1B-EP-21

Reference: Exhibit 1B, Tab 2, Schedule 1, Pages 35 to 37

Preamble: "Subject to OEB approval, Account 1508 – Demand-Related Variance Account (DRVA) would record: (i) the demand-driven revenue requirement impacts arising from variances in actual versus forecast capital and operational expenditures for certain demand-based programs (the Expenditure Variance Sub-Account); and (ii) the 1 revenue impacts arising from variances in forecast versus actual billing determinants over the rate period (the Revenue Variances Sub-Account)."

Questions:

a) Does the proposed Demand Related Variance account increase or decrease the business risk of Toronto Hydro? Please explain your answer.

b) Is Toronto Hydro assuming that all capital project variances including variances caused by poor project management would be recorded in the DRVA?

1B-EP-22

Reference: Exhibit 1B, Tab 2, Schedule 1, Pages 46, Demand-Related Revenue Variance Subaccount

Question:

Does the proposed Demand-Related Revenue Variance account increase or decrease the business risk of Toronto Hydro? Please explain your answer.

1B-EP-23

Reference: Exhibit 1B, Tab 2, Appendix A and Appendix B, Scott Madden Report

Questions:

a) The report refers to a few US states. Should the OEB assume that regulatory commissions in the remaining US states have not approved any incentive rate plans that are similar to the plan that Toronto Hydro is proposing. Please explain your answer.

b) Please confirm that regulatory regimes in the United Kingdom, Australia, Philippines, and Malaysia are quite different from the North American cost of service/ rate of return on rate base form of regulation. Please explain your answer.

c) Please confirm that the Revenue Growth Factor proposed by Toronto Hydro is actually a revenue requirement growth factor.

d) Please explain how Toronto Hydro's proposed custom IR differs from a multi-year cost of service rate plan.

e) Based on Scott Madden's research, is Toronto Hydro's proposed custom IR plan simple or complex?

f) Based on Scott Madden's research does Toronto Hydro's proposed custom IR plan provide more or less incentive for productivity improvements than OEB's standard price-cap plan that is used by most Ontario distributors?

2B-EP-24

Reference: Exhibit 2B, Section A3.4, Page 13

Preamble: "For instance, in May 2022, an extreme wind event known as the Derecho Storm struck Southern Ontario and Quebec with 120+km/h winds. These extreme winds caused substantial damage to vegetation, which in turn damaged overhead distribution wires and equipment leaving approximately 142,000 customers (18 percent of Toronto Hydro's total customer base) without power at the peak of the storm. While the majority of customers were restored within 48 hours, it took approximately 5 days and cost approximately $2.35 million to restore power to all customers."

Question:

Has Toronto Hydro previous prepared any projections for anticipated costs to restore service for extreme weather events? If so, please provide those past projections so they may be compared to the actual cost incurred in the May 2022 case of extreme weather.

2B-EP-25

References: Exhibit 2B, Section A3.5, Page 15; Exhibit 2B, Section D4.3, Page 13; Exhibit 2B, Section E3.2, Page 3; Exhibit 2B, Section E5.5, Page 6

Preambles: "By the end of the decade, Toronto Hydro expects to have over 4,400 DER connection projects representing a total installed capacity of approximately 517 MW, an increase of approximately 67 percent compared to 2022"

"Based on the capacity planning process outlined above, Toronto Hydro proposes investments in various programs to meet the utility's fundamental obligation to connect new and expanded services to the grid in this decade and beyond. These programs include expansion to increase grid capacity and enhancements to better utilize existing equipment. Through programs such as Load Demand, Stations Expansion, and Horseshoe and Downtown Renewal, Toronto Hydro is renewing and enhancing stations, buses, feeders, and other equipment that will facilitate load growth at the appropriate locations. In areas where Toronto Hydro expects customers to connect more DERs, programs such as Grid Protection, Monitoring and Control alleviate short-circuit capacity constraints."

"Toronto Hydro's 2023-2029 DER connection and capacity forecast considers a combination of historical trends, project pipeline, economic environment, and the current energy policies at the time of the forecast. Total DER projects are expected to contribute a total increase of 67 percent to total installations, reaching nearly 4,500 connections by the end of 2029, as shown in Figure 2. This represents a total DER installed capacity of approximately 516.7 MW by the end of 2029 in comparison to the 304.9 MW installed as of the end of December 2022, depicted in Figure 3."

"Currently, three station buses have reached short circuit capacity limits and are not able to connect additional DERs. Toronto Hydro anticipates that a total of eight station busses will exceed short circuit capacity by 2029. To arrive at the projected constraints in Table 4, Toronto Hydro mapped its overall forecast of 2029 DER capacity onto station busses by assuming that the geospatial distribution of DERs will continue to follow existing load connection patterns."

Questions:

a) How does Toronto Hydro determine where to expect customers to connect more DERs?

b) Please describe how Toronto Hydro would act in the event that more customers want to connect DERs than Toronto Hydro expects in a particular area.

c) How will Toronto Hydro ensure that it is not picking certain neighborhoods, such as only those that have previously shown demand to connect DERs, at the expense of other neighbourhoods for being able to benefit from connecting DERs?

d) If a neighbourhood ends up having greater demand for connecting DERs in the future than Toronto Hydro has planned for, please describe the approach Toronto Hydro would take to service those customers?

2B-EP-26

Reference: Exhibit 2B, Section C1, Page 1

Preamble: "A key theme of the Ontario Energy Board's guidance is that utilities should align their investment plans with customer needs, and adopt an outcomes-based approach to tracking their performance."

Questions:

a) Since the shift to more people working from home during and after the pandemic, has Toronto Hydro changed its approach to tracking reliability performance data in any way to align with the needs of more customers working from home and needing reliable power at residential addresses during working hours? If so, how has Toronto Hydro's approach to tracking reliability performance data changed?

b) Does Toronto Hydro track power outages of a few seconds or minutes (momentary interruptions) when compiling reliability performance data?

c) What is the minimum interruption time Toronto Hydro tracks when compiling Reliability Performance data?

d) Are there any plans to change the tracked minimum interruption time with changing customer needs?

e) Does Toronto Hydro have a plan for reducing the frequency of momentary interruptions in service that may negatively impact customers working from home?

2B-EP-27

Reference: Exhibit 2B, Section C2.6, Page 14

Preamble: "On average, between 2018 and 2022, defective equipment was the main contributor to SAIFI and SAIDI, at 27.5 percent and 36.2 percent, respectively. However, in 2020 and 2022, defective equipment was surpassed by unknown caused outages as the top contributor to SAIFI."

Question:

a) Does Toronto Hydro view it as a problem that the number of outages by unknown causes is increasing? If not, why not?

b) As Toronto Hydro's data shows the number of outages with unknown causes is increasing, does Toronto Hydro have a plan for improving its ability to diagnosing unknown causes in the future? If so, what is the plan? If there is no plan, why is there no plan to address this increasing problem?

2B-EP-28

Reference: Exhibit 2B, Section D4, Appendix A, Page 1

Preamble: "Government at all levels are implementing decarbonization policies, including GHG emission targets and incentives to encourage consumers to electrify their transportation and heating needs. Key policies and incentives include: Canada Greener Homes Grant provides up to $5,000 for electrified heating technologies such as heat pumps. This grant was introduced in December 2020 and is expected to stay in place for seven years."

Questions:

a) Has Toronto Hydro performed any analysis of the impacts on peak electricity demand in winter months for a sizable portion of residential customers converting their home heating to heat pumps? If not, why not?

b) Does Toronto Hydro presently expect the transition to heat pumps for home heating to have a material effect on peak electricity demand? If not, why not?

c) If significantly more residential customers install heat pumps in a particular area than Toronto Hydro has presently anticipated, how will this impact service reliability?

d) Does Toronto Hydro have a plan in the event that significantly more customers install heat pumps in a particular area than anticipated?

2B-EP-29

Reference: Exhibit 2B, Section D4, Appendix A, Page 3

Preamble: "Consumer choices and behaviors regarding energy use are gradually changing. Activities that previously did not affect the electricity system (including fueling vehicles and space heating) now have the potential to change electricity consumption patterns and shift system peaks. For example, residential and fleet EV charging could create new system needs like real-time voltage control to support a sharp rise from morning and/or afternoon charging on a scale similar to that created by air conditioning demand on hot summer days. Additionally, as

heating systems are electrified (e.g. heat pumps), electricity system peaks can shift from summers to winters."

Questions:

a) Are the demands on service areas expected to vary depending on whether the area has more residential EV charging activity vs fleet or commercial EV charging activity?

b) Does Toronto Hydro have any projections for what areas of the city are likely to experience increases in fleet or commercial EV charging vs residential EV charging?

c) Has Toronto Hydro identified areas in the city that require infrastructure upgrades to support projected EV charging needs?

d) How will Toronto Hydro ensure that it does not pick certain neighbourhoods to provide sufficient capacity for future EV charging but not other neighbourhoods?

3-EP-30

Reference: Exhibit 3, Tab 1, Schedule 1, Page 27, 11. Heat Pumps

Preamble: "In preparing the revenue load forecast for the 2025-2029 7 period, Toronto Hydro determined that the impact of heat pumps on overall load and demand is not yet material."

a) How many Toronto Hydro customers have a heat pump and how many have a hybrid system that uses a heat pump and a gas furnace?

b) What is the average load and peak load for a heat pump?

c) Please file the numerical analysis that supports the quoted statement.

d) How many multi-unit residential buildings in Toronto are heated and cooled with heat pumps?

3-EP-31

Reference: Exhibit 3, Tab 1, Schedule 1, Appendix J, 2.4 Estimate Monthly Billing Demand Impact, Page 7

Preamble: "Three of Toronto Hydro's rate classes are billed on peak demand which is calculated as the highest kVA demand for that customer in each month (Footnote 6). Billing demand times and amounts will vary from customer to customer and from month to month. The

presence of EV charging will put upward pressure on billing demand and that pressure is a function of the number of EVs being charged at the premise, the load profiles of those EVs, and the base load profile for that customer. A load profile that estimates the hourly charging requirements (or production expectations) of an EV/DER at the general service customer premise is necessary for the analysis.

> Footnote 6: These rate classes are GS 50-999, GS 1-5MW, and Large Users. The remaining rate classes do not have a billing demand rate component.
>
> Footnote 7: Since only the three general service rate classes have a billing demand component, it is only a general service load profile that needs to be calculated. Residential home charging can be ignored when estimating billing demand impacts."

Questions:

a) Does a residential customer with a Level 2 charger have higher peak demand when charging than residential customers without chargers? If the answer is yes, please provide an estimate of how much higher, such as 100 times higher. If the answer is no, please explain why not.

b) Please explain why residential home charging can be ignored. Would that not result in residential customers who do not have Level 2 chargers subsidizing residential customers who have Level 2 chargers? Please discuss.

c) What can be done to prevent cross-subsidies between customers who have EV chargers and customers who do not?

d) Do some North American jurisdictions have a rate for customers with EV chargers?

3-EP-32

Reference: Exhibit 3, Tab 1, Schedule 1, Appendix J, Page 10, Footnote 11

Preamble: Footnote 11: "The more EVs or DER capacity at a given customer site, the more likely it will be that the presence of the technology will shift the billing peak time to a different time that day or to a separate day. The Integration Model accounts for this by adding more EVs and more DER capacity for the larger rate class customers (GS 15 MW and Large Use) who are likely to have a higher number of EVs or DERs on site than those customers GS 50-999 kW."

Questions:

a) The quoted text refers to a potential shift in billing time. Please explain from what time of the day to what other time of the day would this shift take place.

b) Considering that some large institutional and industrial customers use gas powered generators to avoid GA charges during peak periods under the Industrial Conservation

Initiative program, is it possible that these customers would be burning more natural gas in order to charge EVs?

4-EP-33

Reference: Exhibit 4, Tab 1, Schedule 1, Page 1

Preamble:
In addition to enabling Toronto Hydro to attract and retain the necessary resources to carry out its DSP and deliver customer outcomes in next rate period and beyond, the OM&A plan addresses other key operational requirements, including:
• integrating cloud computing and non-wires solutions into operations;
• responding to evolving policy and customer expectations to connect behind-the meter technologies such as electric vehicles, solar panels, and energy storage;

Questions:

a) Does Toronto Hydro charge customers for behind the meter connections of electric vehicle chargers, solar panels, and storage batteries? If the answer is yes, please list such charges and indicate if they are expected to recover Toronto Hydro's incremental costs. If the answer is no, please explain why not.

b) Please file a table listing the forecast of 2025 OM&A costs for behind the meter connections for each of the following customer owned appliances: EV chargers, solar panels, and storage batteries.

5-EP-34

Reference: Exhibit 5, Tab 1, Schedule 1, Page 1, Capital Structure and Exhibit 9, Tab 1, Schedule 1, Page 27

Preamble: "Toronto Hydro's sets its capital structure for ratemaking purposes in accordance with the OEB's Cost of Capital guidelines issued in EB-2009-0084, Report of the Board on the Cost of Capital for Ontario's Regulated Utilities (December 11, 2009) ("Report of the Board"). For Toronto Hydro, the debt to equity split for the test years is set at 60:40. The debt component in each year includes a deemed 4 percent short-term debt component".

Questions:

a) Is Toronto Hydro's debt to equity split of 60:40 the same as that of other electricity distributors regulated by the OEB?

b) Please confirm that the proposed Custom IR lowers the business risk of Toronto Hydro. If the answer is no, please explain why not?

c) Please confirm that the recent OEB decision in EB-2023-0143 Getting Ontario Connected Act Variance account lowers the regulatory risk of Toronto Hydro.

d) If the OEB approves Toronto Hydro's Custom IR, should it adjust the debt to equity split commensurate with the reduction in the business risk and regulatory risk? Please explain your answer.

7-EP-35
Reference: Exhibit 7, Tab 1, Schedule 1, Page 3

Preamble: "The load profiles were scaled to the 2025 baseline load forecast based on the ratio of 2025 kWh to 2019 kWh by class. Resulting load profiles were modified to include electric vehicles ("EVs") and distributed energy resources ("DERs") forecasted load impacts."

Questions:

a) Are customers with EV chargers and customers with DER's distributed evenly throughout the Toronto Hydro service area or are they concentrated in certain areas?

b) What is Toronto Hydro doing to ensure that customers in lower income areas who do not own EV chargers and DER's are not allocated costs that are caused by customers in higher income areas who own EV chargers and DER's?

9-EP-36

Reference: Exhibit 9, Tab 1, Schedule 1, Page 27, Account 1508 – subaccount – Getting Ontario Connected Act ("GOCA") Variance Account

Preamble: "On October 31, 2023, the OEB established a generic, industry-wide variance account to record incremental costs of locates resulting from the implementation of Bill 93 (Getting Ontario Connected Act, 2022), with an effective date of April 1, 2023. As this decision was released just weeks before Toronto Hydro submitted its application to the OEB, the utility intends to file supplemental evidence to forecast the balances that it expects in this account over the current rate period."

Question:
Has this supplemental evidence been filed? If the answer is yes, please provide the link to the filing. If the answer is no, please file it or indicate when it will be filed.