INTERROGATORY RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

2-EP-1

EVIDENCE REFERENCE:

Exhibit 2, Tab 5, Schedule 1, Page 53

Preamble: “These four priorities are: Growth and Electrification, Aging Infrastructure, Grid Modernization, and Grid Resilience. The majority of customers across all categories supported the proposed plan, with many even encouraging Hydro Ottawa to exceed it. Feedback was obtained from 21,8399 customers during this phase. Table 2 outlines the identified priority rankings by customer class.”

QUESTION(S):

a) Is the number of customers that provided feedback 21,839 or 218,399?

b) Since customers who provide feedback are self-selected how can the OEB be assured that they a statistical representation of the entire population of customers?

RESPONSE(S):

a) The number of customers who provided feedback in Phase II of Hydro Ottawa's customer engagement survey is 21,839 as found in Schedule 1-4-2 - Customer Engagement on the 2026-2030 Application page 3, line 28. This represents the total of customer responses across the various rate classes which can be found in Attachment 1-4-2(A) - Customer Engagement Report on Hydro Ottawa’s 2026-2030 Rate Application, page 18.

The number cited in Schedule 2-5-1 - Distribution System Plan Overview, page 53, "21,8399," is a typographical error.

b) Hydro Ottawa's customer engagement process, detailed in Schedule 1-4-2 - Customer Engagement on the 2026-2030 Application and Attachment 1-4-2(A) - Customer Engagement Report on Hydro Ottawa's 2026-2030 Rate Application, used a two-phase approach to gather statistically robust and representative feedback. Phase I employed qualitative methods (focus groups, interviews) to understand broad needs, while Phase II used quantitative online surveys for specific feedback on the draft investment plan.

Phase II engagement aimed for broad representation across rate classes (residential, small commercial, large commercial, key accounts) and demographics (gender, age, income, geographic location). Multi-channel outreach (website, email, social media, advertising, QR codes in print materials) promoted the survey, with participants required to verify their Hydro Ottawa customer status using account numbers and postal codes to ensure result accuracy. Data weighting, particularly for residential customers by consumption and region, and for GS>50kW by business type, mitigated self-selected sample biases.

INTERROGATORY RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

2-EP-2

EVIDENCE REFERENCE:
Exhibit 2, Tab 5, Schedule 1, Page 56

Preamble: Electrification is also profoundly influencing electricity demand, adding significant pressure to the system. And this trend is expected to continue as Federal Government legislation requires 60% of all light duty vehicles sold in Canada to be electric vehicles by 2030 and 100% by 2035, compared to 9% of vehicles sold in 2021. The increasing adoption of electric vehicles.

QUESTION(S):

Does Hydro Ottawa expect that increasing demand from electrification will result in increasing revenues that will pay for the costs of electrification? Please discuss.

RESPONSE(S):

Hydro Ottawa has applied for a revenue requirement that it believes prudently addresses growth within its service territory due to electrification. Please refer to Schedule 3-1-1 - Revenue Load and Customer Forecast for more information on how electrification was incorporated into Hydro Ottawa's load forecast and thus, its applied-for revenue requirement.

Please also see Attachment 2-5-4(F) - Decarbonization Study, which evaluates the potential impacts of societal electrification trends on the Hydro Ottawa distribution system through 2050 with a scenario based approach.

INTERROGATORY RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

3-EP-3

EVIDENCE REFERENCE:

Exhibit 3, Tab 1, Schedule 1, Page 10, Table 8

QUESTION(S):

Will increasing demand from electrification result in increasing revenues and will these revenues be sufficient to cover the costs of electrification?

RESPONSE(S):

In terms of capacity needs assessment, Hydro Ottawa proposed capacity related investments based on immediate system needs driven by capacity constraints and committed load requirements. Also, to get a better understanding of increasing demand from electrification, Hydro Ottawa utilized a multi-scenario forecasting approach to capture different paces of electrification as detailed in Attachment 2-5-4(F) - Decarbonization Study and used the Reference Scenario from this study to align the investment decisions related to mid to long term forecasted system capacity, facilitating efficient capital deployment and optimized asset utilization. More details on this approach can be found in section 9.1 of Schedule 2-5-4 - Asset Management Process.

The proposed revenue requirement from rates as submitted is designed to provide revenues to recover anticipated related operating costs, which include incremental expenses associated with forecasted electrification. Hydro Ottawa has also incorporated electrification, along with organic customer and load growth, into its 2026-2030 revenue forecast that underpins this application, as detailed in Schedule 3-1-1 - Revenue Load and Customer Forecast. Should the forecasted revenue load billing determinants (customer count, demand, and consumption) materialize as forecasted; a

corresponding increase in revenue is expected from net customer growth, organic load growth, and new electrification initiatives.

The specific revenue and cost implications of electrification beyond this proceeding have not been analyzed because that time frame associated with electrification extends well beyond the scope of this application. Furthermore, the specific cost and revenue impacts of electrification are influenced by numerous conditions and factors (e.g. policy, technology and customer behaviour). These factors are not within Hydro Ottawa's control, and are subject to varying degrees of uncertainty, as demonstrated by the five scenarios in the Decarbonization Study namely Policy-Guided, Reference, Dual Fuel, High Sensitivity and Low Sensitivity scenarios. Hydro Ottawa used the Reference scenario to align its investment decisions related to forecasted system capacity. For all these reasons, Hydro Ottawa is unable to provide a specific and conclusive answer to questions asked. However, the utility directionally notes that the Power Canada A Blueprint for Success study[1] has suggested that over time, by 2050 or before, the cost of the energy transition will be offset by the increase in demand. This report details a "viable route to achieving net-zero" in Canada, with a focus on electricity systems.

[1] Canada Electricity Advisory Council, *Powering Canada - A Blueprint for Success*, (May 2024), pages 8 & 33.

INTERROGATORY RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

4-EP-4

EVIDENCE REFERENCE:
Exhibit 4, Tab 1, Schedule 1, Page 7

Preamble: “Rapid population growth and accelerated electrification are significantly increasing demand on Hydro Ottawa's infrastructure, driving up OM&A costs through expanded customer service needs, increased maintenance, and more complex engineering requirements.”

QUESTION(S):

a) How and why is accelerated electrification driving up OM&A costs?
b) What units of measure does Hydro Ottawa use to measure electrification?
c) Please file a table showing how electrification has increased from 2021 to 2024 and how it will increase from 2025 to 2030.

RESPONSE(S):

a) Hydro Ottawa notes the reference to this interrogatory is to page 7 of Schedule 4-1-1 - Operations, Maintenance and Administration (OM&A) Summary, however, please see pages 9-10 for a more fulsome description of the quote referenced, and specifically Section 3.2 of the same Schedule. The additional information on these pages describes how increased customer growth and the introduction of new programs, technologies, and infrastructure expansion are driving greater complexity and volume across customer billing, customer & community relations, underground locates, maintenance related programs, and engineering & design. And that these evolving demands necessitate strategic investments in system upgrades, advanced tools, specialized expertise, and additional staffing to ensure accuracy, responsiveness, and grid resilience.

b) From a system capacity perspective, Hydro Ottawa uses Megawatt (MW) unit of measure to gauge the impact of electrification. For more details on the methodology and assumptions please refer to Section 2.1 of Attachment 2-5-4(F) - Decarbonization Study.

c) Hydro Ottawa is unable to provide a table detailing the increase in electrification from 2021 to 2024. Hydro Ottawa does not possess the specific data required to construct this table since customers are not required to notify the utility of changes within their premise, such as the installation of EV chargers or a switch from gas to electric heating, unless the change necessitates a service upgrade. Although Hydro Ottawa tracks the number of service upgrades, as detailed in the part (a) of the response to interrogatory 2-ED, this data is not solely for electrification-related changes and therefore cannot be used to isolate the growth of electrification.

Furthermore, monitoring system-level demand growth specifically attributed to electrification is not a standard practice for assessing capacity needs. This is due to the fact that demand growth is typically regional rather than a system-wide phenomenon. For a more detailed explanation as to why historical system peak data does not always reflect demand growth, please refer to part (d) of the response to interrogatory 2-Staff-61.

To project how electrification will increase from 2025-2030, Hydro Ottawa engaged Black & Veatch to conduct a study on the impacts of decarbonization, as described in Section 2.1.4 of Schedule 2-5-1 - Distribution System Plan Overview and Attachment 2-5-4(F) - Decarbonization Study. This study was specifically designed to understand the potential impacts of electrification through five different scenarios to ensure Hydro Ottawa is prepared for the impacts of electrification on its distribution system. Please refer to part (a) of the response to interrogatory 1-CO-4 for more information.

The scenarios were developed using varying assumptions for the pace of electrification in both transportation and space heating. The specific assumptions for transportation electrification are outlined in Table A below, while the assumptions for space and water heating are available in part (a) of the response to interrogatory 2-ED-22. The combined impact of space heating and

transportation electrification ranged from 432MW to 1252MW across the scenarios by 2030, as shown in Table B.

Table A: Transportation Electrification Assumptions

Assumption Metric	Reference	Dual-Fuel	Policy-Guided	High Sensitivity	Low Sensitivity
% of New Electric LDV Sales	2026- 20% of new LDVs 2030- 60% of new LDVs 2035- 100% of new LDVs	2026- 20% of new LDVs 2030- 60% of new LDVs 2035- 100% of new LDVs	2026- 20% of new LDVs 2030- 60% of new LDVs 2035- 100% of new LDVs	2026- 30% of new LDVs 2030- 90% of new LDVs 2035- 100% of new LDVs	2026- 16% of new LDVs 2030- 40% of new LDVs 2035- 90% of new LDVs
Charger Types	Residential L1 or L2- 80% Public L2- 17% Public DCFC- 3%	Residential L1 or L2- 80% Public L2- 17% Public DCFC- 3%	Residential L1 or L2- 80% Public L2- 17% Public DCFC- 3%	Residential L1 or L2- 85% Public L2- 12% Public DCFC- 3%	Residential L1 or L2- 80% Public L2- 17% Public DCFC- 3%
Rate Incentive Adoption	75%	75%	0%	90%	50%
MDV/HDV Load as a % of total LDV load	2050- 10% (increases incrementally up to 10% by 2050)	2050- 10% (increases incrementally up to 10% by 2050)	2050- 10% (increases incrementally up to 10% by 2050)	2050- 15% (increases incrementally up to 15% by 2050)	2050- 5% (increases incrementally up to 5% by 2050)

Table B: Electrification Forecast (MW)

Electrification Forecast	
Scenario	**2030 (MW)**
Policy Guided	1252
Reference	810
Dual Fuel	432

INTERROGATORY RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

4-EP-5

EVIDENCE REFERENCE:
Exhibit 4, Tab 1, Schedule 1, Page 13

Preamble: Hydro Ottawa is committed to enabling the energy transition by modernizing the grid to facilitate customer participation, enable widespread electrification, and optimize the integration of Distributed Energy Resources (DERs).

QUESTION(S):

a) What percentage of Hydro Ottawa customers currently own DERs?
b) What is the forecast of the percentage that will own DER's by the end of the 2030?
c) Please confirm that customers that own DERs impose higher costs on Hydro Ottawa than customers that do not own DERs?
d) Do customers with DERs that export excess power into the distribution grid, impose greater costs than customers that have non-exporting DERs?

RESPONSE(S):

a) As per Figure 109 of Section 9.3.1 in Schedule 2-5-4 - Asset Management Process, at the time of the rate filing there were 1,364 DER projects operating in Hydro Ottawa service territory. Representing 0.4% of the 364,334 load customers in the service territory, as per Section 1 of Schedule 1-2-2 - Distribution System Overview.

b) As per Figure 111 of Section 9.3.1 in Schedule 2-5-4 - Asset Management Process the latest forecast anticipates 2,062 DER projects by the end of 2030, representing 0.5% of the 392,422 load customers forecast in the service territory by 2030, as per Table 2 - Revenue Load

Forecast Summary in Section 3 of Schedule 1-2-1 - Application Summary. It is important to note that these DER projections are based on historical trends and should be viewed in conjunction with the fact that Hydro Ottawa has seen a steady rise in DER connection requests as evident in Figure 13 of Schedule 2-5-1 - Distribution System Plan Overview. This is particularly evident in 2024, with a significant surge in requests attributed to the IESO's Ottawa DER Large Solar PV Funding Incentive program launched in January 2024. The program's expansion to province-wide customers in January 2025 suggests that this trend will likely persist. These incentive programs are clearly stimulating public interest and participation in DER. Hydro Ottawa will continue monitoring the growth in DER connections and revise projections as necessary on an annual basis.

c) Customers that own DERs can impose higher costs on Hydro Ottawa than customers that do not own DERs. Please see response to part d) of this interrogatory response.

d) From a billing and settlement perspective, customers who export to the grid impose higher costs as it requires additional activities such as billing function, data capture, review time and settlement with the IESO.

Operational costs are considered in Hydro Ottawa's cost allocation analysis and/or are a primary reason for several rate changes:

- Removal of the Net-meter charge, although some additional costs occur, customers pay a fixed charge as net metered customers have a consumptive load.
- Adjustments to MicroFit, Fit and Other large generation fixed charges
- The continuation of the standby rate structure with adjustments (does not export to the grid).

When the number of customers with DERs grows, the relatively fixed portion of billing and settlement costs associated with each additional customer decreases.

Depending on the type of customer and size of the generation the cost to the grid itself can vary. Determining factors are things such as requirements of additional or more specialized equipment and location of the generation. DERs that inject power back into the grid create

two-way flows, which may require upgrades to assets and systems to manage these flows effectively and ensure proper protection. The extent of these costs is highly dependent on factors such as the density and location of the DERs, as well as the existing condition of the local distribution grid. Customer owned generation, when coordinated with distributors, can also provide benefits to the grid, please see interrogatory response 1-PP-7 part e) for further discussion. Hydro Ottawa's approach is to keep costs and remuneration separately to adhere to the beneficiary pays principle and to encourage beneficial generation rather than providing blanket remuneration. This result encourages non beneficial generation to be allocated their costs while properly remunerating beneficial generation.

It is also important to note, which is supported by the principles of the OEB cost allocation model (minimal load) and through the Residential rate design[1], that all customers/users of the grid understand the value of the grid and pay a minimum cost for the use. Specifically, the OEB stated "For example, no matter how much electricity a residential customer uses, that customer still needs a meter, a connection to the nearest distribution pole, the poles and wires that bring electricity from the bulk system, and a place in the customer service computer system."[2]

[1] Ontario Energy Board, *Board Policy - A New Distribution Rate Design for Residential Electricity Customers*, EB-2012-0410 (April 2, 2015).
[2] Ibid

INTERROGATORY RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

4-EP-6

EVIDENCE REFERENCE:

Exhibit 4, Tab 1, Schedule 1, Attachment A, Page 2

Preamble: “Hydro Ottawa is committed to selecting the optimal solution regardless of whether it is an on-premise or a cloud solution as it believes it is in the best interest of the customer.”

QUESTION(S):

Does selection of the optimal solution consider the total owning and operating costs of the alternatives?

RESPONSE(S):

Yes. Hydro Ottawa carefully weighs all the known costs involved from initial setup to subscription/licenses and ongoing maintenance to support in order to understand the true long-term expense prior to technology selection.

INTERROGATORY RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

4-EP-7

EVIDENCE REFERENCE:

Exhibit 4, Tab 1, Schedule 2, Page 3, Table 2

QUESTION(S):

a) Please provide a breakdown of incremental $8 million cost of major weather events that was incurred in 2022 and 2023.
b) Why was the incremental cost the of major events the same in 2022 and 2023 or is it just a coincidence?

RESPONSE(S):

a) Table A shows the breakdown of incremental $8 million cost of major weather events that was incurred in 2022 and 2023 in OM&A.

Table A - Incremental Cost of 2022 and 2023 Major Weather Events ($000s)

	Historical Years	
	2022	**2023**
Internal Labour	$ 4,286	$ 4,012
Contracted Services	$ 2,656	$ 4,107
Others	$ 742	$ 256
TOTAL	**$ 7,684**	**$ 8,374**

b) The incremental cost for the major events included in Table 2 - OM&A Cost Drivers 2021-2026 ($'000,000s) of Schedule 4-1-2 - Operations, Maintenance and Administration Program Costs were both shown as $8 million due to rounding. The incremental cost of major events in 2022 was $7.7M and in 2023 was $8.4 million.

INTERROGATORY RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

6-EP-8

EVIDENCE REFERENCE:

Exhibit 6, Tab 3, Schedule 4, Page 4

Preamble: “As a result of this agreement and to promote self-generation in support of the grid, Hydro Ottawa stopped charging net metered customers the monthly net metering service charge effective November 1, 2021.”

QUESTION(S):

a) What was the amount of the Monthly Net Metering Service Charge in 2021?

b) What was the total annual revenue from the service charge in the last full year that it was Collected?

c) What costs were recovered through the service charge and from which customers are these costs collected now?

d) How many customers will be on net metering in the rebasing year and in each subsequent year in the deferred rebasing period?

RESPONSE(S):

a) The 2021 Approved Net Metering Monthly Service charge was $14.

b) The last full year of revenue generated from the Net-Metering service charge was 2020 and it was $17.3k.

c) The historical Net Metering charge was set based on recovering the costs incurred to bill customers manually and settlement with the IESO. Hydro Ottawa has since automated the billing process resulting in large productivity benefits. Please refer to Schedule 1-3-4 - Facilitating Innovation and Continuous Improvement Table 4 for quantifiable benefits and Section 3.2.1 for further details. Please note net metered customers continue to pay their rate class fixed charge.

d) The projected net metering customer counts are as follows, representing the count as at the end of each year: 1,161 for 2026, 1,617 for 2027, 2,193 for 2028, 2,913 for 2029, and 3,813 for 2030.