TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ONTARIO ENERGY BOARD STAFF

JT2.1

EVIDENCE REFERENCE:

2-Staff-32, Table A

UNDERTAKING(S):

To update failure curves for 2024 actuals and a portion of 2025 actuals

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RESPONSE(S):

As requested, the updated Table A below includes the 2024 Actuals for interrogatory response 2-Staff-32, part (b). In 2024, transformer replacements due to oil leaks saw a significant increase, peaking at $4.8 million, which is $2.2 million above the historical average. Spending related to electrical failures also surpassed average levels. It should be noted that 2025 spending is categorized as "Other" because the causes are unknown.

Table A – 2021-2025 Historical/Bridge Year Spending of Emergency Underground Transformers by Cause ($'000s)

Cause	Historical Years	Bridge Year	Total
	2021-2024	2025	2021-2025
Adverse Weather	$ 7		$ 7
Electrical Failure	$ 1,653		$ 1,653
Foreign Interference	$ 8		$ 8
Mechanical Failure	$ 530		$ 530
Oil Leak	$ 12,499		$ 12,499
Other	$ 36[1]	$ 2,297	$ 2,333
Safety	$ 81		$ 81
Net In-Service Additions	**$ 14,813**	**$ 2,297**	**$ 17,110**

[1] Subsequent to filing of 2-Staff-32, there was a reclassification between Other and the Oil Leak category for the balance of $0.7M. The outstanding $36K for the 2021-2024 period is attributed to unknown failure causes.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ONTARIO ENERGY BOARD STAFF

JT2.2

EVIDENCE REFERENCE:

2-Staff-41 part c Table A

UNDERTAKING(S):

Provide updated table values for 2024 in response to part c of IR 2-Staff-41

RESPONSE(S):

Table A in interrogatory response 2-Staff-41 part c) has been updated, as requested, to include 2024 Major Event Days. Please see Table A below.

Table A - Total Percentage of Customers Interrupted for Each Major Event

Date	% Customers Interrupted
2016-07-01	4%
2017-01-04	6%
2017-09-27	3%
2018-04-16	17%
2018-05-04	19%
2018-09-21	65%
2019-04-15	13%
2019-07-05	21%
2019-11-01	4%
2020-03-07	3%
2020-10-18	3%
2021-06-14	5%
2022-05-21	54%
2022-06-18	8%
2022-12-23	19%
2023-04-05	45%
2023-06-26	4%
2023-07-28	10%
2024-02-28	6%

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ONTARIO ENERGY BOARD STAFF

JT2.3

EVIDENCE REFERENCE:

2-Staff-51 - Table A

UNDERTAKING(S):

Update Staff-251, IR page 3, table A to include 2024 numbers

RESPONSE(S):

Please refer to Table A below for an update to include 2024 actuals from interrogatory response 2-Staff-51 Table A.

Table A - Five-Year SAIFI and SAIDI Contribution by Outage Type (Including MED's)

Code - Cause	SAIFI & SAIDI Contribution	2019	2020	2021	2022	2023	2024
0 - Unknown	Number of Interruptions	66	53	28	38	66	53
	Customer Interruptions	31,473	33,536	10,420	23,940	20,721	13,703
	Customer-Hours	25,666	20,163	9,138	35,959	23,185	11,452
1 - Scheduled Outages	Number of Interruptions	647	755	742	618	570	919
	Customer Interruptions	13,668	22,522	17,058	21,173	38,571	31,992
	Customer-Hours	34,899	49,218	59,325	47,286	97,117	94,832
2 - Loss of Supply	Number of Interruptions	29	27	35	40	77	11
	Customer Interruptions	84,734	73,945	115,354	218,821	158,144	76,784
	Customer-Hours	126,600	99,571	66,352	142,147	73,966	49,358
3 - Tree Contact	Number of Interruptions	76	104	83	104	105	66
	Customer Interruptions	45,788	18,548	21,474	45,667	35,214	21,833
	Customer-Hours	67,655	30,671	30,386	76,794	56,818	37,971
4 - Lightning	Number of Interruptions	26	27	18	9	32	10
	Customer Interruptions	27,749	12,188	20,275	7,008	31,224	1,214
	Customer-Hours	10,273	6,797	47,209	3,812	40,417	1,187
5 - Equipment Failure	Number of Interruptions	269	269	249	210	169	145
	Customer Interruptions	65,446	115,479	65,945	100,784	52,484	56,480
	Customer-Hours	81,989	306,002	97,196	144,967	115,889	92,952
6 - Adverse Weather	Number of Interruptions	16	6	11	64	167	37
	Customer Interruptions	4,326	1,393	10,706	226,599	128,041	29,986
	Customer-Hours	5,344	4,750	7,511	13,540,805	1,986,652	58,147
7 - Adverse Environment	Number of Interruptions	14	4	9	4	2	3
	Customer Interruptions	1,710	197	8,740	287	1,243	49
	Customer-Hours	4,850	475	9,754	652	2,436	556
8 - Human Element	Number of Interruptions	23	9	17	14	14	17
	Customer Interruptions	33,391	8,267	19,019	11,109	28,727	23,992
	Customer-Hours	16,452	1,508	13,139	3,720	33,600	14,895
9 - Foreign Interference	Number of Interruptions	211	178	153	114	177	142
	Customer Interruptions	56,741	55,968	53,398	38,540	42,276	33,572
	Customer-Hours	64,742	65,977	48,943	57,831	79,050	44,897

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ONTARIO ENERGY BOARD STAFF

JT2.4

EVIDENCE REFERENCE:

2-Staff-51 Table A

UNDERTAKING(S):

Reproduce Table A for 2024 explicitly as stated. For cause code 6, adverse weather, include secondary cause code of tree contact

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RESPONSE(S):

Please refer to Table A below for a 2024 breakdown of Adverse Weather (code-6) by secondary cause, further to Hydro Ottawa's response to JT2.3, which includes an update to Table A in interrogatory response 2-Staff-51.

Table A - Breakdown of Cause Code 6 - Adverse Weather by Secondary Cause for 2024

Secondary Cause	SAIFI & SAIDI Contribution	2024
Equipment Breakage	Number of Interruptions	3
	Customer Interruptions	216
	Customer-Hours	1,344
Other adverse weather	Number of Interruptions	19
	Customer Interruptions	17,056
	Customer-Hours	33,928
Tree Contact Weather	Number of Interruptions	15
	Customer Interruptions	12,714
	Customer-Hours	22,876

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ONTARIO ENERGY BOARD STAFF

JT2.5

EVIDENCE REFERENCE:

2-Staff-62

UNDERTAKING(S):

Provide the lambda value for poor condition poles

RESPONSE(S):

Hydro Ottawa confirms that the Lambda (λ) value for poles in "poor" condition is 0.0554.

Hydro Ottawa calculates the annual probability of failure (PoF) for asset condition categories using an exponential Cumulative Distribution Function (CDF). This function determines the likelihood of an asset failing at a specific time, assuming a constant failure rate (λ) for a given asset type based on its underlying failure curve. For annual PoF, the time variable (t) is set to one year.

The formula used is: $PoF=1-e^{-\lambda t}$

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6

EVIDENCE REFERENCE:

KT2.1

UNDERTAKING(S):

Undertaking to respond to Environmental Defence's questions in the letter dated September 10, 2025

RESPONSE(S):

Please see responses included as JT2.6-ED-1 through JT2.6-ED-18.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-1

EVIDENCE REFERENCE:

1-ED-5 (a)

UNDERTAKING(S):

This interrogatory reads as follows:

"Hydro Ottawa indicates that all micro-generation projects "were connected within the prescribed time frame or at an agreed-upon date with the customer." Please indicate for each year the percent connected (i) within the prescribed time frame and (b) an agreed-upon date. For the five most recent projects connected on an agreed-upon date, please provide the correspondence in which the customer agreed upon an alternative date (with personal information redacted)."

HOL indicated that its records do not track the information in a manner that allows the percentage to be easily calculated. EDC therefore requests that an estimate be calculated on a best-efforts basis, such as an estimate based on reviewing a sufficient number of the most recent projects to generate a statistically valid estimate. We also ask for the relevant email correspondence. HOL questioned the relevance of the correspondence, and we confirm that it is relevant to testing HOL's assertion that it met the relevant metric 100% of the time, including whether customers were granted free choice as to whether to agree to an extended time period.

RESPONSE(S):

Based on an analysis of all completed connections in 2025 (as of September 15, 2025), Hydro Ottawa has calculated an estimate for the percentage of projects connected within the prescribed timeframe versus those connected on a mutually agreed-upon date.

Connections <10kW

- Total connections: 69
- Connected within the Prescribed Timeframe: 43%
- Connected at an Agreed-upon Date: 57%

Hydro Ottawa maintains its position not to file customer email communications, as noted in its response interrogatory 1-ED-5. Hydro Ottawa notes that these appointments are primarily scheduled by telephone, with email confirmations issued only after an appointment has been mutually agreed upon.

However, in an effort to be responsive to the request, Hydro Ottawa reviewed a subset of phone recordings associated with projects connected beyond the prescribed timeframe, and the later connection date reflected the customer's acceptance of, or request for, an appointment beyond the prescribed five days, rather than Hydro Ottawa's inability to meet the standard. The review also indicated that customers often requested appointments outside the prescribed five-day window. Some examples of these types of appointments include:

- Customer requests the earliest available morning appointment, which falls beyond the five-day timeframe;
- Electrical contractor requests multiple projects be scheduled on the same day; and
- Customer requests a specific date of their choice outside of the prescribed timeframe.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-2

EVIDENCE REFERENCE:

2-ED-10

UNDERTAKING(S):

The response to this interrogatory refers to an assessment of the “feasibility of using fast-switching protective devices to eliminate 100% of existing short-circuit constraints.” Please elaborate on this response with details on the technology and the cost thereof. Links to manufacturer websites for said devices would be helpful.

RESPONSE(S):

Hydro Ottawa currently has one station with short-circuit limitations and consequently all stations fed downstream of this station are short-circuit constrained. More details on these stations can be found in Section 9.3.3 of Schedule 2-5-4 - Asset Management Process. To alleviate the technical constraints for DER connections in stations with short-circuit limitations Hydro Ottawa is evaluating the option of running the substation with bus-tie open. This approach isolates the two bus sections, reducing the fault current and enabling safer DER integration. A significant outage will occur if a transformer or incoming feeder fails while the bus-tie is open, as the entire bus section it serves will lose power. This is the primary disadvantage of operating with an open bus-tie.

Fast-switching protective devices can be used to minimize this reliability impact. These devices are designed to detect a fault and switch the load from the faulted source to a healthy one in a matter of

milliseconds. This offers a significantly faster response time compared to conventional mechanical circuit breakers. By incorporating these devices, a substation can operate with an open bus-tie, achieving the lower fault levels necessary for DER connection, while simultaneously maintaining a high level of service reliability. If this solution is implemented, Hydro Ottawa will be able to remove limitations to connect DERs in its short-circuit constrained stations.

Hydro Ottawa is in the early planning stages of implementing fast switching devices to enable DERs and has not finalized equipment manufacturers or cost details for such devices. This is something that Hydro Ottawa will explore in the near future, and as such, cannot comment on these details at this time.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-3

EVIDENCE REFERENCE:

2-ED-12

UNDERTAKING(S):

The response to this interrogatory states that “Hydro Ottawa updated standards for underground residential transformer and service wire sizes to account for the impacts of electrification, specifically looking to accommodate a Level 2 charger at every home.” Do these updated standards also account for the electrification of home heating? If not, when will that be considered for inclusion in the standard? Please also speak at a high level to how the standard might change if the electrification of home heating were to be accounted for.

RESPONSE(S):

Yes, the updated standards for underground residential transformers and service wire sizes account for the impacts of the electrification of home heating.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-4

EVIDENCE REFERENCE:

2-ED-14

UNDERTAKING(S):

With respect to service upgrades, this interrogatory response states as follows: “the existing meter and secondary conductor are removed by Hydro Ottawa, when possible, at no additional cost to the customer.” Will the new meter and conductor be installed at no cost to the customer? Please list all the types charges that may be levied on a residential customer upgrading to 200 amp service, including an estimated average cost for cost categories that are variable and not always required (e.g. conductor upgrades).

RESPONSE(S):

In all cases the new meter will be installed at no cost to the customer. The statement "when possible at no cost" refers to additional costs that can occur when it is not safe and feasible for Hydro Ottawa to carry out the work without encountering extraordinary obstacles or hazards to remove the meter and secondary conductor. As outlined in 2-ED-14 part b), the costs to be incurred for a service upgrade (to 400 amp service or less) will include:

- The shared cost of transformation and secondary buss (calculated based on the main switch size)
- 30 meters (100 feet) of service wire

- An additional cost if the service wire exceeds 30 meters

Other charges that may apply:

- Isolation/Re-energization (I/R) costs: these costs vary depending on the work required
  - Estimated cost if I/R is at the meter: $190.57
  - Estimated cost if I/R is at the transformer, buss or service drop: $717.69
- Civil work
  - Civil work costs are highly variable, with estimates ranging from $5,000 to $30,000 or more, depending entirely on the amount of civil work required and existing site conditions (e.g., backyard work, downtown, rock, etc.)
- Additional costs may apply if a crew is needed on overtime, or other job specific circumstances resulting in other recoverable fees

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-5

EVIDENCE REFERENCE:

2-ED-18

UNDERTAKING(S):

This interrogatory explores the cost of meter replacement for customers adopting net metering. Where a customer needs a bi-directional meter to install a DER, would HOL agree to apportion a portion of the cost to the AMI 2.0 program on the assumption that the replacement would likely occur in the near term regardless of the decision to install a DER? Also, are all bi-directional meters installed for customers adopting net metering also AMI 2.0 meters?

RESPONSE(S):

As noted through the record, Hydro Ottawa has proposed a 10-year phased replacement approach for the AMI 2.0 program, aimed at balancing customer affordability and effective risk management. Please refer to Section 5 of Schedule 2-5-7 - System Renewal Investments for more details about the recommended approach, as well as Hydro Ottawa's response to interrogatories 2-CCC-27(c), 2-CCC-27(e), 4-Staff-142(g)(iii), and 1-SEC-10.

During this 10-year implementation period, Hydro Ottawa will charge customers who are adopting a Distributed Energy Resource (DER) for the purpose of net metering, in accordance with section 3.1.7A of the Distribution System Code. Specifically, if an immediate meter replacement is required to enable net metering, Hydro Ottawa will charge the customer: (i) the remaining net book value (if

any) of the existing meter that is being replaced and (ii) any appropriate advancement costs associated with the installation of the new meter outside of the AMI 2.0 program's prioritized areas as listed in 2-ED-18(d), Section 5.7.1 of Schedule 2-5-7 - System Renewal Investments, including any costs associated with the dedicated truck roll and labour that would be required to replace the meter on a one-off basis rather than through a coordinated replacement strategy.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-6

EVIDENCE REFERENCE:

2-ED-23

UNDERTAKING(S):

This interrogatory asked HOL to compare its load forecasts with the cost-optimal pathway set out in the Cost-Effective Pathways Study prepared for the Ontario Government.[1] HOL declined to ask Black & Veatch to do so. However, HOL should be capable of doing so, at least at a high level and/or with caveats. We ask that this be done. It is relevant to assessing the load forecasts underling the application.

RESPONSE(S):

Hydro Ottawa respectfully submits that the requested comparison is not relevant for assessing the load forecast underlying the application. As noted in the response to interrogatory 2.5-BOMA-2, and further articulated by the Panel 1 witnesses at the Technical Conference, Hydro Ottawa used a Planning Forecast (rather than Reference Scenario from the Decarobonization Study) to determine the needs of the system in the 2026-2030 rate term based on already constrained regions and areas with immediate investment needs to meet the utility's obligation to serve customers.

[1]Ontario Ministry of Energy and Electrification, Cost Effective Energy Pathways Study for Ontario ,https://www.ontario.ca/files/2025-06/mem-cost-effective-energy-pathways-study-for-ontario-en-2025-06-10.pdf

As noted in the response to interrogatory 2-ED-23, Hydro Ottawa did not complete a detailed technical review of the Cost-Effective Pathways (CEP) Study because it was released in August 2024 as Hydro Ottawa's Decarbonization Study was getting finalized. Reflecting on the comparison of these two studies as requested by ED in this undertaking, Hydro Ottawa also notes that the appropriateness and usefulness of this comparison is limited by the fact that these two studies serve very different purposes and have different scopes and metrics. These differences are summarized in Table A below and further explained in the narrative following the table.

Table A - Decarbonization Study & CEP Forecast Comparison

Feature	Hydro Ottawa Decarbonization Study (Local Purpose)	CEP Study (Provincial Purpose)
Primary Metric	**Peak Demand (MW)**: The highest instantaneous load required. This dictates the necessary capacity of the local distribution infrastructure.	**Annual Energy (TWh/y):** The total energy consumed over a year. This dictates the volume of generation and fuel supply required across the province.
Scope of Impact	**Distribution System**: Forecasts the load at the local substation level, crucial for planning wires, BESS, and other Non-Wires Solutions (NWS).	**Bulk System:** Forecasts provincial generation, transmission, and overall energy mix (e.g., nuclear, wind capacity).

Primary Metric:

The key differentiation from the manner in which the studies forecast load growth fundamentally stems from a misalignment between the metrics and purposes of the two studies, making direct comparison inappropriate and misleading. The Hydro Ottawa Decarbonization Study utilizes peak demand (MW) as its core metric because it focuses on the local distribution constraints during the few hours of maximum electricity usage. Conversely, the Cost-Effective Energy Pathways Study for Ontario (CEP Study) focuses on annual energy volume (TWh) to address the system-wide total volume of electricity needed over an entire year to meet provincial supply requirements. An

electricity grid can have ample annual energy (TWh) but still collapse instantly if the local instantaneous distribution capacity (MW) is overwhelmed during a peak event.

Scope of Impact:

The Hydro Ottawa Decarbonization Study explicitly identifies the need for high *power capacity* to serve all customers under various electrification scenarios, all pointing to a shift to winter peak primarily due to an increase in heating electrification. In contrast, the CEP Study's provincial figures rely on the natural diversification of loads across many cities, sectors, and climates throughout Ontario, reducing the overall coincident peak factor. Therefore, judging Ottawa's specialized load profile against a generalized provincial average would fail to account for the unique, intense local demand concentration resulting from heating electrification, a critical component for LDC planning.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-7

EVIDENCE REFERENCE:

2-ED-24

UNDERTAKING(S):

We ask for the same with respect to the Canadian Climate Institute report.[1]

RESPONSE(S):

Hydro Ottawa respectfully submits that the requested comparison is not relevant for assessing the load forecast underlying the application. As noted in the response to interrogatory 2.5-BOMA-2, and further articulated by the Panel 1 witnesses at the Technical Conference, Hydro Ottawa used a Planning Forecast (rather than Reference Scenario from the Decarbonization Study) to determine the needs of the system in the 2026-2030 rate term based on already constrained regions and areas with immediate investment needs to meet the utility's obligation to serve customers.

As noted in the response to interrogatory 2-ED-24, Hydro Ottawa did not complete a detailed technical review of the Heat Exchange report prepared by the Canadian Climate Institute because it was released in June 2024 as Hydro Ottawa's Decarbonization Study was getting finalized. Reflecting on the comparison of these two studies as requested by ED in this undertaking, Hydro Ottawa also notes that the appropriateness and usefulness of this comparison is limited by the fact that these two studies serve very different purposes and have different scopes and metrics. These

[1] https://climateinstitute.ca/wp-content/uploads/2024/06/Heat-Exchange-Report-Canadian-Climate-Institute.pdf

differences are summarized in Table A below and further explained in the narrative following the table.

Table A - Decarbonization Study & Heat Exchange Report

Feature	Hydro Ottawa Decarbonization Study (Local Purpose)	Heat Exchange Report (National/Provincial Purpose)
Primary Metric	**Peak Demand (MW)**: The highest instantaneous load required. This dictates the necessary capacity of the local distribution infrastructure.	**Annual Energy (TJ/y, Mt CO2 eq/y):** The total energy consumed or total emissions over a year. This dictates the overall energy volume and total supply mix
Scope of Impact	**Distribution System**: Forecasts the load at the local substation level, crucial for planning wires, BESS, and other Non-Wires Solutions (NWS).	**National/Provincial Energy System & Policy:** Focuses on overall macro-level and provincial energy mix changes, technology pathways, and broad policy recommendations

Primary Metric:

The key differentiation stems from a misalignment between the metrics and purposes of the two studies, making a direct comparison inappropriate and misleading. The Hydro Ottawa Decarbonization Study utilizes peak demand (MW) as its core metric because it focuses on the local distribution constraints during the few hours of maximum electricity usage. This metric is critical for Local Distribution Companies (LDCs) like Hydro Ottawa, as an electricity grid can have ample annual energy (TWh) but still fail instantly if the local instantaneous distribution capacity (MW) is overwhelmed during a peak event.

Conversely, the Heat Exchange report predominantly analyzes annual energy demand in terajoules (TJ/y) and emissions (Mt CO2 eq/y) to model macroeconomic changes and overall transition pathways. This metric is best suited for assessing the large-scale shift in fuel sources and the total annual production needs of an energy system, but it does not capture the severe, localized instantaneous strain of peak demand that an LDC must plan for.

Scope of Impact:

The studies examine energy transition impacts at fundamentally different geographical and systemic scales. The Hydro Ottawa Decarbonization Study is locally focused, explicitly detailing the projected load increase at the substation level within the City of Ottawa. It identifies the need for capacity to serve all customers under various electrification scenarios, all pointing to a shift to winter peak primarily due to rising heating electrification. In contrast, the Heat Exchange report focuses on national and provincial modeling to identify cost-optimal pathways. Its provincial figures rely on the natural diversification of loads across many cities, sectors, and climates throughout Ontario and Canada, reducing the overall coincident peak factor. Therefore, judging Ottawa's specialized and concentrated load profile against a generalized national or provincial average would fail to account for the unique, intense local demand concentration resulting from heating electrification, a critical component for LDC planning. The report itself notes that planning must be done "province by province and even municipality by municipality, based on the specifics of each electricity and gas network"[2].

[2] Harland, Kate, Sachi Gibson, Jason Dion, Nikhitha Gajudhur, and Kathleen Mifflin. 2024. *Heat Exchange: How today's policies will drive or delay Canada's transition to clean, reliable heat for buildings*, Canadian Climate Institute, Page 15.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-8

EVIDENCE REFERENCE:

2-ED-28

UNDERTAKING(S):

This interrogatory asked:

"If a residential customer increases their service (e.g. from 40 amp to 200 amp), how will that impact the various peak load forecasts (if at all). For the purpose of this question, please assume that the customer's peak and annual load remains the same. The purpose of this question is to determine whether efforts to help customers avoid service upgrades when electrifying heating or transportation can help reduce costs driven by peak demand in any part of the electricity system."

HOL indicated as follows:

"If a residential customer increases their service size, this would not impact the peak load forecasts since Hydro Ottawa's load forecasting process does not consider the forecast contribution to coincident system peak demand from individual customers."

As a follow up, we ask that HOL answer the same question but on the assumption that, say, 2000 residential customers increase their service without impacting their peak or annual load.

RESPONSE(S):

Peak load forecasts would not be impacted if 2000 residential customers increase their service size from 40A to 200A without changing their peak or annual load. This is because Hydro Ottawa's load forecasting process focuses on aggregated historical and projected demand, not individual customer capacity. The increase in service size, without a corresponding increase in actual consumption, does not change the data points used for forecasting.

If an increase in service size does not translate into a change in peak demand it will not impact peak load forecasts since the forecast methodology is based on aggregated, measured peak demand. A service upgrade may, however, require local network upgrades based on load sizing as per the Canadian Electrical Code.

Planning Load Forecasting Methodology

Hydro Ottawa's planning load forecasting process uses historical weather-normalized system coincident peak at the station level and projects loads in the future years. Forecasting models use various factors to predict how this peak will change, including intensification, economic growth, demographic trends and decarbonization goals and specific large load requests. More details on Hydro Ottawa's planning forecasting process can be found in Section 9.4 of Schedule 2-5-4 - Asset Management Process.

Residential Network Service Upgrades

The impacts of customer service upgrades have different considerations from system-wide load forecasting. When a customer upgrades their service, it is a localized need, triggering the following assessments for impact.

- Customer-Specific: Service size determines the maximum potential load a single customer can draw calculated as per guidance in Section 8 of the Canadian Electrical Code. Upgrades are often required to accommodate new high-demand appliances, even if the customer's annual energy use is not projected to change.

- Distribution Network Impact: Upgrades to a customer's service may necessitate upgrades to the local distribution transformer or other parts of the low-voltage network, like cables. This ensures the infrastructure can safely handle the new potential load. This is a local management process, driven by individual customer needs, not a direct system-wide forecasting input. Hydro Ottawa has standards and processes in place to ensure safe alignment between a customer's service size and the connecting distribution transformer capacity. This local capacity assessment is also rolled up to manage the collective capacity of multiple distribution transformers connected in a residential loop and, further, the amount of transformation that can be safely connected to a feeder.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-9

EVIDENCE REFERENCE:

8-ED-33

UNDERTAKING(S):

This interrogatory response indicates that the fixed charges for GS<50 will be increasing despite being above the ceiling. Is this an error? If not, please explain how this is consistent with the decision on the fixed/variable split in the most recent HOL case.

RESPONSE(S):

The original interrogatory asked “Is Hydro Ottawa’s proposal with respect to the fixed monthly service charges the same as was ordered by the OEB in the previous Hydro Ottawa rebasing decision? Please explain.” Please note the follow-up question relates to the General Service (GS) <50 kW rate class which was not part of the previous rebasing decision that was directed specifically at commercial customers billed on demand. Therefore Hydro Ottawa confirms, its statement is not an error.

The OEB’s decision on the unsettled element of fixed/variable split in the 2021-2025 proceeding was specifically restricted to three commercial customer classes.

Within the Background section the decision states the following.

> *The Parties agreed that Hydro Ottawa's proposals under Issue 7.3, as modified in the settlement proposal, are appropriate, except for one unsettled element. The unsettled element relates to the proposed fixed/variable rate design for three commercial customer classes: GS > 50 to 1,499 kW, GS 1,500 to 4,999 kW, and Large Use.*[1]

Further within the finding section the following statement was made.

> *For the GS > 50 to 1,499 kW, GS 1,500 to 4,999 kW, and Large Use classes, the OEB finds that fixed charges should be set by comparing the fixed charge resulting from Hydro Ottawa's standard rate design approach with the previous year's level for the five year rate term. In years where maintaining the current fixed/variable revenue split results in a higher fixed charge than the previous year, Hydro Ottawa shall maintain the fixed charge at the previous year's level. In years where maintaining the current fixed/variable revenue split. results in a lower fixed charge than the previous year, Hydro Ottawa shall maintain the fixed charge at the lower value.*[2]

As described in Schedule 7-1-1: Cost Allocation, page 5, applying the ceiling to the monthly service charge for GS < 50 kW customers would have the undesirable impact of increasing the proportion of GS < 50 kW customers that would be billed at less than the Residential monthly service charge. This was not a consideration for the demand related commercial and industrial customers whose fixed charge is larger than the residential fixed charge[3] and therefore did not contemplate a commercial customer paying less than a residential customer.

Given the OEB cost allocation model has not been adjusted since residential customers moved to a fully fixed distribution charge, Hydro Ottawa is proposing to maintain a consistent relationship between the GS < 50 kW monthly service charge and the fixed residential rate design. Maintaining the fixed/variable split for GS < 50 kW at 25%/75% consistently puts the monthly service charge at ~68% of the fixed residential charge. Essentially, creating an alternative ceiling outside the cost

[1] Decision and Order, November 19, 2020, page 13
[2] Decision and Order, November 19, 2020, page 23
[3] Note that Hydro Ottawa also contends, in the above reference, that ceiling rates for these rate classes are also understated by the cost allocation model.

allocation model that limits the number of small commercial customers who pay less for their distribution service than residential customers. As the cost allocation model in its current format generates a ceiling rate for Residential that is considerably lower than GS < 50 kW, it appears to be designed with a similar focus of limiting the crossover impact between the two rate classes. As part of the OEB staff paper on Rate Design for Commercial and Industrial Electricity Customers - Rates to Support an Evolving Energy Sector[4], including a detailed analysis on usage data, OEB staff concluded that "GS< 10kW customers are similar to residential customers in how they use the distribution system." As such, Hydro Ottawa proposes that cost recovery should reflect this by not widening the gap between the monthly service charges of the two classes. Hydro Ottawa has achieved this by suggesting an alternative ceiling methodology.

Lastly, the GS < 50 kW ceiling over the rate period is growing faster than the proposed monthly service charge. Maintaining a constant fixed/variable ratio within the class as well as a constant relationship between the two classes emphasizes rate stability and predictability over the rate period.

[4] Ontario Energy Board, *Staff Report to the Board - Rate Design for Commercial and Industrial Electricity Customers - Rates to Support an Evolving Energy Sector*, EB-2015-0043, (February 21, 2019), page.13.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-10

EVIDENCE REFERENCE:

8-ED-34

UNDERTAKING(S):

This interrogatory response on page 3 calculates the cost of gross load billing in HOL's UTRs. Please provide a breakdown of the generators that contribute to this gross load adjustment by MW and type (gas, solar, etc.) for each year.

RESPONSE(S):

Hydro One charges Gross load Billing based Renewable and Non-Renewable categories. Hydro One applies gross load billing on Non-Renewable generators equal to or greater than 1 MW and Renewable generators equal to or greater than 2 MW. These categories have been provided to limit the need to file confidentially. Hydro Ottawa believes this would be sufficient, however it is not clear the purpose of the request, as such we have made best efforts to provide what we believe would be helpful while keeping it on the public record.

Table A - Breakdown of the Generators that contribute to Gross Load Adjustment (MW)

Type	2020	2021	2022	2023	2024
Renewable	187	344	290	347	181
Non-Renewable[1]	3	12	21	19	72
TOTAL MW	**191**	**356**	**311**	**366**	**253**

[1] Gas and Battery.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-11

EVIDENCE REFERENCE:

8-ED-37(b)

UNDERTAKING(S):

HOL indicates that the charges for micro connections are $564.24.

a. Does this include tax?

b. Are there any additional charges for micro connections (e.g. an application fee)?

c. Is this charge solely attributable to the meter replacement?

d. Does HOL conduct site assessments for micro connections (if yes, how often)?

e. Does HOL collect a deposit for micro connection site assessments?

f. The DSC reads as follows: “3.1.5 A For micro-embedded generation facility customers, a distributor shall define a basic connection and recover the cost of the basic connection through a charge to the customer. The basic connection for each micro-embedded generation facility customer shall include, at a minimum, the supply and installation of any new or modified metering.” Please provide the documentation wherein HOL has defined the basic micro-generation facility connection in accordance with this section. If no such documentation exists, why, and when will it be drafted? Will Hydro Ottawa commit to making this information available online?

g. Why does HOL charge for meter replacements for micro generation facilities up-front instead of via the basic charge referred to above?

RESPONSE(S):

a) No. As indicated in Table A to the referenced interrogatory the amount indicated is pre-tax.

b) As indicated in the referenced response, there are no additional charges, such as an application fee, for micro connections. Additional charges may be incurred if there is work falling outside of a typical scope, such as a service upgrade.

c) As indicated in the referenced response, the charge is not solely for the material associated with meter replacement. This charge is for both the bi-directional meter and the associated labour for its installation.Yes, Hydro Ottawa conducts site assessments for micro connections. For every micro connection request, a site assessment is included as part of the micro connection process. Once this is completed, a Customer Layout document is provided, which outlines the scope of work, service conditions, and cost estimates.

d) Hydro Ottawa does not collect a deposit for micro connection site assessments. Once Hydro Ottawa has reviewed the request, a Customer Layout, which includes all applicable fees, is provided to the customer.

e) Hydro Ottawa defines a "basic micro-generation facility connection." as the connection charge of $564.24, which is the Customer Layout cost for micro connections, and is considered the equivalent basic connection charge. This is not described in a dedicated document. This cost is derived from a detailed cost study and the methodology is captured and updated as part of Hydro Ottawa's Conditions of Service - Appendix G: Methodology for Standard Fees for Various Services, which can be found on Hydro Ottawa's website. This charge is updated regularly and is communicated to customers through the service connection (layout) process. Hydro Ottawa is continuously improving its DER connection process, and is considering adding this information to its website or Conditions of Service.

f) Hydro Ottawa does charge for meter replacements as part of the basic connection charge as described in part f) and as prescribed in DSC Section 3.1.5 A.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-12

EVIDENCE REFERENCE:

8-ED-37(b)

UNDERTAKING(S):

The notes on page 3 to the tables in this IR refer to “Additional Charges” but there is no column or row for additional charges in the table. Is there a row or column missing?

RESPONSE(S):

There is no column missing, as Table A in Interrogatory 8-ED-37 part (b) identifies the base cost associated with a typical scope for the four types of DER connections. The "Additional Charges" are additional costs that are applied if extra work falls outside of a typical scope for DER connections. It should be noted that the scope associated with the “Additional Charges” is not always required, and is variable both in activity and costing due to customer specific site conditions. Given this variability, these items are not included in Table A. Examples of this variable work include service upgrades or any necessary distribution system modifications or expansions.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-13

EVIDENCE REFERENCE:

8-ED-38

UNDERTAKING(S):

This interrogatory was answered based on the assumption that “Hydro Ottawa is not able to treat DERs with a nameplate capacity above 10kW as a micro-generation connection.” However, that is incorrect, per s. 6.2.24 of the DSC, which reads as follows

“A distributor may by written agreement with an applicant who is proposing to connect a small, mid-sized or large embedded generation facility provide that the process for connecting the generation facility to be followed is the process set out for a smaller category of embedded generation facility, including a micro-embedded generation facility.”

Please provide an updated response to the interrogatory based on that information. Also, in the response to (c), please provide a table comparing (i) the average all-in cost and (ii) the full process time from application to connection, for (i) micro applications and (ii) simplified small applications.

RESPONSE(S):

With respect to the classification of embedded generation facilities, Hydro Ottawa adheres to Section 1.2 of the DSC, which defines a micro-embedded generation facility as one with a nameplate rated capacity of 10 kW or less.

Hydro Ottawa acknowledges, however, that Section 6.2.24 of the DSC provides distributors with discretion:

"6.2.24 A distributor may by written agreement with an applicant who is proposing to connect a small, mid-sized or large embedded generation facility provide that the process for connecting the generation facility to be followed is the process set out for a smaller category of embedded generation facility, including a microembedded generation facility."

This provision means that, in principle, Hydro Ottawa could agree in writing to apply the micro process to DERs above 10 kW. In practice, this option has not been utilized, as DERs above 10 kW can introduce system impacts, protection, and reliability considerations, as well as planning challenges that are better evaluated through a Connection Impact Assessment (CIA). This approach also promotes consistency and fairness among similar applicants, maintaining alignment with OEB standards.

Instead, to balance customer convenience with system reliability, Hydro Ottawa implemented a Simplified CIA process on June 2, 2025, for inverter-based DERs above 10 kW that meet defined eligibility thresholds. The capacity requirements for a Simplified CIA are:

- Single-phase DERs >10 kW and ≤30 kW;
- Three-phase DERs on feeders <15 kV, >10 kW and ≤50 kW;
- Three-phase DERs on feeders ≥15 kV, >10 kW and ≤100 kW.

This streamlined process reduces the timeline and cost of a CIA relative to the standard CIA.

Hydro Ottawa is not implementing a blanket policy to treat DERs up to 20 kW as micro-generation. Instead, Hydro Ottawa's Simplified CIA serves as the appropriate pathway for DERs greater than 10 kW.

Table A below provides a comparison of the micro DER vs the Simplified and Standard connection process.

Table A - Comparison of Micro DER vs Simplified vs Standard

Element	Micro	Simplified	Standard
Definition/ eligibility	Nameplate ≤10 kW	Inverter-based DERs >10 kW within Simplified CIA size bands; no upgrades required	Nameplate >10 to <50kW (not meeting Simplified CIA criteria) & Nameplate 50 to 500 kW
Overall Cost Approx.	$600 + service upgrades	$7,000 for CIA, metering, commissioning, and management + service upgrades (project specific)	$20,000-30,000 for CIA, monitoring and control upgrades, metering, commissioning + service upgrades (project specific)
Process Steps	Service request → service layout → ESA → Hydro Ottawa works	PCIR (≤15 days) → Simplified CIA (≤30 days) → Offer to Connect → ESA → Hydro Ottawa works/commissioning	PCIR (≤15 days) → CIA (60 days, additional time if system expansion/ transmitter CIA required) → Offer to Connect → ESA → Hydro Ottawa works/commissioning
Typical end-to-end timeline	**2 - 3 months**, assuming no upgrades and timely customer/ESA readiness	**3 - 5 months**, assuming no upgrades and timely customer/ESA readiness	**14-16 Months**

Note: The costs above do not include customer equipment, ESA permit, customer-hired contractor/consultant, etc. The costs to upgrade the customer service are also not included.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-14

EVIDENCE REFERENCE:

8-ED-39

UNDERTAKING(S):

The response to part (b) indicated that a certain power factor correction solution was not cost effective. Please provide the analysis and cost-benefit calculations. Can Hydro Ottawa contract with existing inverter-based DERs to assist with power factor correction? Also, please provide a response to (d). It is relevant to determining if the scope of the HOL study was appropriate.

RESPONSE(S):

b) Based on a 2021 study at the Kanata Station, Hydro Ottawa determined that the Sentient Energy's GEMS®+ENGO® power factor correction solution was not cost-effective for reducing line losses. The analysis and cost-benefit calculation are as follows:

Cost-Benefit Analysis

Hydro Ottawa's analysis showed that a large capital investment would be needed to achieve a small reduction in system-wide line losses. The study involved deploying 43 Sentient Energy units at the Kanata Station.

- **Study Findings:** The 43 units led to an annual line loss reduction of 20 MWh from June 2018 to May 2019 and 17.6 MWh from June 2019 to May 2020. This represented an annual savings of

$443.53 (average Hourly Ontario Energy Price of $22.18/MWh) and $225.28 (average Hourly Ontario Energy Price of $12.80/MWh), respectively, on energy costs.

- **Customer Impact:** The 20 MWh reduction from the 2018-2019 period would result in only a 0.01% efficiency gain in the monthly consumption for the station's customers. This represents a savings of $0.04 per customer per month on their energy costs.
- **System-Wide Cost:** To achieve a 0.01% reduction in overall system losses, Hydro Ottawa would need to reduce line losses by 425 MWh. This would require a capital investment of **$3.5M** for **946 units** (946 units × ~$3,750 per unit). Using an Hourly Ontario Energy Price of $22.18/MWh, the savings would represent just under **$10,000** in energy for the system during the period from June 2019 to May 2020. Based on these savings, the return on investment would far exceed the lifecycle of the asset.
- **Additional Costs:** This initial investment does not include taxes, shipping, installation, and maintenance costs for the entire lifecycle of each unit.
- **Additional Concerns:** Kanata Station's feeders experienced larger voltage drops than other feeders on the Hydro Ottawa system. Therefore, the system loss savings from power factor correction would be smaller across Hydro Ottawa's other service territory feeders compared to the savings observed at the Kanata Station.
- **Conclusion:** Due to the high cost of implementation for such a minimal reduction in line losses, Hydro Ottawa did not propose to move forward with standalone capital investments in this solution based on line loss reductions alone.

<u>Contracting with Inverter-Based DERs</u>

No, Hydro Ottawa is not contracting inverter-based DERs to assist in power factor correction. Instead, Hydro Ottawa is prioritizing capacity services through the procurement of inverter-based DERs for its Non-Wires Customer Solutions Program portfolio (see the response to interrogatory 2-Staff-67, part (a)).

d) Burlington Hydro's and Hydro Ottawa's line loss studies, both conducted by CIMA+, share a common methodology but differ in their specific application of that methodology. While Hydro

Ottawa has no specific knowledge of Burlington Hydro's system, a comparison of the two studies reveals clear similarities and differences.

Similarities in Scope and Methodology

Both studies share a standard scope and methodological approach to analyzing distribution system line losses.

- **Primary Losses Only**: Both studies focus exclusively on primary voltage distribution line losses, intentionally excluding secondary line losses.
- **CYME Software**: Both use the CYME software and CYMDIST feeder models to calculate line losses. The base data provided by each utility included these models and feeder loading conditions.
- **Sample-Based Approach**: Each study selected a sample of ten feeders as archetypes to represent their respective distribution systems, covering a variety of voltage levels, loading conditions, and lengths.
- **4% Loss Threshold**: Both use a 4% total line loss of the feeder load as a key threshold to identify feeders that require further review for mitigation.
- **Common Mitigation Strategies**: Both explore the same three primary mitigation strategies for high-loss feeders: power factor correction, load balancing, and reconductoring.
- **No Generation**: Both studies explicitly state that any generation modeled in the CYME models was shut off and not factored into the analysis.

Key Differences in Application

While the overall framework is similar, the main differences lie in how the load data was handled and the specific criteria for applying mitigation strategies.

- **Load Allocation Method**:
  - **Hydro Ottawa**: CIMA+ actively modified the CYME models to allocate loads proportionally to the kVA capacity of each transformer.

- **Burlington Hydro**: CIMA+ accepted the provided CYME models and their associated data as is, considering them a "true representative" of their system without significant modification.

- **Power Factor Correction Threshold**:
  - **Hydro Ottawa**: The study explored power factor correction for any feeder with a stated power factor of 90% or less. The simulation aimed for a corrected power factor of 95%.
  - **Burlington Hydro**: The study examined power factor correction for feeders with a stated power factor of less than 95%. The simulation also aimed for a corrected power factor of 95%.

Common Conclusions and Recommendations:

Despite the minor differences in execution, both studies reach similar conclusions and offer consistent recommendations regarding line loss reduction:

- **Best Practices**: Both studies conclude that their respective 27.6 kV feeders, with good power factor and reasonable load balance, are operating in line with the standard best practices of Ontario Local Distribution Companies.
- **Load Balancing**: Both highlight that load balancing is a low-cost, high-impact activity that can be done on a targeted, maintenance basis to effectively reduce losses.
- **Voltage Conversion**: Both find that voltage conversion is not an economic solution solely for reducing losses. However, they both recommend that it should be considered for feeders that are nearing the end of their useful life.
- **Targeted Reconductoring**: Both studies mention that reconductoring can have a minimal impact on losses if not targeted correctly and that its effectiveness depends highly on the location and amount of the undersized line segments.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-15

EVIDENCE REFERENCE:

8-ED-40

UNDERTAKING(S):

Please provide an answer to this interrogatory. It will be very difficult to resolve loss factor issues without this information. The question is clearly relevant to those issues. It is not onerous to reach out to CIMA+ to ask the question and HOL cannot say it is impractical without even trying.

RESPONSE(S):

As requested in the interrogatory 8-ED-40, Hydro Ottawa consulted CIMA+ for suggestions on what to include “in a further study during the next rate period to build on their prior report, address any potential missing data or gaps, and explore additional means to cost-effectively reduce distribution losses”.

In response CIMA+ provided the following suggestions:

- Analyze feeder information, verify and validate that any flagged missing data and gaps have been covered and resolved.
- Further evaluate how to leverage dynamic feeder reconfigurations and distribution automation based on varying load.
- Consider implementing energy storage.

The input received from CIMA+ are in alignment with Hydro Ottawa's plans as stated in this submission for the 2026 - 2030 period, specifically:

- The review and update of flagged missing data and gaps in the distribution network model and feeder information are being addressed as part of the Advanced Distribution Management System (ADMS) project. More details on the ADMS project can be found in Section 5 of Schedule 2-5-8 - System Service Investments.
- Dynamic feeder reconfigurations and distribution automation are already part of Hydro Ottawa's plans through the distribution system reliability, resilience, and system observability programs. More details in Section 3 of Schedule 2-5-8 - System Service Investments.
- Energy storage options are also being considered as detailed in the Non-Wire Capacity Upgrade program. More details in Section 2 of Schedule 2-5-8 - System Service Investments.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-16

EVIDENCE REFERENCE:

8-ED-41

UNDERTAKING(S):

Part (d) reads as follows:

"Some LDCs assess alternatives with respect to conductors and transformers by comparing the all-in lifetime cost of each alternative (e.g. different sized conductors, different transformer brands) in a way that includes the forecast volume of losses arising from each alternative. Does Hydro Ottawa do this? If not, why not? If yes, please provide the internal guides or documentation that detail this."

HOL indicated that it did not, but did not explain why. We have attached the Hydro One methodology to assessing transformers, which states as follows:

"The cost-of-losses formula determines the operating cost of the transformer over its lifetime and sums it with the capital cost to produce a Net Present Value for the lifetime cost of the transformer. The TOC of alternative transformer designs can be compared so that the utility can select those with the lowest TOC. This allows the utility to assess whether or not there is economic benefit in paying a higher capital cost in order to obtain a transformer with reduced losses and lower operating costs."

This allows Hydro One to minimize lifetime costs. Will HOL adopt a similar methodology? If not, why not? Please explicitly explain why HOL would not seek to minimize lifetime costs.

Hydro One also considers whether it is cost-effective to use an upsized conductor to reduce transmission losses in order to minimize lifetime costs.3 Will HOL do so going forward? If not, why not? Please explicitly explain why HOL would not seek to minimize lifetime co
sts.

RESPONSE(S):

Hydro Ottawa is not considering adopting a similar method to Hydro One. Hydro Ottawa's transformer purchasing specifications require that transformers meet the CSA C802.1 "Minimum efficiency values for liquid-filled distribution transformers." This standard specifies energy efficiencies and recommends the total ownership cost methodology for achieving them. The standard, optimized for minimum total losses, is rooted in a least lifecycle cost analysis; applying it separately would result in double-counting the benefit.

Hydro Ottawa prioritizes upsizing conductors due to load growth and asset replacement cycles, rather than solely for system loss reduction. This is often integrated into the voltage conversion programs. For further details, please refer to the response to interrogatory 8-ED-39 part (b). While voltage conversion programs may lead to upsizing conductors, their main goals are system renewal and reliability; loss reduction is a positive side effect, not the primary objective. This aligns with the recommendations from CIMA+ in that "Voltage conversions for the sole purpose of reducing losses is not likely to be economic. However, voltage conversion for any feeders nearing end-of-life replacement is strongly recommended."[1]

[1] Attachment 8-ED-39(A) - Distribution Losses Analysis Jan 24, 2022, page 7 of 231.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-17

EVIDENCE REFERENCE:

8-ED-44

UNDERTAKING(S):

HOL indicates that is charges $16/month for MicroFIT whereas all other major distributors charge $5/month or less. Please explain what is different about HOL that would justify charging more? A letter from the OEB to distributors dated November 19, 2024 stated as follows:

“As part of its annual review of the microFIT charge for 2025, OEB staff has, in accordance with the established methodology, updated the microFIT-related costs for those electricity distributors tha had an OEB-approved cost of service application in the previous year. The resulting calculation supports that an update to $5.00 is appropriate.

The OEB reminds distributors that they may request a distributor-specificmicroFIT charge as part of their cost of service applications. Any distributor that applies for a distributor-specific charge will be required to demonstrate that its costs lead to a materially different charge than the province-wide charge.”

Please provide the required evidence to demonstrate that HOL’s costs lead to a materially different charge than the province-wide charge. Exhibit 8, Tab 4, Schedule 2, Attachment A, p. 1 does not explain: (a) why HOL’s requirements are greater, (b) why so much time is required each month, (c) why the processes cannot be automated, and (d) why postage and cheques costs are incurred. In answering the question, please address each of these.

RESPONSE(S):

Hydro Ottawa disagrees that Schedule 8-4-2 - Generation Charges Attachment A does not demonstrate that Hydro Ottawa's costs result in a materially different charge.

The OEB sets the annual province-wide microFIT charge based on a price methodology that was set in EB-2009-0326 and appears to only use the costs of distributors that rebased in that year. Therefore, the cost appears to be the average of a few distributors and does not reflect the average of all distributors. In its decision the OEB stated the following:

- As previous cost allocation studies have demonstrated, variations in the manner in which distributors account for costs associated with customer classes exists and result in materially disparate outcomes.[1] The Board has recognized this reality in its cost allocation report of November 28, 2007 (Application of Cost Allocation for Electricity Distributors, EB-2007-0667) - Hydro Ottawa notes these issues still exist

- Aggregating the cost experiences of the distributors on a weighted average basis will establish a reasonable starting point (emphasis added) for a new customer class and avoid the exacerbation of the problem cited above of having a wide range of cost input assumptions for the microFIT program[2]

In its decision the OEB stated "Over time and with empirical information regarding the costs associated with this new class, the Board will be in a better position to consider the effectiveness of this rate". Since the methodology was set 15 years ago, Hydro Ottawa does not believe a follow-up review has occurred. However, Hydro Ottawa has, as demonstrated, completed a cost study.

The costing for the MicroFIT service charge has been completed in alignment with the methodology for Specific Service Charges (SSCs) and Hydro Ottawa's 2016 and 2021 Custom IR applications.

[1] Ontario Energy Board, *Decision and Order to Determine and Implement a Distribution Rate for Embedded Generators having a nameplate capacity of 10 kW or Less*, EB-2009-0326, (June 9, 2010), page 15.
[2] Ontario Energy Board, *Decision and Order to Determine and Implement a Distribution Rate for Embedded Generators having a nameplate capacity of 10 kW or Less*, EB-2009-0326, (June 9, 2010), page 16.

Hydro Ottawa notes its methodology does not include meter expense costs and the Amortization Expense – General Plant assigned to Meters allowed per EB-2009-0326. This is a result of using the methodology for SSCs informed by the EB-2009-0326 decision cost categories.

As part of this application, Hydro Ottawa is proposing to reduce the MicroFIT charge from $16 to $11 as result of efficiencies. Billing of MicroFIT customers is automated, however these accounts may still require manual intervention from Billing for any bill exceptions, which is a similar activity performed for load customers. This requires 1 day per month for the 865 accounts. Hydro Ottawa notes, the cost of the aforementioned automated process is not part of the cost design for MicroFit customers, nor are the systems that support this automation.

Additional time is also required monthly for Meter Data Services (MDS) and Finance staff to validate data, investigate/correct any issues, and complete wholesale settlement requirements with the customer and IESO. Similarly, this is a typical process that is required for load customers and only the time for generation customers are part of the cost study. The per account time by finance for generation customers is mainly higher than that required for load customers due to payments to generators.

Hydro Ottawa offers microFIT customers a choice of receiving their settlement payments by cheque or direct deposit. In 2024, further outreach was completed to encourage MicroFIT customers to enroll in direct deposit; 60% of MicroFIT customers have opted for monthly direct deposit with the remaining 40% preferring the cheque method for payment. This has been reflected in the updated costing.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENVIRONMENTAL DEFENCE

JT2.6-ED-18

EVIDENCE REFERENCE:

8-ED-44

UNDERTAKING(S):

HOL indicates that the MicroFIT classification is being amended to ensure it covers generators after their MicroFIT contracts expire. However, the heading appears to cover all micro generation as it reads “MicroFIT AND OTHER GENERATION <10kW.” But the description does not, stating that “[t]his classification applies to an electricity generation facility contracted under the Independent Electricity System Operator's microFIT program.” See Exhibit 8, Tab 5, Schedule 1, Attachment B, ORIGINAL, Page 30. Please propose alternative wording that would resolve the inconsistency and not simply include all micro generation facilities.

RESPONSE(S):

The description on Page 30 of Attachment 8-5-1(B) - 2025 Current and 2026-2030 Proposed Tariff of Rates and Charges has been updated to reflect the change in covering all Micro (<10kW) generation after their MicoFIT contracts expire. Hydro Ottawa has updated the proposed wording in the Attachment JT2.6-ED-18(A) - Proposed MicroFIT and Other Generation <10kW Tariff.

Hydro Ottawa Limited

PROPOSED - TARIFF OF RATES AND CHARGES

Effective and Implementation Date January 1, 2026

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2024-0115

MICROFIT AND OTHER GENERATION <10kW SERVICE CLASSIFICATION

This classification applies to an electricity generation facility contracted under the Independent Electricity System Operator's microFIT program or other generation <10kW and connected to the distributor's distribution system. Further servicing details are available in the distributor's Conditions of Service.

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Ontario Energy Board, and amendments thereto as approved by the Ontario Energy Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor’s Licence or a Code or Order of the Ontario Energy Board, and amendments thereto as approved by the Ontario Energy Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable.

It should be noted that this schedule does not list any charges, assessements or credits that are required by law to be invoiced by a distributor and that are not subject to Ontario Energy Board approval, such as the Global Adjustment and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	$	$11.00

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO DISTRIBUTED RESOURCE COALITION

JT2.7

EVIDENCE REFERENCE:

KT2.2 - DRC letter dated September 19, 2025.

UNDERTAKING(S):

Undertaking to respond to DRC's questions in the letter dated September 19, 2025

RESPONSE(S):

Please see responses included as JT2.7-DRC-1 through JT2.7-DRC-7.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO DISTRIBUTED RESOURCE COALITION

JT2.7-DRC-1

EVIDENCE REFERENCE:

1-DRC-1 c)

UNDERTAKING(S):

What would be the impacts on Hydro Ottawa's ability to respond to wider adoption of distributed energy resources ("DERs") and electric vehicles ("EVs") (including low adoption and high adoption scenarios) in the event that funding for the 22 positions identified as associated with the Customer Connection and Capacity Program growth are not approved as part of this proceeding?

RESPONSE(S):

If funding for the 22 positions associated with the Customer Connection and Capacity Program growth isn't approved, Hydro Ottawa's ability to manage the wider adoption of Distributed Energy Resources (DERs) and Electric Vehicles (EVs) will be significantly impacted, with the effects varying based on the level of adoption.

Should the adoption of DERs and EVs proceed at a slower rate than the current forecast, the absence of funding for the 22 requested positions will still present significant operational challenges. As outlined in Schedule 4-1-3(C) - Workforce Growth Section 3.1.1.1 (Customer Connection and Capacity Growth Program), these roles are essential to address not only future growth, but also the immediate and ongoing needs of Hydro Ottawa's distribution system. Without these personnel, Hydro Ottawa's capacity to manage the existing volume of customer connection requests including

new residential, commercial, and institutional developments will be significantly hindered. This would likely lead to extended service timelines, a reduction in the quality of customer service, and delays in critical infrastructure upgrades required to maintain system reliability. The ability to integrate even a modest number of new DER and EV connections would be strained.

In a high adoption scenario, where the pace of DER and EV integration accelerates significantly, the consequences of not securing funding for the 22 positions would be substantial and widespread. The current workforce is already operating at full capacity to meet existing demands. A rapid increase in connection requests for DERs and EVs would overwhelm existing resources, leading to substantial delays in the connection process.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO DISTRIBUTED RESOURCE COALITION

JT2.7-DRC-2

EVIDENCE REFERENCE:

1-DRC-2 f)

UNDERTAKING(S):

a) Please elaborate on what Hydro Ottawa means by "As V2G matures and becomes more economically and technically feasible for widespread implementations".

b) Please discuss the economic and technical barriers that currently limit the implementation of V2G in Hydro Ottawa's service area.

c) Are there any leading jurisdictions or utilities that you are aware of with respect to procuring services from EV energy storage systems such as V2G?

RESPONSE(S):

a) Vehicle-to-Grid (V2G) technology has the potential to provide long-term benefits to the distribution grid as a Non-Wires Solution (NWS), however uncertainty about the viability of V2G technology as a long-term NWS has led the Independent Electricity System Operator (IESO) to exclude bidirectional charging from its recent Local Achievable Potential Study (L-APS) for Toronto and Ottawa. The IESO's decision, outlined in its August 18, 2025, Memorandum on Consideration of Bidirectional Charging in Non-Wires Analysis,[1] highlights several unresolved

[1] https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Toronto/toronto-20250821-Memorandum.pdf

issues that must be addressed before V2G can be considered a reliable grid planning solution. The reasons for the exclusion include:

- A limited availability of V2G/B (Vehicle-to-grid/Vehicle-to-building) capable vehicles and uncertain customer acceptance.
- Uncertainty around resource availability and performance.
- Uncertainty around cost-effectiveness.
- The existence of barriers for integrating the technology.

Despite the exclusion within the current L-APS, the IESO "expects that as the resources' availability, performance, customer willingness to participate, cost, and other characteristics are better understood, V2G/B measures will be included in future potential studies and may be considered in the non-wires analysis in subsequent Integrated Regional Resource Plans for Toronto, Ottawa, and other regions". The IESO is also actively supporting Electric Vehicle demonstration projects with a specific funding stream for V2G within the Grid Innovation Fund 2024 proposal guidelines.[2] Hydro Ottawa remains committed to evaluating the potential benefits for V2G as research, pilot projects, and other reports such as the memorandum referenced above provide a better understanding of the technology, commercial viability, and changes needed before widespread deployment.

b) Please refer to the response provided in part (a) above, as well as the referenced memorandum.

c) IESO has included two appendices within the referenced memorandum. Appendix 1 outlines the IESO supported V2G pilot projects currently underway through the 2024 Grid Innovation Fund referenced in response a, and Appendix 2 lists some of the high-profile V2G projects taking place elsewhere in North America.

[2] GIF Project Proposal Guidelines

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO DISTRIBUTED RESOURCE COALITION

JT2.7-DRC-3

EVIDENCE REFERENCE:

1-DRC-4 e)

UNDERTAKING(S):

Does Hydro Ottawa have any further insights regarding the significant increase in Large Commercial consideration of electrifying company owned vehicles (42% -> 51%), including in relation to impacts on Hydro Ottawa's distribution system and load forecasts?

RESPONSE(S):

The referenced statistics, which are provided on page 43 of Attachment 1-ED-7(B) - 2024 Customer Satisfaction Study results - Large Commercial, show the percentages of survey respondents (93 respondents in 2022 and 116 respondents in 2024) who indicated they would "definitely" or "probably" consider electrifying company owned vehicles in the 2022 and 2024 version of this survey. The survey question doesn't indicate a time frame for that activity. This trend is consistent with other data that shows an increasing move toward electrification of transportation, which is consistent with Hydro Ottawa's Decarbonization Study results. While this data point is helpful to validate Hydro Ottawa's expectations that EV adoption is increasing over time, and is in line with broader electrification assumptions, the specific percentages should not be considered indicative of actual customer behaviour, and as such, there are no additional impacts to the distribution system or forecast based on this single data point.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO DISTRIBUTED RESOURCE COALITION

JT2.7-DRC-4

EVIDENCE REFERENCE:

2-DRC-6 a)

UNDERTAKING(S):

a) Based on past experience, how has Hydro Ottawa's customer-satisfaction score changed when connection queues lengthened, and what would be the expected impact if new EV/DER connections begin to stall?

b) Can you describe in a general sense what work Hydro Ottawa is doing to understand how customer preferences for DER and EV options may develop over the coming years?

RESPONSE(S):

a) Hydro Ottawa has multiple sources of customer-satisfaction scores, including annual customer satisfaction surveys, as well as immediate feedback mechanisms following interactions through our primary communication channels (e.g. contact center, email, and web chat). Hydro Ottawa has not correlated specific customer satisfaction scores with EV/DER connection timelines. The OEB as part of the DER Connection Procedure (DERCP) and Electric Vehicle Charging Connection Procedures (EVCCP) guidelines has outlined connection timelines, which Hydro Ottawa complies with. Should EV/DER connection timelines not meet the minimum standard, this could result in lower customer satisfaction scores for those customers impacted by those

timelines, however EV/DER connections make up only a small portion of customer interactions each year, so overall scores may not significantly change.

b) As part of Hydro Ottawa's Decarbonization Study, previously submitted as 2-5-4(F) - Decarbonization Study, Hydro Ottawa examined several data sources, including legislation, stated targets, and market trends, to identify several scenarios related to DER and EV adoption, and related impact to its grid. Additionally, Hydro Ottawa periodically includes questions related to DERs and EVs in surveys. For example, the supplemental questions asked as part of the 2023 Residential & Small Commercial Survey, previously submitted as Attachment 1-ED-7(A). Hydro Ottawa intends to ask these same supplemental questions as part of the 2025 Residential & Small Commercial Survey, to be completed in Q4 2025, in order to identify trends. Subsequent surveys may also include questions related to DERs and EVs.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO DISTRIBUTED RESOURCE COALITION

JT2.7-DRC-5

EVIDENCE REFERENCE:

2-DRC-6 b)

UNDERTAKING(S):

How will Hydro Ottawa pivot if EV and/or DER demand advances at more accelerated rates, consistent with a high electrification scenario?

RESPONSE(S):

Hydro Ottawa is committed to maintaining a reliable and resilient grid while actively enabling the transition to a high-electrification future. Should Electric Vehicle (EV) and/or Distributed Energy Resource (DER) demand advance at rates consistent with a high electrification scenario (the High Sensitivity scenario in our Decarbonization Study), Hydro Ottawa is prepared to pivot its investment and operational strategies through a multi-faceted and adaptive approach.

1. Adaptive Investment and Capacity Planning:

   While Hydro Ottawa's base capacity-related investments for the 2026-2030 period are anchored by immediate system needs and the Decarbonization Study's Reference Scenario, planning is not static. Hydro Ottawa's adaptive annual investment planning process will ensure capital is deployed efficiently and in direct response to realized grid needs. Specifically, Hydro Ottawa will annually monitor and evaluate load realization against both the Reference and High Sensitivity forecasts. If EV and DER adoption trends track closer to the High Sensitivity scenario, Hydro

Ottawa will update short term planning forecasts and assess impacts on a regional basis, in alignment with the approach presented in Section 9 of Schedule 2-5-4 - Asset Management Process. The impacts from EVs and DERs will be assessed at the local, neighbourhood level and the required investments will be planned and expedited as deemed necessary based on actual system demand and localized capacity constraints, ensuring a responsive and prudent use of capital. This approach avoids over-investing in infrastructure prematurely but allows for rapid scaling when required and is further described within response to JT2.6-ED-8.

2. Strategic Use of Non-Wires Solutions (NWS):

NWS can serve as a primary bridge strategy and flexible resource to manage capacity constraints arising from accelerated growth:

- Capacity Gap Management: Leveraging NWS can provide Hydro Ottawa with the necessary lead time to plan, approve, and construct long-term, conventional grid infrastructure (like new substations or feeder upgrades). Hydro Ottawa's proposed ODERA project invests in the foundational technologies that Hydro Ottawa is relying upon to demonstrate this approach in the Kanata North region. The NWCSP deployment outlined in the interrogatory response 2-Staff-67 serves to bridge the capacity needs in the region while the new Kanata North station is constructed. Once foundational technologies are in place and results are demonstrated, Hydro Ottawa expects that this approach can serve to cost-effectively allow customers to continue to connect EVs and DERs in capacity constrained regions.

- Utility-Owned BESS: Hydro Ottawa is also proposing the rapid deployment of Battery Energy Storage Systems (BESS) in areas identified as immediate or near-term capacity constraint hotspots. These BESS can be operational much faster than conventional infrastructure, providing critical peak shaving and deferring, long-lead time upgrades.

3. Accelerated Grid Modernization and Observability:

A high-electrification scenario fundamentally requires a smarter, more controllable grid. Hydro Ottawa would also look to accelerate grid modernization efforts to maximize operational flexibility:

- Enhanced Grid Observability: The deployment of AMI 2.0 and the integration of advanced sensors and monitoring systems are crucial. These tools provide the necessary real-time data on distributed energy flows and consumption patterns, which is essential for managing a highly dynamic system with two-way power flow.

- DER Integration and Optimization: The advancement of a modernized Distributed Energy Resource Management System (DERMS) platform is specifically designed to enhance controllability and allow for the optimization of DERs, including smart EV charging and storage. This enables the grid to effectively utilize flexible loads to reduce overall peak demand, turning EVs and DERs from potential system stressors into system assets.

- Operational Flexibility: Enhanced IT/OT systems will enable dynamic operating control and other active management techniques, allowing the existing infrastructure to safely carry more load under times of peak demand by accounting for real-time conditions, thus delaying conventional asset replacement.

In summary, Hydro Ottawa's pivot would not be a singular reactive measure, but rather a system of proactive, flexible strategies which are continuously reviewed and prioritized to ensure the ability to connect new customers and maintain high service quality, even if the adoption rate of EVs and DERs significantly exceeds the current reference forecast.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO DISTRIBUTED RESOURCE COALITION

JT2.7-DRC-6

EVIDENCE REFERENCE:

2-DRC-6 c)

UNDERTAKING(S):

a) In capacity-constrained areas, how many new EV charger or DER interconnection requests would you anticipate could be deferred per year under a “reduced-spend” alternative?

b) Given the documented shortage of skilled utility trades, what is Hydro Ottawa’s contingency plan if investments are deferred through this Proceeding and then need to be executed on a compressed timeline?

c) Which neighbourhoods would be most likely to face temporary pauses on new EV and/or DER connections (e.g., rooftop solar) if the planned investments are deferred?

d) Is Hydro Ottawa aware of any specific commercial or industrial projects in growth areas that might be delayed or lost if sufficient hosting capacity for fleet EV chargers and on-site generation is not available?

RESPONSE(S):

a) Hydro Ottawa interprets the "reduce-spend" alternative in part (a) of this undertaking as Alternative 1: Decelerated Growth Approach, detailed in Section 2 of Schedule 2-5-8: System

Service Investment. This alternative continues only the station projects initiated during the 2021-2025 period, including Kanata North MTS, Piperville MTS, and Mer Bleue MTS. Since this alternative does not address all immediate system needs, EV charger or DER interconnection requests would likely experience connection delays depending on their location; the supply option for their connection might require complex system reconfigurations or expansions to accommodate the proposed connections. This approach might also compromise the overall reliability of the distribution system, potentially leading to service disruptions. The year-over-year deferral impact on EV charger or DER interconnection requests cannot be quantified as it would be based on case-by-case customer requests.

b) Hydro Ottawa's contingency plan for a deferred investment, requiring execution on a compressed timeline amidst a skilled labor shortage, would focus on prioritizing work with existing, constrained resources. The immediate steps would involve prioritizing existing staff by leveraging both internal and contracted trade staff and by expediting current work programs. This strategy, however, carries the inherent trade-off of potentially increased work program costs and/or customer costs due to the extensive reliance on overtime. Crucially, if the demands prove insurmountable for the available trades and existing work programs, Hydro Ottawa would be compelled to prioritize urgent customer connection scopes by trading them off against other System Renewal and System Service investments.

The ultimate consequences of this deferred execution and forced prioritization are expected to be materially negative for both the system and customers: the distribution system would suffer from delayed upgrades and increased maintenance costs; reliability could be compromised, raising the potential for service disruptions; capacity would face further connection issues for new requests; and customer experience would deteriorate due to delays and dissatisfaction, as connections might need to be facilitated only on an "as available" basis. Hydro Ottawa asserts that this approach of deferral followed by expedited, under-resourced execution is a highly inefficient and high-risk strategy that would significantly impair the utility's ability to deliver reliable service and to support efficient customer connections.

c) Hydro Ottawa again interprets the deferral of planned investments referenced within the question of this undertaking as aligning to Alternative 1: Decelerated Growth Approach, detailed in Section 2 of Schedule 2-5-8: System Service Investment. In this scenario, per Table 3 on page 54, 55% of the planning regions are forecasted to be overloaded by 2035. Customers projected to be connected to the Greenbank MTS, Cyrville MTS, Bronson MTS, King Edward TS, Lisgar TS, Carling TS, Russell TS, Albion TS and South March TS would potentially see delays in EV/DER connections due to capacity constraints in these regions.

d) Hydro Ottawa is not aware of any specific commercial or industrial projects in growth areas that might be delayed or lost if sufficient capacity for fleet EV chargers and on-site generation is not available. Customers are encouraged to utilize the "electricity load capacity map" on Hydro Ottawa's website as a planning tool to identify areas with available load capacity for new connections, including EV charger installations. Any committed fleet EV chargers or generation requests have been included in the forecast to determine system capacity needs and select the most optimal investment scenario. Please refer to Table A in the response to interrogatory 2-CO-21, part (b), for details on transportation electrification demand included in the forecast.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO DISTRIBUTED RESOURCE COALITION

JT2.7-DRC-7

EVIDENCE REFERENCE:

2-DRC-8 b)-e)

UNDERTAKING(S):

a) In the event that the ODERA project is not approved, how many extra years would Hydro Ottawa need to validate a DER-management system before it could be safely rolled out across the whole service territory?

b) To what extent could accurate, feeder-level load forecasts from the ODERA project defer or down-size traditional capacity upgrades that would otherwise be scheduled in the 2026-2030 window?

c) If the ODERA project is delayed, what is the estimated rate impact (¢/kWh) on an average residential customer by 2030 compared with proceeding with the pilot today?

d) What key performance indicators will Hydro Ottawa track over the pilot period to determine whether the technology can be rolled out cost-effectively across the entire distribution system?

e) Which specific data gaps (e.g., missing interval data, DER telemetry) will the pilot seek to close, and how will that improved data flow enhance both local planning and coordination with the IESO?

f) Can Hydro Ottawa provide how and when pilot results (e.g., forecasting accuracy and customer participation) will be shared with other LDCs to accelerate sector-wide learning?

RESPONSE(S):

a) Noting that a full, formal review has yet to be finalized, Hydro Ottawa has attempted to identify the likely implications based on current project dependencies.

The validation of the DER-Management System (DERMS) relies directly on implementing foundational technologies through the ODERA project, which is necessary to execute the demand response (DR) programs within the Non-Wires Customer Solutions Program (NWCSP). The NWCSP program has been proposed to support the near-term capacity requirements within the West 28kV (North) planning region, as outlined within Section 2.3.2.3 of Schedule 2-5-8 - System Service Investments beginning on page 33. If the ODERA project is not approved, Hydro Ottawa will seek alternative funding because its technology outcomes are essential for deploying the NWCSP (as outlined in interrogatory 2-Staff-67). However, if alternative funding sources are not secured and Hydro Ottawa also loses the NRACan funding, the necessary funds to implement the foundational technologies—including DERMS—will be unavailable to enable the DR programs proposed within the NWCSP.

Should this funding gap materialize, the required foundational technologies for the NWCSP will be either delayed or eliminated. Without these technologies, Hydro Ottawa will lack the necessary platform and the associated Distributed Energy Resources (DERs) from the NWCSP to safely and effectively validate the DERMS. The inability to validate will consequently delay the full service territory rollout of DERMS by at least five years, until the end of the next rate period, assuming Hydro Ottawa would be successful in approval of required funding in the next rebasing application. Moreover, this reduced scope would cause the NWCSP to undergo a significant reduction over the next five years, which would inhibit Hydro Ottawa's ability to achieve planned capacity reductions from demand response programs, complicate required

outcomes in the Kanata North region, and hinder the integration of non-wires solutions across both the current and the next rate periods.

b) The ODERA project's accurate, feeder-level load forecasts will not defer or down-size traditional capacity upgrades currently planned within the 2026–2030 window. ODERA's forecasting capability is an operational tool focused on day-ahead and near-real-time forecasts.
While it won't change the immediate plan, a key outcome is that the project's learnings and validation results will significantly enhance the investment planning process for the future (beyond 2030).

The Scope of ODERA's Load Forecasting

ODERA's load forecasting is designed for daily grid management, not long-term strategy. It is used to:

- Determine where and when to dispatch DERs in daily operations.
- Manage daily or hourly grid constraints.

It is not designed to produce the short to long-term load forecasts required for investment planning decisions, which typically look years into the future.

Capacity Investment Planning Process

Investment needs within the 2026-2030 window are determined through Hydro Ottawa's established capacity planning process and short-term load forecasting process, as outlined in Section 9 of Schedule 2-5-4 - Asset Management Process. It is through this process that Hydro Ottawa determines the investments required to meet system needs. Therefore, only changes to the inputs of this planning forecast and needs assessment can result in the deferral or downsizing of traditional capacity upgrades. The learnings gained through ODERA will be leveraged to update these planning forecast inputs for future cycles.

Strategic Future Benefits for Investment Planning

Although ODERA's forecasts are operational, their validation results and granular insights will significantly improve the short to long-term capacity planning process by refining the models used for strategic investment decisions.

i) **Refinement of Planning Forecast Inputs and Models**

The validation of ODERA's high-resolution, feeder-level forecasts provides crucial data and insights that can be leveraged to enhance the existing short to long-term planning forecast process:

- **Improving Load Growth Projections:** By comparing the day-ahead/near-real-time forecasts against actual measured load at the feeder level, Hydro Ottawa can better understand the true, granular impact of new loads (e.g., EV charging, heat pumps) and DERs on the system. The difference between the ODERA forecast and the actual load provides a more accurate demand profile for specific areas, which is vital for long-term load shape modeling.
- **Enhancing Weather and System Event Modeling:** The validation process will reveal how accurately the ODERA models capture the influence of weather variables (e.g., extreme heat/cold) and system events on load at a granular level. These validated coefficients and relationships can then be incorporated into the planning forecast models to improve their predictive accuracy and better anticipate future peak demand under various climate scenarios.
- **Calibrating Long-Term Forecast Assumptions:** The results from the ODERA validation provide empirical evidence on the reliability of high-resolution forecasting. This evidence can be used to calibrate the risk assessments currently used in the short-to-long-term planning forecasts, leading to more robust and risk-informed investment decisions.

ii) Informing Future Investment Scenarios

The insights from ODERA's validation enable a shift towards a more non-wires alternative (NWA) focused capacity planning process in the future:

- **Quantifying NWA Potential:** ODERA is developing and piloting a system to "predict the achievable load curtailment of customer-owned DERs" (as noted in response to interrogatory 2-Staff-69 part a) ii)). This capability is critical because it will allow Hydro Ottawa to accurately represent the potential of Non-Wires Solutions (NWS) in future load forecasts.
- **Optimizing Timing and Size:** By improving the accuracy of long-term load forecast inputs, the capacity planning process can better optimize the timing and size of future traditional capacity upgrades (post-2030). A more precise forecast helps reduce the risk of over-investment.
- **Integrating Active Management Costs:** The validation of the operational tools (ODERA) will provide real-world data on the costs and benefits of active load management. This information is necessary to formally integrate the economics of operational control into the long-term investment planning process, allowing for a holistic cost-benefit analysis between traditional and smart-grid solutions for future capacity needs.

By accurately quantifying the deferral potential of customer-owned DERs, ODERA's findings will contribute to more informed and potentially down-sized capacity plans beyond 2030.

c) It is unclear what is meant by the project being delayed. For example, within the rate period or completely outside the rate period. If however, the delay to the project impacts the ability to secure the $6M in federal funding from NRCan, this additional cost would need to be covered through rates. If the delay results in the ODERA project being pushed into the next rate period, the capacity support anticipated from the demand response programs within the NWCSP will be impacted as the foundational technologies required to effectively forecast the needs and to activate and manage the DERs will not be available. In Section 9.2.3 - Proposed NWSs by Planning Region of Schedule 2-5-4 - Asset Management Process, Hydro Ottawa has outlined

capacity needs which it proposes to support through NWS, including demand response programs within the NWCSP. These proposed demand response programs have been demonstrated to be more financially efficient within the Kanata North region within the Benefit Cost Analysis provided in attachment 2-Staff-67(A). Should there be a delay to the implementation of the demand response programs in Kanata North (along with others that are anticipated to be implemented throughout the other named planning regions), Hydro Ottawa would be compelled to install more expensive traditional wired infrastructure, resulting in additional costs that would need to be recovered through rates. An estimate of the impact to the c/kWh is difficult to quantify at this time.

d) The project is currently in its preliminary design phase and as such, key performance indicators (KPIs) for scalability have not been finalized. In its response to interrogatory 2-DRC-8 part c), Hydro Ottawa outlines the criteria currently being considered for the evaluation of scalability and adaptability of the technology solution. As outlined within the project charter, included to response to interrogatory 2-Staff-69, as Attachment 2-Staff-69(A) - ODERA Project Charter, on page 10, Hydro Ottawa has committed to "develop, track, and communicate KPIs across four main categories:

   i) Operational performance and business impact
   ii) Customer performance and impact
   iii) Knowledge dissemination
   iv) Longitudinal outcomes"

e) The ODERA project is designed to close data gaps primarily concerning the location and operational capability of flexible DERs. Specifically, the project will acquire DER telemetry by identifying the location of flexible DERs down to the distribution transformer level and predicting their curtailment capability, information that is currently missing and prevents Hydro Ottawa from leveraging these customer-owned assets. The improved data flow enhances distribution planning by allowing these flexible resources to be scheduled and deployed as a grid resource via the DERMs platform, mitigating equipment overload and optimizing local capacity. Furthermore, it aims to develop coordination protocol with the IESO through a collaborative

residential demand response program that will coordinate and orchestrate smart devices for mutual benefit in both planning and operations. This aligned planning, supported by quantified data on DER flexibility, is crucial for validating NWS for both local needs and the bulk electricity system.

f) As stated in its response to 2-DRC-8 part e), Hydro Ottawa is committed to broadly sharing the ODERA project's findings, best practices, and lessons learned in order to contribute to the broader advancement of DERMS and NWS across the industry. Objective 6, within the project charter, Attachment 2-Staff-69(A) - ODERA Project Charter, on page 8, further describes this commitment:

Objective 6. Document and broadly disseminate key findings, best practices, and lessons learned from this pioneering DER pilot project to foster industry-wide knowledge sharing.

- Create and maintain a robust project knowledge base including project plans, decisions records, lessons learned, risks, design inputs, and outcomes.
- Design and execute customer surveys.
- Develop whitepapers.
- Attend conferences.
- Share information with community associations.
- Launch news releases. Publish customer newsletters.
- Create other media.

As the project is currently in its preliminary design phase, specific timing and forums for this knowledge dissemination is not yet known, however Hydro Ottawa will look to share any learnings throughout the project, and has already begun so with peers through various workgroups.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ONTARIO ENERGY BOARD STAFF

JT2.8

EVIDENCE REFERENCE:

2-SEC-44(A)

UNDERTAKING(S):

Provide failure probability for fair condition transformers

RESPONSE(S):

Hydro Ottawa calculates the annual probability of failure (PoF) for asset condition categories using an exponential Cumulative Distribution Function (CDF). This function determines the likelihood of an asset failing at a specific time, assuming a constant failure rate (λ) for a given asset type based on its underlying failure curve.

The formula used is: $PoF=1-e^{-\lambda t}$

As per Hydro Ottawa's current underground transformer condition PoF curve, the failure rate for underground transformers in a Fair condition is 0.0475 (λ). For the annual PoF, the time variable (t) is set to 1 year. Applying this to the annual PoF formula, the annual probability of failure for transformers in Fair condition can be obtained as shown below:

$$\text{Annual PoF (for transformers in Fair condition)} = 1 - e^{-0.0475} \approx 0.0464$$

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ONTARIO ENERGY BOARD STAFF

JT2.9

EVIDENCE REFERENCE:

4-Staff-131(A)

UNDERTAKING(S):

File full distribution system, climate risk and vulnerability assessment, report

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RESPONSE(S):

The report produced by Stantec Consultant Inc, titled “Distribution System Climate Risk and Vulnerability Assessment”, Final Report, November 11, 2019, as referenced within the response to interrogatory 4-Staff-131 part a) was a subsection of the report in response to a particular question. For the complete report please see Attachment 2-Staff-41(A) - DX System Climate Risk Vulnerability Assessment for the, as filed in the response to interrogatory 2-Staff-41.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ONTARIO ENERGY BOARD STAFF

JT2.10

EVIDENCE REFERENCE:

4-Staff-159 Table A

UNDERTAKING(S):
Provide actual data for 2024, direct labour inclusive of specific trade positions broken down by trade position

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RESPONSE(S):

Table A below is an updated version of Table A that appeared in the response to Interrogatory 4-Staff-159, with the specific job titles and actual number of positions hired shown in 2024 Direct Labour.

Positions forecast between 2026 and 2030 remain summarized as Direct Labour and are not allocated to specific trades as per Table A in 4-Staff-159. As such, the rows for each trade are shown in grey for this period. The allocation of these positions to specific trades positions will be confirmed annually based on detailed work planning and workforce planning reviews.

Table A - Job Titles of New Positions by OM&A Program, Including 2024 Direct Labour Positions

Appendix 2-JC OM&A Program	Job Title	Year						Total
		2024	2026	2027	2028	2029	2030	
Metering	**Direct Labour**	3	3	2				58
	Apprentice - Meter Technician	3						3
Engineering & Design	**Engineering**							
	Distribution Engineer	3	5	6				14
	Grid Modernization Engineer	3	2					5
	Quality Assurance Engineer			1				1
	Smart Grid Engineer	4						4
	Standards Engineer	1						1
	Telecommunications Engineer	2						2
	Project Execution Planning							
	Distribution Design Layout Agent				2			2
	Engineering Technologist		1	3				4
	Project Administrator		2		1			3
	Project Coordinator		1	2			1	4
	Work Planner		3				1	4
	Work Scheduler		3					3
	Resource Scheduling Agent		1					1
	Leadership							
	Supervisor, Distribution Design Service Layout				1			1
	Supervisor, Distribution System Integration	1						1
	Supervisor, Engineering Technologists			1				1
	Supervisor, P&C		1					1
	Vice President	2						2
	Director, Program Management	1						1
	Supervisor, Distributed Energy Resources		1					1
	Supervisor, Major Projects		1					1

Appendix 2-JC OM&A Program	Job Title	Year						Total
		2024	2026	2027	2028	2029	2030	
	Supervisor, Program Oversight		1					1
Distribution Operations	**Direct Labour**	22	27	19				68
	Apprentice - Power Line Technician	7						7
	Power Line Technician	5						5
	Apprentice - Power Cable Technician	5						5
	Power Cable Technician	1						1
	Apprentice - Station Electrician	3						3
	Fleet Asset Administrator	1						1
	System Operations							
	Vault Tech Specialist		1					1
	System Operations Planners		2					2
	Contractor Management & Oversight							
	Plant Inspector		4					4
	QA Inspector		2					2
	Utility Forestry Inspector		1					1
	Leadership							
	Supervisor, Contractor Management		1					1
	Supervisor Control Room		2					2
	Supervisor, Stations		1					1
	Engineering							
	Project Engineer		1	2				3
	Data Engineer		*1*					1
Customer Billing	*Programmer/ Analyst*		1					1
Customer & Community Relations	*Programmer/ Analyst*		1					1
Information Management & Technology	*Cloud Engineer*		1					1
	Cybersecurity Engineer	1	1					2
	Manager, IT Program Management	1						1

Appendix 2-JC OM&A Program	Job Title	Year						Total
		2024	2026	2027	2028	2029	2030	
	Manager, Systems Programs		1					1
	Supervisor, OT Cybersecurity		1					1
	System Engineer		1					1
Safety, Environment & Business Continuity	*Business Continuity Specialist*	1	1					2
	Instructional Designer		1					1
	Manager, Business Continuity	1						1
	Manager, Sustainability				1			1
	Sustainability Specialist		2					2
Human Resources	*HR Advisor*	1	1					2
	HR Technology Specialist		1					1
Finance	*Accountant*	1		1	1	1		4
Regulatory Affairs	*Advisor, Regulatory Compliance and Projects*	1						1
	Supervisor, Regulatory Compliance and Projects	1						1
TOTAL		**50**	**81**	**37**	**6**	**1**	**2**	**177**

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TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO SCHOOL ENERGY COALITION

JT2.11

EVIDENCE REFERENCE:

CCC-34

UNDERTAKING(S):

Provide the information that Hydro Ottawa provided to the IESO and, if there is any differences between that information and the forecast load included in 3-CCC-34, any adjustments or anything, explain such

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RESPONSE(S):

With regard to Table A of interrogatory response 3-CCC-34, Hydro Ottawa would like to provide a clarification that as noted in Footnote 2 of Table A, it is not the IRRP Forecast; rather, it is the Reference Scenario forecast from the Decarbonization Study.

The adjustments in the forecast submitted to the IESO for the regional planning process as compared to the Reference Scenario forecast in Table A of interrogatory response 3-CCC-34 is as follows:

- As explained in Sections 9.4.1 and 9.4.2 of Schedule 2-5-4 - Asset Management Process, the IRRP Forecast submitted to IESO is the Reference Scenario forecast as represented in Table A of interrogatory response 3-CCC-34 combined with large load requests. Table A below represents the IRRP Forecast that was submitted to the IESO for the regional planning process. Note that the last three rows of Table A below provide a breakdown showing how the system

level IRRP Forecast minus the large loads equals the Reference Scenario Forecast in Table A of 3-CCC-34.

Table A - IRRP Forecast (MW)

Station	2025	2030
ALBION TS	55	85
BECKWITH DS	4	6
BILBERRY CREEK TS	47	0
BRIAN COBURN MTS	0	84
BRIDLEWOOD MTS	20	24
CAMBRIAN MTS	40	73
CARLING TS	100	161
CENTREPOINT MTS	12	17
CYRVILLE MTS	35	47
ELLWOOD MTS	43	57
FALLOWFIELD DS	33	26
HAWTHORNE TS	95	129
NEW 230-44 KV STATION	2	21
HINCHEY TS	66	104
KANATA MTS	60	67
KING EDWARD TS	73	131
LIMEBANK MTS	56	86
LINCOLN HEIGHTS TS	43	76
LISGAR TS	91	139
MANORDALE MTS	9	13
MARCHWOOD MTS	32	45
MERIVALE MTS	17	23
MOULTON MTS	22	40
NEPEAN EPWORTH MTS	12	14
NEPEAN TS	94	161
PIPERVILLE MTS	0	14

Station	2025	2030
ORLEANS TS	12	0
OVERBROOK TS	80	125
RICHMOND SOUTH MTS	17	50
RIVERDALE TS	90	138
RUSSELL TS	67	100
SLATER TS	90	107
SOUTH MARCH TS	82	112
TERRY FOX MTS	59	72
UPLANDS MTS	24	37
WOODROFFE TS	45	68
CASSELMAN DS	7	12
SYSTEM LEVEL (IRRP Forecast submitted to IESO)	**1,635**	**2,463**
Less Large Loads	**-15**	**-106**
Reference Scenario (Table A 3-CCC-34)	**1,620**	**2,357**

As a part of this undertaking, a station-level breakdown of the system forecast from 2025 to 2040 is provided in Attachment JT2.11(A) - Demand MW Load Forecast that was submitted to the IESO for regional planning.

Following Hydro Ottawa's submission of the IRRP Forecast, further adjustments were applied by the IESO to account for factors that influence system-wide demand. The following adjustments were made by the IESO in the final published forecast in the report:

- Casselman DS and Beckwith DS were removed from the forecast as both of these stations are fed by transmission stations that are not in the scope of the Ottawa sub-region IRRP and were not considered by IESO for system level planning.
- The IESO applied its own proprietary weather normalization models to account for the impact of temperature, humidity, and other meteorological conditions on electrical demand.

- The IESO also adjusted the forecast to incorporate the anticipated impact of ongoing CDM programs and Distributed Generation.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION

JT2.12

EVIDENCE REFERENCE:

Attachment 4.0-VECC-35(A) - OM&A Programs by USofA account, specifically Line 61

UNDERTAKING(S):

Provide a greater explanation.

RESPONSE(S):

The primary reason for the increase in Account 5620 Office Supplies and Expenses from 2023 to 2024 was recruitment costs. This increase was caused by the new recruitment efforts to support the growing workforce. The rise in recruitment costs was partially offset by a reduction of other costs within the Human Resources Program.

Table A - Human Resources Program ($'000s)

USofA	Historical Years			Bridge Years		Test Year
	2021	2022	2023	2024	2025	2026
5620-Office Supplies and Expenses	$ 316	$ 482	$ 399	$ 943	$ 1,005	$ 1,048
Other USofAs 5610,5615,5625,5630	$ 2,989	$ 3,338	$ 4,497	$ 3,422	$ 3,423	$ 3,714
Total Expenditures	$ 3,305	$ 3,821	$ 4,896	$ 4,365	$ 4,428	$ 4,762
Variance ($)		$ 515	$ 1,075	$ (530)	$ 62	$ 334
Variance (%)		15.6%	28.1%	(10.8%)	1.4%	7.5%

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION

JT2.13

EVIDENCE REFERENCE:

4.0-VECC-39

UNDERTAKING(S):

Provide the percentage increase or decrease in premiums over the years starting 2021.

RESPONSE(S):

On August 18, 2025, Hydro Ottawa filed a letter to the OEB requesting confidential treatment for specific information filed as part of its interrogatory responses.[1]

Redacted versions of the interrogatory responses were filed on the public record of proceeding EB-2024-0115 and un-redacted versions of the documents were filed confidentially with the OEB pursuant to the OEB's Practice Direction on Confidential Filings (Practice Direction).[2]

As per the Practice Direction, intervenors may sign the OEB's Form of Declaration and Undertaking to consult the unredacted versions of the documents that were filed confidentially with the OEB, including the premium amounts reported in Table B of Interrogatory Response 4.0-VECC-39 (b).

[1] EB-2024-0115, Letter to OEB, (August 18, 2025).
[2] Ontario Energy Board, *Practice Direction on Confidential Filings* (December 17, 2021).

Disclosing the annual percentage increase or decrease in insurance premiums over the years, starting 2021, on the public record could prejudice The MEARIE Group's competitive position in terms of providing similar insurance services to other potential clients.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION

JT2.14

EVIDENCE REFERENCE:

N/A

UNDERTAKING(S):

Provide the cost difference between non-bidirectional and bidirectional meters and who pays the cost difference

---

RESPONSE(S):

The cost difference between a non-bidirectional and a bidirectional meter depends on the service type. The differences for the most common types of meters are noted in Table A below. The difference in cost is paid by the customer requesting the bi-directional meter, in addition to any appropriate advancement costs as outlined in the response to undertaking JT2.6-ED-5.

Table A - Non-Bidirectional vs. Bidirectional Meter Cost Differences (Common Types)

Common Type of Service	Non-bidirectional Meter Unit Cost	Bidirectional Meter Unit Cost	Cost Difference Non vs. Bidi
Residential (1.5 Element 1 Phase Self-Contained)	[redacted]	[redacted]	[redacted]
Commercial (3 Element 3 Phase Self-Contained)	[redacted]	[redacted]	[redacted]
Commercial (3 Element 3 Phase Transformer Rated)	[redacted]	[redacted]	[redacted]

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION

JT2.15

EVIDENCE REFERENCE:

8-VECC-69 a)

UNDERTAKING(S):

Provide a breakdown of residential versus general service net metering customers as of June 30, 2025.

RESPONSE(S):

Table A provides a breakdown of residential versus general service net metering customers as of June 30, 2025.

Table A - Net-Metering Customer Breakdown (as of June 30, 2025)

	# of Customers
Residential Net-Metered	571
Small Commercial Net-Metered	13
Commercial Net-Metered	17
TOTAL	**601**

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO SCHOOL ENERGY COALITION

JT2.16

EVIDENCE REFERENCE:

4-SEC-66

UNDERTAKING(S):

Provide updated forecast

RESPONSE(S):

Please see Attachment JT2.16(A) - OM&A & Capital Expenditures 2025 Forecast, which provides the 2025 OM&A forecast using the Appendix 2-JA and Appendix 2-JC formats, and Capital Expenditures in the Appendix 2-AA format. The Compensation and FTE forecast is summarized in the Appendix 2-K format at the subtotal level. A further breakdown between Management and Non-Management could not be provided within the current timelines as this split is not available within the ERP system and requires analysis at the individual employee level.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO SCHOOL ENERGY COALITION

JT2.17

EVIDENCE REFERENCE:

4-Staff-159

UNDERTAKING(S):

Provide number and titles of the direct reports for IT manager and supervisor and numbers for level below.

RESPONSE(S):

As noted in interrogatory responses 4-Staff-159, two new head count are required for the Manager, System Programs and Supervisor, OT Cybersecurity roles in the 2026 timeframe.

The Manager, System Programs role is primarily responsible to supervise the implementation of new technology solutions. Consequently, the number and composition of direct reports will fluctuate based on the specific initiatives of a given year. For the 2026 to 2030 rate period, this position is projected to have between five to ten direct reports and manage additional resources within a matrixed organizational structure.

The Supervisor, OT Cybersecurity will be overseeing all OT initiatives related to Cybersecurity and will be working closely with existing Electricity Distribution employees on scoping, defining and planning key initiatives to help drive the Grid Modernization Roadmap ahead. Two existing OT Cybersecurity Engineers will report to the Supervisor, OT Cybersecurity.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO SCHOOL ENERGY COALITION

JT2.18

EVIDENCE REFERENCE:

2SEC-33(A)

UNDERTAKING(S):

Provide revised version of table showing in-service additions by program on a net basis. Show each programs per category on a net basis instead of showing a gross basis with a single line item showing capital

---

RESPONSE(S):

Please reference Attachment JT2.18(A) - OEB Appendix 2-AA - Capital Programs Table - In-Service Additions on a Net Basis that updates 2-SEC-33(A) on a net basis.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO SCHOOL ENERGY COALITION

JT2.19

EVIDENCE REFERENCE:

2-SEC-33(A)

UNDERTAKING(S):

Explain system access spike in 2027.

RESPONSE(S):

Please refer to Table 19 - 2026-2030 Overview of Significant In-Service Additions of Schedule 2-1-1 Rate Base Overview. As noted in the table, there are several large System Expansion projects within System Access that will be completed in 2027 which are the main drivers of the spike of in-service additions in that year, namely the OC Transpo EBus system expansion (Hydro Road Station), and the DND Dwyer Hill Expansion and Station Upgrade.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO SCHOOL ENERGY COALITION

JT2.20

EVIDENCE REFERENCE:

1-SEC-24

UNDERTAKING(S):

Provide a complete picture of initiatives implemented in whole or in part before 2021.

RESPONSE(S):

Please see Table A below which indicates which of the Productivity Initiatives presented in 1-SEC-24 were implemented before 2021.

Table A - Productivity Initiatives

Initiative	Implementation Date Relative to the Start of 2021
3.1.1 Distribution Capital Program Delivery Optimization (Regular Time & Overtime)	After
3.1.2 Fleet Pooling	After
3.1.3 Cable Locates Efficiency	After
3.1.4 Service Layout Process Improvements	After
3.1.5 Major Projects Consulting Procurement	After

Initiative	Implementation Date Relative to the Start of 2021
3.1.6 Vendor and Supplier Engagement	In part, before. This is an ongoing initiative, however, it had not been quantified previously. In addition, the impacts of COVID-19 and related supply chain challenges created a focus on Hydro Ottawa's efforts and increased the level of engagement with key suppliers.
3.2.1 Net Metering Automation	After
3.2.2 Online Billing Enhancements	In part, before. This is an ongoing initiative, however only incremental savings are included. Additional efforts to push the e-billing rate from 54.8% at the end of 2020 to 80% in 2026 will result in postage costs being reduced from $1.6M in 2021 to $1.1M in 2026. Bill production costs will also decrease from $0.4M to $0.3M, as outlined in Table A of CCC-45.
3.2.3 Remote Disconnection Technology	In part, before. This is an ongoing initiative, however additional deployment of remote disconnect meters resulted in additional savings over the 2021-2025 period.
3.2.4 Customer Relationship Management (CRM) Platform Implementation	After. Although first implemented in 2018, the productivity savings discussed stem from improved usage of the CRM system after 2021
3.2.5 Disconnection Notification Automation	Before. Although implemented in 2019, the automation reduced the need for additional staff in the 2021-2025 period. As outlined in Table C of CCC-50, FTEs of 30 in 2021 vs 28 in 2026.
3.2.6 Satellite Imaging for Vegetation Management	After
3.2.7 Blue Beam for Plant Inspectors	In part, before.The Blue Beam system implementation started in 2017 and put into service in 2019 with savings starting to be realized in 2020.
3.2.8 Move-In Move-Out Automation	After
3.2.9 Salesforce Field Service for Reliability Operations	After
3.2.10 Damage to Plant Process Automation	After
3.2.11 Customer Information System Reduced Fees	Before. Contract Negotiation occurred in 2019 with savings ending as of 2022.
3.3.1 Protection Relays Design Standard	After

1

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO SCHOOL ENERGY COALITION

JT2.21

EVIDENCE REFERENCE:

1-SEC-28

UNDERTAKING(S):

Provide a copy of the corporate scorecard for the years 2021 through 2025

RESPONSE(S):

Please see the following attachments appended to this undertaking response:

- Attachment JT2.21 (A) - 2021 Hydro Ottawa Corporate Scorecard - REDACTED
- Attachment JT2.21 (B) - 2022 Hydro Ottawa Corporate Scorecard - REDACTED
- Attachment JT2.21 (C) - 2023 Hydro Ottawa Corporate Scorecard - REDACTED
- Attachment JT2.21 (D) - 2024 Hydro Ottawa Corporate Scorecard - REDACTED
- Attachment JT2.21 (E) - Q2 2025 Hydro Ottawa Corporate Scorecard - REDACTED

Financial Strength – Year-to-Date Results Q4-2021
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will create sustainable growth in our business and our earnings** *By improving productivity and pursuing business growth opportunities that leverage our strengths, our core capabilities, our assets and our people*							
Enterprise Strategic Outcome	**Growth in shareholder value**							
2021 Corporate Performance Measures	**2016A IFRS**	**2017A IFRS**	**2018A IFRS**	**2019A IFRS**	**2020A IFRS**	**2021 Target IFRS**	**2021 Actual IFRS**	**2021 Assessment ●X**
Net Income	[redacted]							
Revenue *(excl CDM ~~& Streetlighting~~)* [1]	[redacted]							
OM&A – Net *(excl CDM ~~& Streetlighting~~)* [1]	[redacted]							
Return on Equity	[redacted]							
Cash Flow from Operations [2]	[redacted]							
CAPEX *(excl Gen Refurbishment & Plant Failure [Emergency Renewal])* [3] CAPEX – Gen Refurbishment [3] CAPEX – Plant Failure (Emergency Renewal) [3]	[redacted]							
Credit Rating [4]	[redacted]							
Debt to Capitalization Ratio [5]	[redacted]							
Funds From Operations (FFO) to Debt Ratio [5]	[redacted]							

[redacted]

HOL Financial Strength – Year-to-Date Results Q4-2021
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will create sustainable growth in our business and our earnings** *By improving productivity and pursuing business growth opportunities that leverage our strengths, our core capabilities, our assets and our people*							
Enterprise Strategic Outcome	**Growth in shareholder value**							
2021 HOL Performance Measures	**2016A IFRS**	**2017A IFRS**	**2018A IFRS**	**2019A IFRS**	**2020A IFRS**	**2021 Target IFRS**	**2021 Actual IFRS**	**2021 Assessment ●X**
Net Income	$34.3M	$36.5M	$37.2M	$37.7M	$34.6M	$37.2M	$40.6M	●
Revenue *(excl CDM)*	$182.0M	$187.1M	$199.2M	$210.2M	$206.8M	$220.4M	$214.8M	X
OM&A - Net *(excl CDM)*	$87.9M	$87.5M	$95.1M	$100.3M	$98.3M	$106.8M	$97.0M	●
Return on Equity	11.0%	11.1%	10.7%	10.2%	9.0%	9.2%	10.1%	●
Cash Flow from Operations [1]	$78.0M	$78.3M	$114.3M	$99.1M	$121.0M	$117.7M	$143.5M	●
CAPEX **System Renewal and Service *(excl Plant Failure)*** **Plant Failure** **General *(incl Facilities Renewal Program)***	$57.3M $7.8M $15.7M	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A
Cumulative Capital Additions **General Plant** **System Renewal & Service**	---	$31.0M $116.0M	$37.9M $186.4M	$53.1M $270.4M	$65.3M $312.5M	$65.8M $67.5M	$34.5M $71.6M	X ●
Labour Allocation to CAPEX	62%	60%	58%	58%	N/A	N/A	N/A	N/A
Labour Allocation to Maintenance & Administrative Work (Regular Hrs) [2]	---	---	---	---	37%	≤33%	29%	●
Debt to Capitalization Ratio [3]	---	---	---	65.9%	66.7%	66.1%	66.0	●

[1] In 2016 and 2017, Cash flow from Operations on financial statement includes reclassifications of deferred revenue and customer deposits. The actual results are based on the previous reporting method to compare to the target. Starting in 2018, results were aligned with financial statement reporting.
[2] In 2020, the Labour Allocation to Capex measure was replaced with Labour Allocation to Maintenance & Administration to further support performance management.
[3] New measure added in 2019.

HOL Financial Strength – Year-to-Date Results Q4-2021
Performance Outcomes Accountability Mechanism Deferral Account

- This item was established as part of the settlement agreement for 2021-2025 rate application
- Centered around five metrics with annual targets; indicator system assesses performance
- Hydro Ottawa Limited will report against performance to the OEB on an annual basis
- Maximum annual credit obligation is $1.0M; maximum five-year obligation is $5.0M
- Account balance (if any) will be refunded to ratepayers at the end of the five-year rate term
- In 2021, HOL achieved 4 of 5 targets; narrow miss on 1 metric results in $100K customer credit

Performance Measures	2016A	2017A	2018A	2019A	2020A	2021 Target	2021 Actual	2021 Assessment [1] ● ▲ X
Number of Interruptions Caused by Defective Equipment – Overhead System (excluding Major Event Days)	---	---	---	---	---	115	77	●
Number of Interruptions Caused by Defective Equipment – Underground System (excluding Major Event Days and Leaking Padmount Transformers)	---	---	---	---	---	114	105	●
System Average Interruption Duration Index (excluding Loss of Supply and Major Event Days)	---	---	---	---	---	0.91	0.82	●
Wood Pole Replacement Unit Cost	---	---	---	---	---	$8,510	$8,739	▲
Underground Cable Replacement Unit Cost	---	---	---	---	---	$103,051	$62,244	●

[1] The "Green-Yellow-Red" indicator system functions as follows:
● = target has either been met or exceeded, resulting in $0 credit obligation
▲ = target has been narrowly missed within a prescribed range, resulting in a partial credit obligation that is proportional to performance
X = target has been missed, resulting in $200,000 credit obligation

Customer Value – Year-to-Date Results Q4-2021
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will deliver value across the entire customer experience** *By providing reliable, responsive and innovative services at competitive rates*							
Enterprise Strategic Outcome	**Customer loyalty**							
2021 Corporate Performance Measures	**2016A**	**2017A**	**2018A**	**2019A**	**2020A**	**2021 Target**	**2021 Actual**	**2021 Assessment** ●X
SATISFACTION								
Residential & Small Commercial Annual Satisfaction Survey	HO / ON Pre 81%/81 Post 77%/74%	HO / ON Pre 90%/85% Post 87%/81%	HO / ON Pre 94%/91% Post 93%/89%	HO / ON Pre 95%/92% Post 94%/92%	96%	≥90%	94%	●
Large Commercial Annual Satisfaction Survey	N/A	90%	HO / ON Pre 94%/93% Post 95%/93%	HO / ON Pre 96%/92% Post 97%/96%	N/A [1]	≥90%	N/A [1]	●
Contact Centre Satisfaction – Transactional Feedback [2]	89%	87%	78%	87%	87%	≥85%	88%	●
Ability to deal with issues (First Call Resolution)	85%	84%	86%	89%	90%	≥85%	89%	●
Complaints – Total Number **Complaints – At Fault**	106 N/A	71 N/A	182 N/A	29 4	53 24	≤120 ≤20	96 17	● ●
VALUE								
Number of hydrottawa.com sessions	3,170,766	6,088,429	6,623,907	2,880,541	3,535,210	>2,500,000	3,600,982	●
Number of MyAccount customers	158,112	167,114	184,067	202,031	222,608	>225,000	242,826	●
Number of e-Billing accounts	123,801	134,761	150,991	169,514	187,912	>192,000	207,995	●
Number of Auto pay accounts [3]	51,520	54,789	63,014	70,331	95,305	>100,000	102,061	●
Number of Equal Monthly Payment Plan (EMPP) accounts	20,347	19,987	19,573	19,444	19,932	N/A	19,984	N/A
Number of App Registrants (Downloads) **Number of Mobile App Sessions [4]**	N/A N/A	12,519 8,585	24,363	35,377 58,323	48,679 34,927	>50,000 >18,000	65,711 15,780	● X
Number of Social Media Followers (Twitter, Facebook, LinkedIn, Instagram, YouTube) [5]	18,340	23,618	46,859	55,930	61,544	>70,000	66,174	X

[1] To align with industry practice, the Large Commercial Survey is conducted every two years. The next survey, originally planned for 2021, is now deferred to 2022. Other significant utilities are delaying their timeline for a variety of reasons and benchmarking against others is an important feature of this survey.
[2] 2016-2019 figures represent customers' interactions with Hydro Ottawa by phone. As of 2020, the scope of this metric has expanded to include email and chat interactions.
[3] This line now includes all autopay accounts, whether EMPP or not. As of Q2 2020, in accordance with new OEB Customer Service Rules, customers are permitted to enroll in EMPP without enrolling in autopay.
[4] With a new platform launched in November 2020, an alternate metric was introduced to measure mobile app traffic - "Mobile App Users", measuring the number of unique users who use the mobile app in a month.
[5] In 2020, the Social Media Follower measures were combined into one, with historical figures updated to include all platforms.

Customer Value – Year-to-Date Results Q4-2021
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will deliver value across the entire customer experience** *By providing reliable, responsive and innovative services at competitive rates*							
Enterprise Strategic Outcome	**Customer loyalty**							
2021 Corporate Performance Measures	**2016A**	**2017A**	**2018A**	**2019A**	**2020A**	**2021 Target**	**2021 Actual**	**2021 Assessment** ●X
PRODUCT RELIABILITY								
SAIFI – Average Number of Times that Power to a Customer is Interrupted 5 year average	0.89	0.82	0.73	0.74	0.74	0.74	0.62	●
SAIFI – Average Number of Times that Power to a Customer is Interrupted Annual excluding LOS and MEDs [1] Annual including LOS and MEDs [2]	0.69 0.78	0.79 0.87	0.78 1.78	0.75 1.08	0.72 1.00	≤0.74 N/A [2]	0.62 0.98	●
SAIDI – Average Number of Hours that Power to a Customer is Interrupted 5 year average	1.09	1.10	0.99	0.94	0.96	0.91	0.88	●
SAIDI – Average Number of Hours that Power to a Customer is Interrupted Annual excluding LOS and MEDs [1] Annual including LOS and MEDs [2]	1.00 1.13	1.19 1.58	0.85 22.72	0.77 1.30	0.83 1.70	≤0.90 N/A [2]	0.82 1.11	●
FEMI (Feeders Experiencing Multiple Interruptions) – Number of feeders with 10 or more interruptions per year	5	15	10	10	10	≤10	5	●

[1] LOS = Loss of Supply, MED = Major Event Day
[2] There is no target set for SAIFI and SAIDI with LOS and MEDs included.

Organizational Effectiveness – Year-to-Date Results Q4-2021
Corporate Performance Measures and Targets

Enterprise Strategic Objective	We will achieve performance excellence *By cultivating a culture of innovation and continuous improvement*
Enterprise Strategic Outcomes	• Efficient and effective operations • Safe and healthy work environment • Engaged, aligned and prepared workforce

2021 Corporate Performance Measures	2016A	2017A	2018A	2019A	2020A	2021 Target	2021 Actual	2021 Assessment ●X
OM&A per customer - HOL only *(excl CDM)* [1]	$268	$264	$284	$295	$284	≤$307	$275	●
Revenue per employee *(excl CDM)* [1]	$0.32M	$0.34M	$0.379M	$0.41M	$0.43M	≥$0.43M	$0.46M	●
All injury/illness frequency rate	1.60	2.01	2.31	0.65	0.84	0.95[2]	1.01	X
Lost time severity rate	18.67	15.18	7.52	0.32	2.53	7.42[2]	8.93	X
OHSE major deficiencies identified by external audits & enforcement agencies	0	0	3	0	0	0	0	●
Attrition	6.05%	7.48%	7.38%	7.89%	8.29%	≤6%	7.08%	X
Hours of training per employee (includes safety training)	39.54	49.77	34.46	40.26	19	≥30[3]	23.85	X
Delivery of approved IM/IT business projects on time and on budget	92%	93%	93%	83.32%	100%	≥80%	90.8%	●

[1] In 2016, these measures excluded CDM and Street Lighting. In 2019, the measure was modified to exclude CDM only, with streetlighting included in Envari base revenue.

[2] These targets are based on current comparators from Electricity Canada's 2020 annual reporting.

[3] 2021 target was decreased due to COVID-19 limitations placed on in-person/in-class training and shift in learning strategy.

Corporate Citizenship – Year-to-Date Results Q4-2021

Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will contribute to the well being of the community** *By acting at all times as a responsible and engaged corporate citizen*							
Enterprise Strategic Outcomes	• **Leading governance and business practices; Engaged stakeholders; Safe, secure and environmentally responsible services; Positive community impact**							
2021 Corporate Performance Measures	**2016A**	**2017A**	**2018A**	**2019A**	**2020A**	**2021 Target**	**2021 Actual**	**2021 Assessment** ●X
Stakeholder Engagement								
% of positive / neutral media stories: • Traditional media • Social media	98% N/A	98.6% N/A	99% 86%	100% 86 %	99% 85%	≥97% ≥85%	99% 90%	● ●
Number of community outreach activities [1]	364	466	401	425	112	≥150	157	●
Number of Shareholder Communications [2]	64	86	53	32	44	≥13	25	●
Number of Online engagements	N/A	N/A	216,324	73,816	38,819	≥25,000	21,517	X
Community Investment								
Value of Community Investment Program (CIP) Discretionary Investments	$233,898	$361,625	$232,377	$202,655	$90,214	$250,000	$125,167	X
Value of CIP Mandated Investments : • Low-Income Energy Assistance Program (LEAP) [3] • Ontario Electricity Support Program (OESP) • COVID Energy Assistance Program • Energy Affordability Program	482 Households / $186,144 --- ---	380 Households / $149,106 --- ---	246 Households / $102,927 --- ---	181 households / $75,073 --- ---	94 households / $40,656 24,486 821	N/A[3] N/A[4] N/A[4] N/A[4]	57 households / $20,559 26,999 1,572 N/A	N/A [3] N/A[4] N/A[4] N/A[4]
Value of Annual Employee Charitable Campaign [5]	$282,585	$371,941	$180,974	$392,251	$131,994	$140,000	135,186	X
Number of employee volunteer days [6]	204 [6]	202	187	210	4	≥200	0	X

[1] Includes activities such as presentations, open houses and information sessions, CDM van events, and school safety presentations.
[2] Includes monthly newsletter, quarterly financial results, and additional memorandums as required.
[3] There is no target for the LEAP Program, as the mandated amount is set at 0.12% of OEB-approved Distribution Revenue provided in four quarterly payments. The distribution of funds to households and the management of the program is administered by The Salvation Army Ottawa Booth Centre.
[4] New measures added in 2020 for visibility; however, these are provincially-funded programs without regional targets.
[5] Includes money raised by employees, company matching funds, and fundraising events contributed to annual United Way and The Ottawa Hospital Breast Cancer Centre campaigns.
[6] Includes days for employee loaned to the United Way. The number originally reported in 2016 (127) excluded the 77 days for employee loaned to the United Way from Aug to Dec.

Corporate Citizenship – Year-to-Date Results Q4-2021

Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will contribute to the well being of the community** *By acting at all times as a responsible and engaged corporate citizen*							
Enterprise Strategic Outcomes	• **Leading governance and business practices** • **Engaged stakeholders** • **Safe, secure and environmentally responsible services** • **Positive community impact**							
2021 Corporate Performance Measures	**2016A**	**2017A**	**2018A**	**2019A**	**2020A**	**2021 Target**	**2021 Actual**	**2021 Assessment** ●X
Environmental								
Total Non-hazardous waste diversion rate	92.3%	91.6%	91.6%	86.1	98%	>95%	94%	X
% of green suppliers (% of services and products procured from local suppliers)	27%	38%	55%	53.0%	43%	>45%	46%	●
Emissions from fleet (GHG equivalent tonnes / 200,000 hours worked) [1]	---	---	---	---	280	278	285	X
Number plastic water bottles saved (by use of water filling stations) [2]	---	---	---	103,785	---[2]	100,000	---[2]	N/A

[1] This metric replaces the previous metric of GHGs in tonnes per 50,000 hours worked.
[2] No bottle count available due to COVID-19.

HOL 2021-2025 Custom Performance Scorecard

HOL Custom Performance Measures [1]	2016A	2017A	2018A	2019A	2020A	2021 Target	2021 Actual	2021 Assessment ●X
CUSTOMER FOCUS – Customer Satisfaction [2]								
Contact Centre Satisfaction – Transactional Feedback [3]	89%	87%	78%	87%	87%	≥85%	88%	●
Number of MyAccount Customers	158,112	167,114	184,067	202,301	222,608	>225,000	242,826	●
Number of Online Billing Accounts	123,801	134,761	150,991	169,514	187,912	>192,000	207,995	●
OPERATIONAL EFFECTIVENESS – Safety								
All Injury/Illness Frequency Rate	1.60	2.01	2.31	0.63	0.84	Reduce	1.17	X
Lost Workday Severity Rate	18.67	15.18	7.52	0.31	2.53	Reduce	3.11	X
OPERATIONAL EFFECTIVENESS – System Reliability								
Customer Average Interruption Duration Index	1.45	1.82	2.97	1.11	1.82	Monitor	1.42	●
Feeders Experiencing Multiple Sustained Interruptions	5	15	10	10	10	≤10	5	●
Worst Feeder Analysis – Number of Feeders with Very Poor Performance	N/A	N/A	5	5	8	Reduce	6	●
Stations Exceeding Planning Capacity	10	9.1	16	8.8	13.2	≤5%	7.7%	X
Feeders Exceeding Planning Capacity	1.6	2	2.9	1.6	1.9	≤10%	1.0%	●
Stations Approaching Rated Capacity	1.1	0	0	0	0	0%	1.1%	X
Feeders Approaching Rated Capacity	0	0	0.1	0.1	0.1	0%	0.1%	X
OPERATIONAL EFFECTIVENESS – Asset Efficiency								
Technology Infrastructure Cost per Employee	$26,933	$25,302	$30,385	$28,118	$29,587	≤$29,530	$32,301	X

[1] Rows shaded in green represent performance measures that are likewise included in Hydro Ottawa's enterprise-wide Corporate Performance Scorecard.
[2] In the section headings, the four performance outcomes under the OEB's Renewed Regulatory Framework are written in ALL CAPS. The reporting categories which correspond to these outcomes are written using normal capitalization.
[3] 2016-2019 figures represent customers' interactions with Hydro Ottawa by phone. In 2020, the scope of this metric was expanded to include email and chat interactions.

HOL 2021-2025 Custom Performance Scorecard

HOL Custom Performance Measures	2016A	2017A	2018A	2019A	2020A	2021 Target	2021 Actual	2021 Assessment ●X
OPERATIONAL EFFECTIVENESS – Cost Control								
Productive Time	74%	73%	72%	74%	69%	≥72%	73%	●
Labour Allocation	35%	37%	35%	33%	37%	≤33%	29%	●
3-Year Average Cost per Pole – Wood Pole Replacement	N/A	N/A	$8,524	$7,969	$7,951	Monitor	$8,099	●
3-Year Average Cost per Meter – Underground Cable	N/A	N/A	$80	$90	$53	Monitor	$50	●
Average Cost per Kilometer – Vegetation Management	$2,834	$3,243	$3,183	$2,649	$4,015	Monitor	$3,834	●
Average Cost per Pole – Pole Test & Inspection	$51	$53	$24	$16	$24	Monitor	$28	●
PUBLIC POLICY RESPONSIVENESS – Environment								
Annual Oil Spills and Costs of Remediation	825 L $665,000	1120 L $873,000	1475 L $1.76M	1131 L $948,000	954 L $1.44M	Reduce	804 L $1.69M	X
Non-Hazardous Waste Diversion Rate	92.3%	91.6%	91.6%	86.1%	97.8%	>95%	94%	X
Percentage of Green Suppliers	27%	38%	55%	53%	43%	>45%	46%	●
FINANCIAL PERFORMANCE – Financial Metrics								
OM&A per Customer[1]	$251.99	$247.89	$259.05	$244.61	$249.11	Monitor	$239.83	●
Bad Debt as % of Total Electricity Revenue	0.13%	0.20%	0.13%	0.08%	0.25%	≤0.26%	0.07%	●
Cumulative Capital Additions per Investment Category	Reported through annual filings to OEB					Per 2021-2025 Settlement Agreement	N/A	N/A
Annual Capital Spending per Investment Category	Reported through annual filings to OEB						N/A	N/A

[1] This definition is intended to align with the definition of "Total OM&A per Customer" that is utilized in OEB Appendix 5-A and Interrogatory OEB 51 from Hydro Ottawa's 2021-2025 rate application proceeding. Customer numbers are based on end of the period.

Scorecard - Hydro Ottawa Limited

10/7/2021

Performance Outcomes	Performance Categories	Measures		2016	2017	2018	2019	2020	Trend	Target Industry	Target Distributor
Customer Focus Services are provided in a manner that responds to identified customer preferences.	**Service Quality**	New Residential/Small Business Services Connected on Time		100.00%	100.00%	100.00%	100.00%	100.00%	flat	90.00%	
		Scheduled Appointments Met On Time		99.60%	99.43%	99.65%	99.59%	99.56%	up	90.00%	
		Telephone Calls Answered On Time		83.80%	85.07%	88.74%	86.15%	74.60%	down	65.00%	
	Customer Satisfaction	First Contact Resolution		84.99%	84.27	85.52%	89.32%	89.88			
		Billing Accuracy		99.90%	99.90%	99.89%	99.90%	99.88%	flat	98.00%	
		Customer Satisfaction Survey Results		81%	90.00	93.00%	94.00%	95.00			
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and distributors deliver on system reliability and quality objectives.	**Safety**	Level of Public Awareness		70.00%	70.00%	70.00%	72.00%	72.00%			
		Level of Compliance with Ontario Regulation 22/04 [1]		C	C	C	C	C	flat		C
		Serious Electrical Incident Index	Number of General Public Incidents	0	0	0	0	1	down		0
			Rate per 10, 100, 1000 km of line	0.000	0.000	0.000	0.000	0.171	down		0.051
	System Reliability	Average Number of Hours that Power to a Customer is Interrupted [2]		1.00	1.11	0.85	0.77	0.83	up		1.42
		Average Number of Times that Power to a Customer is Interrupted [2]		0.74	0.73	0.78	0.75	0.72	up		1.04
	Asset Management	Distribution System Plan Implementation Progress		94%	95.00	113.00%	84.69%	89.00			
	Cost Control	Efficiency Assessment		4	4	4	4	4			
		Total Cost per Customer [3]		$664	$653	$701	$733	$714			
		Total Cost per Km of Line [3]		$38,794	$37,950	$40,766	$42,694	$41,819			
Public Policy Responsiveness Distributors deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	**Connection of Renewable Generation**	Renewable Generation Connection Impact Assessments Completed On Time		100.00%	100.00%	100.00%	87.50%	100.00%			
		New Micro-embedded Generation Facilities Connected On Time		100.00%	100.00%	100.00%	100.00%	100.00%	flat	90.00%	
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	**Financial Ratios**	Liquidity: Current Ratio (Current Assets/Current Liabilities)		1.19	1.23	0.80	1.14	0.81			
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio		1.65	1.73	1.86	1.90	1.98			
		Profitability: Regulatory Return on Equity	Deemed (included in rates)	9.19%	9.19%	9.19%	8.98%	8.98%			
			Achieved	9.80%	10.10%	9.14%	8.82%	7.24%			

1. Compliance with Ontario Regulation 22/04 assessed: Compliant (C); Needs Improvement (NI); or Non-Compliant (NC).
2. An upward arrow indicates decreasing reliability while downward indicates improving reliability.
3. A benchmarking analysis determines the total cost figures from the distributor 's reported information.

Legend:

5-year trend: up, down, flat

Current year: target met, target not met

Financial Strength – Year-to-Date Results Q4-2022
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will create sustainable growth in our business and our earnings** *By improving productivity and pursuing business growth opportunities that leverage our strengths – our core capabilities, our assets and our people*							
Enterprise Strategic Outcome	**Growth in shareholder value**							
2022 Corporate Performance Measures	**2017A**	**2018A**	**2019A**	**2020A**	**2021A**	**2022 Target**	**2022 Actual**	**2022 Assessment**
Net Income	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Revenue [1]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
OM&A – Net [1]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Return on Equity	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Cash Flow from Operations [2]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
CAPEX *(excl Gen Refurbishment & Plant Failure (Emergency Renewal))* [3] CAPEX – Gen Refurbishment [3] CAPEX – Plant Failure (Emergency Renewal) [3]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Credit Rating	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Debt to Capitalization Ratio [4]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Funds From Operations (FFO) to Debt Ratio [4]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

HydroOttawa

HOL Financial Strength – Year-to-Date Results Q4-2022
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will create sustainable growth in our business and our earnings** *By improving productivity and pursuing business growth opportunities that leverage our strengths – our core capabilities, our assets and our people*							
Enterprise Strategic Outcome	**Growth in shareholder value**							
2022 HOL Performance Measures	**2017A**	**2018A**	**2019A**	**2020A**	**2021A**	**2022 Target**	**2022 Actual**	**2022 Assessment** ●X
Net Income	$36.5M	$37.2M	$37.7M	$34.6M	$40.6M	$39.8M	$32.7M	X
Revenue [1]	$187.1M	$199.2M	$210.2M	$206.8M	$214.8M	$226.9M	$229.8M	●
OM&A – Net [1]	$87.5M	$95.1M	$100.3M	$98.3M	$97.0M	$102.2M	$114.8M	X
Return on Equity	11.1%	10.7%	10.2%	9%	10.1%	9.3%	7.7%	X
Cash Flow from Operations [2]	$78.3M	$114.3M	$99.1M	$121.0M	$143.5M	$123.9M	$74.4M	X
Cumulative Capital Additions **General Plant (including CCRAs)** [3] **System Renewal & Service**	$31.0M $116.0M	$37.9M $186.4M	$53.1M $270.4M	$65.3M $312.5M	$34.5M $71.6M	$77.8M $160.0M	$69.6M $164.0M	X ●
Labour Allocation to Maintenance & Administrative Work (Regular Hrs) [4]	---	---	---	37%	≤29%	≤32%	35%	X
Debt to Capitalization Ratio [5]	---	---	65.9%	66.7%	66.0%	65.9%	66.8%	X

[1] CDM is excluded from these measures.
[2] Please see footnote 2 on the previous slide.
[3] For 2017 to 2020, General Plant cumulative capital additions exclude CCRAs. As of 2021, CCRAs are included in General Plant, as per the 2021-2025 rate application settlement agreement.
[4] In 2020, the Labour Allocation to Capex measure was replaced with Labour Allocation to Maintenance & Administration to further support performance management.
[5] New measure added in 2019.

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HOL Financial Strength – Year-to-Date Results Q4-2022
Performance Outcomes Accountability Mechanism Deferral Account

- Established via settlement of 2021-2025 rate application; intent is to link outcomes with revenue recovery and customer interests
- Mechanism is centered around five performance metrics with annual targets; indicator system is used to assess HOL's performance
- Maximum annual credit obligation is $1.0M; maximum five-year obligation is $5.0M; account balance (if any) refunded to ratepayers at end of term

2022 Summary

- Supply chain cost pressures impacted our ability to achieve wood pole replacement target and will likely limit our ability to meet target for remainder of five-year rate period
- SAIDI performance was affected by after effects of May 2022 Derecho; expected to return to normal levels in 2023
- $400,000 will be credited back to customers as a result of 2022 performance

Performance Measures	2017A	2018A	2019A	2020A	2021A	2022 Target	2022 Actual	2022 Assessment[1] ●▲X
Number of Interruptions Caused by Defective Equipment – Overhead System (excluding Major Event Days)	---	---	---	---	77	115	82	●
Number of Interruptions Caused by Defective Equipment – Underground System (excluding Major Event Days and Leaking Padmount Transformers)	---	---	---	---	105	114	90	●
System Average Interruption Duration Index (excluding Loss of Supply and Major Event Days)	---	---	---	---	0.82	0.91	1.02	X
Wood Pole Replacement Unit Cost	---	---	---	---	$8,415 [2]	$8,510	$9,951	X
Underground Cable Replacement Unit Cost	---	---	---	---	$62,244	$103,051	$101,334	●

[1] The "Green-Yellow-Red" indicator system functions as follows:
● = target has either been met or exceeded, resulting in $0 credit obligation
▲ = target has been narrowly missed within a prescribed range, resulting in a partial credit obligation that is proportional to performance
X = target has been missed, resulting in $200,000 credit obligation

[2] 2021 Wood Pole Replacement Unit Cost restated from $8,739 to $8,415 in 2022.

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Customer Value – Year-to-Date Results Q4-2022
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will deliver value across the entire customer experience –** *by providing reliable, responsive and innovative services at competitive rates*							
Enterprise Strategic Outcome	**Customer loyalty**							
2022 Corporate Performance Measures	**2017A**	**2018A**	**2019A**	**2020A**	**2021A**	**2022 Target**	**2022 Actual**	**2022 Assessment** ● X
SATISFACTION								
Residential & Small Commercial Annual Satisfaction Survey	HO / ON Pre 90%/85% Post 87%/81%	HO / ON Pre 94%/91% Post 93%/89%	HO / ON Pre 95%/92% Post 94%/92%	96%	94%	≥90%	93%	●
Large Commercial Annual Satisfaction Survey	90%	HO / ON Pre 94%/93% Post 5%/93%	HO / ON Pre 96%/92% Post 97%/96%	N/A	N/A	≥90%	94%	●
Contact Centre Satisfaction – Transactional Feedback [1]	87%	78%	87%	87%	88%	≥85%	84%	X
Ability to Deal With Issues (First Call Resolution)	84%	86%	89%	90%	89%	≥85%	86%	●
Complaints – Total Number Complaints – At Fault	71 N/A	182 N/A	29 4	53 24	96 17	≤120 ≤20	114 23	● X
VALUE								
Number of hydrottawa.com Sessions	6,088,429	6,623,907	2,880,541	3,535,210	3,600,982	>2,500,000	6,136,510	●
Number of MyAccount Customers	167,114	184,067	202,031	222,608	242,826	265,000	256,721	X
Number of E-bill Accounts	134,761	150,991	169,514	187,912	207,995	230,000	221,848	X
Number of Auto Pay Accounts [2]	54,789	63,014	70,331	95,305	102,061	106,000	106,921	●
Number of Equal Monthly Payment Plan accounts	19,987	19,573	19,444	19,932	19,984	N/A	20,349	N/A
Number of Mobile App Registrants (Downloads) Number of Mobile App Sessions [3]	12,519 8,585	24,363	35,377 58,323	48,679 34,927	65,711 15,780	>75,000 >18,000	89,056 23,100	● ●
Number of Social Media Followers (All Platforms)	23,618	46,859	55,930	61,544	66,174	>70,000	88,122	●

[1] 2017-2019 figures represent customers' interactions with Hydro Ottawa by phone. In 2020, the scope of this metric was expanded to include email and chat interactions.
[2] As of 2021, this line includes all autopay accounts, whether EMPP or not. In 2020, in accordance with new OEB Customer Service Rules, customers were permitted to enroll in EMPP without enrolling in autopay.
[3] With a new platform launched in November 2020, an alternate metric was introduced to measure mobile app traffic - "Mobile App Users", measuring the number of unique users who use the mobile app in a month.

HydroOttawa

Customer Value – Year-to-Date Results Q4-2022
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will deliver value across the entire customer experience** *By providing reliable, responsive and innovative services at competitive rates*							
Enterprise Strategic Outcome	**Customer loyalty**							
2022 Corporate Performance Measures	**2017A**	**2018A**	**2019A**	**2020A**	**2021A**	**2022 Target**	**2022 Actual**	**2022 Assessment** ● X
PRODUCT RELIABILITY								
SAIFI – Average Number of Times that Power to a Customer is Interrupted 5-Year Average	0.82	0.73	0.74	0.74	0.62	0.72	0.69 [1]	● [1]
SAIFI – Average Number of Times that Power to a Customer is Interrupted Annual excluding LOS and MEDs [2] Annual including LOS and MEDs [2]	0.79 0.87	0.78 1.78	0.75 1.08	0.72 1.00	0.62 0.98	≤0.75	0.69 1.95	●
SAIDI – Average Number of Hours that Power to a Customer is Interrupted 5-Year Average	1.10	0.99	0.94	0.96	0.88	0.88	1.02 [1]	X [1]
SAIDI – Average Number of Hours that Power to a Customer is Interrupted Annual excluding LOS and MEDs [2] Annual including LOS and MEDs [2]	1.19 1.58	0.85 22.72	0.77 1.30	0.83 1.70	0.82 1.11	≤0.85	1.02 39.52	X
FEMI (Feeders Experiencing Multiple Interruptions) – Number of Feeders with 10 or More Interruptions per Year	15	10	10	10	5	≤9	4	●

[1] 5-year averages for SAIFI and SAIDI are reported on an annual basis only.
[2] LOS = Loss of Supply; MED = Major Event Day
[3] There is no target set for SAIFI and SAIDI with LOS and MEDs included.

HydroOttawa

Organizational Effectiveness – Year-to-Date Results Q4-2022
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will achieve performance excellence** *By cultivating a culture of innovation and continuous improvement*							
Enterprise Strategic Outcomes	• **Efficient and effective operations**; **Safe and healthy work environment**; **Engaged, aligned and prepared workforce**							
2022 Corporate Performance Measures	**2017A**	**2018A**	**2019A**	**2020A**	**2021A**	**2022 Target**	**2022 Actual**	**2022 Assessment** ●X
OM&A per Customer - HOL only *(excl CDM)*	$264	$284	$295	$284	$275	≤$292	$319	X
Revenue per Employee *(excl CDM)* [1]	$0.34M	$0.379M	$0.41M	$0.43M	$0.46	≥$0.45M	$0.49M	●
All Injury/Illness Frequency Rate	2.01	2.31	0.65	0.84	1.01	0.95[2]	0.64	●
Lost Time Severity Rate	15.18	7.52	0.32	2.53	8.93	7.42[2]	2.08	●
OHSE Major Deficiencies Identified by External Audits & Enforcement Agencies	0	3	0	0	0	0	0	●
Attrition	7.48%	7.38%	7.89%	8.29%	7.08%	≤6%	10.17%	X
Hours of Training per Employee (includes safety training)	49.77	34.46	40.26	19	23.85	≥30[3]	34.78	●
Delivery of Approved IM/IT Business Projects On Time and On Budget	93%	93%	83.32%	100%	90.8%	80%	90.2%	●
NEW **Percentage of IT Spending (% Operate : % Enhance/Innovate)**[4]	N/A	N/A	N/A	56% : 44%	N/A	50% : 50%	48% : 52%	●
NEW **Click Through Rate for Employee Email Phishing Campaigns**	11%	17%	16%	10%	N/A	5%	8.2%	X

[1] In 2017, these measures excluded CDM and Street Lighting. In 2019, the measure was modified to exclude CDM only, with streetlighting included in Envari base revenue.
[2] These targets are based on current comparators from Electricity Canada's 2021 annual reporting.
[3] Similar to 2021, the 2022 target has been decreased relative to prior years due to COVID-19 limitations placed on in-person/in-class training and shift in learning strategy.
[4] "Operate" = essential business processes; "Enhance" = improvements in operations and performance; "Innovate" = new markets, products and/or business models.

HydroOttawa

Corporate Citizenship – Year-to-Date Results Q4-2022
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will contribute to the well being of the community –** *by acting at all times as a responsible and engaged corporate citizen*							
Enterprise Strategic Outcomes	• **Leading governance and business practices; Engaged stakeholders; Safe, secure and environmentally responsible services; Positive community impact**							
2022 Corporate Performance Measures	**2017A**	**2018A**	**2019A**	**2020A**	**2021A**	**2022 Target**	**2022 Actual**	**2022 Assessment** ● X
STAKEHOLDER ENGAGEMENT								
% of Positive / Neutral Media Stories: • **Traditional Media** • **Social Media**	98.6% N/A	99% 86%	100% 86%	99% 85%	99% 90%	≥97% ≥85%	77% 82%	X X
Number of Community Outreach Activities [1]	466	401	425	112	157	≥150	137	X
Number of Shareholder Communications [2]	86	53	32	44	25	≥13	47	●
Number of Online Engagements	N/A	216,324	73,816	38,819	21,517	≥200,000	570,491	●
COMMUNITY INVESTMENT								
Value of Community Investment Program (CIP) Discretionary Investments	$361,625	$232,377	$202,655	$90,214	$125,167	$250,000	$288,141	●
Value of CIP Mandated Investments : [3] • Low-Income Energy Assistance Program (LEAP) • Ontario Electricity Support Program (OESP)	380 Households / $149,106 ---	246 Households / $102,927 ---	181 households / $75,073 ---	94 households / $40,656 24,486 ---	57 households / $20,559 26,999	N/A N/A	243 households $132,152 29,617 $10,286,973	N/A N/A
Value of Annual Employee Charitable Campaign [4]	$371,941	$372,739	$389,945	$131,994	$135,186	N/A	$166,254	●
Number of Employee Volunteer Days [5]	202	187	210	4	0	≥200	48.6	X

[1] Includes activities such as presentations, open houses and information sessions, and school safety presentations.
[2] Includes monthly newsletter, quarterly financial results, and additional memorandums, as required.
[3] There are no targets for these provincial programs.
[4] Includes money raised by employees, company matching funds, and fundraising events contributed to annual United Way and The Ottawa Hospital Breast Cancer Centre campaigns. (The latter campaign is not reflected in the following: (i) 2020 actuals, as COVID-19 restrictions precluded organization of the annual golf tournament; and (ii) 2021 target, as annual targets are only established for United Way fundraising).
[5] Includes days for employees loaned to the United Way.

Corporate Citizenship – Year-to-Date Results Q4-2022
Corporate Performance Measures and Targets

Enterprise Strategic Objective	**We will contribute to the well being of the community** *By acting at all times as a responsible and engaged corporate citizen*
Enterprise Strategic Outcomes	• **Leading governance and business practices** • **Engaged stakeholders** • **Safe, secure and environmentally responsible services** • **Positive community impact**

2022 Corporate Performance Measures	2017A	2018A	2019A	2020A	2021A	2022 Target	2022 Actual	2022 Assessment ● X
ENVIRONMENTAL								
Total Non-Hazardous Waste Diversion Rate	91.6%	91.6%	86.1	98%	94%	>95%	95%	●
% of Green Suppliers (% of services and products procured from local suppliers)	38%	55%	53.0%	43%	46%	>45%	45.4%	●
Emissions from Fleet (GHG equivalent tonnes / 200,000 hours worked) [1]	---	---	---	280	285	272[2]	278	X
Number Plastic Water Bottles Saved (by use of water filling stations)	---	---	103,785	---[3]	---[3]	>100,000	72,403	X
NEW Employee Commuting Emissions (Scope III - metric tonnes of CO_2) [4]	---	---	978	279[5]	N/A	<782[6]	424.9	●

[1] This metric replaces the previous metric of GHGs in tonnes per 50,000 hours worked.
[2] This target represents a 3% reduction relative to 2020 emissions.
[3] No bottle count available due to COVID-19.
[4] This measure is being included in support of the commitment to achieve net zero operations by 2030.
[5] This figure represents only those field employees (approximately 200) who continued to commute to work in 2020 during the COVID-19 pandemic.
[6] This target represents a 20% reduction relative to the 2019 baseline of 978 metric tonnes of CO_2.

HydroOttawa

HOL 2021-2025 Custom Performance Scorecard

HOL Custom Performance Measures [1]	2017A	2018A	2019A	2020A	2021A	2022 Target	2022 Actual	2022 Assessment ●X
CUSTOMER FOCUS – Customer Satisfaction [2]								
Contact Centre Satisfaction – Transactional Feedback	87%	78%	87%	87%	88%	≥85%	84%	X
Number of MyAccount Customers	167,114	184,067	202,301	222,608	242,826	265,000	256,721	X
Number of Online Billing Accounts	134,761	150,991	169,514	187,912	207,995	230,000	221,848	X
OPERATIONAL EFFECTIVENESS – Safety								
All Injury/Illness Frequency Rate	2.01	2.31	0.63	0.84	1.17	0.95	0.74	●
Lost Workday Severity Rate	15.18	7.52	0.31	2.53	3.11	7.42	2.40	●
OPERATIONAL EFFECTIVENESS – System Reliability								
Customer Average Interruption Duration Index (CAIDI)	1.82	2.97	1.11	1.81	1.42	N/A	29.35	N/A
CAIDI - Excluding Loss of Supply and Major Events	1.51	1.09	1.02	1.15	1.33	N/A	1.48	N/A
Feeders Experiencing Multiple Sustained Interruptions	15	10	10	10	5	≤9	4	●
Worst Feeder Analysis – Number of Feeders with Very Poor Performance	N/A	5	5	8	6	<5	7	X
Stations Exceeding Planning Capacity	9.1	16	8.8	13.2	7.7%	≤5%	4.3%	●
Feeders Exceeding Planning Capacity	2	2.9	1.6	1.9	1.0%	≤10%	0.9%	●
Stations Approaching Rated Capacity	0	0	0	0	1.1%	0%	0%	●
Feeders Approaching Rated Capacity	0	0.1	0.1	0.1	0.1%	0%	0%	●
OPERATIONAL EFFECTIVENESS – Asset Efficiency								
Technology Infrastructure Cost per Employee	$25,302	$30,385	$28,118	$29,587	$32,301	≤$31,770	$33,777	X

[1] Rows shaded in green represent measures that are also included in Hydro Ottawa's enterprise Corporate Performance Scorecard.
[2] In the section headings, the four performance outcomes under the OEB's Renewed Regulatory Framework are written in ALL CAPS. The reporting categories which correspond to these outcomes are written using normal capitalization.

HydroOttawa

HOL 2021-2025 Custom Performance Scorecard

HOL Custom Performance Measures	2017A	2018A	2019A	2020A	2021A	2022 Target	2022 Actual	2022 Assessment ●X
OPERATIONAL EFFECTIVENESS – Cost Control								
Productive Time	73%	72%	72%	69%	73%	≥72%	69%	X
Labour Allocation	37%	35%	33%	37%	29%	≤32%	35%	X
3-Year Average Cost per Pole – Wood Pole Replacement	N/A	$8,524	$7,969	$7,900	$8,262	N/A	$9,205	N/A
3-Year Average Cost per Meter – Underground Cable	N/A	$80	$90	$55	$50	N/A	$60	N/A
Average Cost per Kilometer – Vegetation Management	$3,243	$3,183	$2,649	$3,194	$3,834	N/A	$3,797	N/A
Average Cost per Pole – Pole Test & Inspection	$53	$24	$16	$40	$28	N/A	$19	N/A
PUBLIC POLICY RESPONSIVENESS – Environment								
Annual Oil Spills and Costs of Remediation	1120 L $873,000	1475 L $1.76M	1131 L $948,000	954 L $402,000	804 L $1.69M	Reduce	781 L $1.97M	●
Non-Hazardous Waste Diversion Rate	91.6%	91.6%	86.1%	97.8%	94%	>95%	95%	●
Percentage of Green Suppliers	38%	55%	53%	43%	46%	>45%	45.4%	●
FINANCIAL PERFORMANCE – Financial Metrics								
OM&A per Customer [1]	$247.89	$259.05	$244.61	$249.11	$239.83	Monitor	$279.71	X
Bad Debt as % of Total Electricity Revenue	0.20%	0.13%	0.08%	0.25%	≤0.07%	≤0.15%	0.18%	X
Cumulative Capital Additions per Investment Category	Reported through annual filings to OEB					Per 2021-2025 Settlement Agreement	Reported through filings to OEB	
Annual Capital Spending per Investment Category	Reported through annual filings to OEB						Reported through filings to OEB	

[1] This definition is intended to align with the definition of "Total OM&A per Customer" that is utilized in OEB Appendix 5-A and Interrogatory OEB 51 from Hydro Ottawa's 2021-2025 rate application proceeding. Customer numbers are based on end of the period.

HydroOttawa

Financial Strength – Year-End Results Q4-2023
Corporate Performance Measures and Targets

2023 Corporate Performance Measures	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ✓X
Net Income	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Revenue [1]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
OM&A – Net [1]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Return on Equity	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Cash Flow from Operations	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
CAPEX *(excl Gen Refurbishment & Emergency Renewal)* CAPEX – Gen Refurbishment CAPEX – Emergency Renewal	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Credit Rating [2]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Debt to Capitalization Ratio	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Funds From Operations (FFO) to Debt Ratio	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

HydroOttawa

HOL Financial Strength – Year-End Results Q4-2023
Corporate Performance Measures and Targets

2023 HOL Performance Measures	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ●X
Net Income	$34.6M	$40.6M	$32.7M	**$42.7M**	$28.8M	X
Revenue [1]	$206.8M	$214.8M	$229.8M	**$240.8M**	$241.8M	●
OM&A – Net [1]	$98.3M	$97.0M	$114.8M	**$109.5M**	$125.8M	X
Return on Equity	9%	10.1%	7.7%	**9.2%**	6.4%	X
Cash Flow from Operations	$121.0M	$143.5M	$74.4M	**$129.4M**	$104.2M	X
Cumulative Capital Additions General Plant (including CCRAs) [2] System Renewal & Service	$65.3M $312.5M	$34.5M $71.6M	$69.6M $164.0M	**$84.1M** **$213.9M**	$77.5M $222.3M	X ●
Labour Allocation to Maintenance & Administrative Work (Regular Hrs) [3]	37%	≤29%	35%	**≤32%**	35%	X
Debt to Capitalization Ratio	66.7%	66.0%	66.8%	**64.8%**	66.2%	X

[1] CDM is excluded from these measures.

[2] In 2020, General Plant cumulative capital additions exclude CCRAs. As of 2021, CCRAs are included in General Plant, as per the 2021-2025 rate application settlement agreement.

[3] In 2020, the Labour Allocation to Capex measure was replaced with Labour Allocation to Maintenance & Administration to further support performance management.

HydroOttawa

HOL Financial Strength
Performance Outcomes Accountability Mechanism Deferral Account

- This item was established as part of the settlement agreement for the 2021-2025 rate application
- Intent is to link achievement of outcomes with revenue recovery and customer interests
- Mechanism is centered around five performance metrics with annual targets; an indicator system is used to assess Hydro Ottawa's performance
- Hydro Ottawa Limited will report against performance to the OEB on an annual basis
- Maximum annual credit obligation is $1.0M; maximum five-year obligation is $5.0M
- Account balance (if any) will be refunded to ratepayers at the end of the five-year term

Performance Measures	2021A	2022A	2023 Target	2023 Actual	2023 Assessment [1] ● ▲ X
Number of Interruptions Caused by Defective Equipment – Overhead System (excluding Major Event Days)	77	82	**115**	82	●
Number of Interruptions Caused by Defective Equipment – Underground System (excluding Major Event Days and Leaking Padmount Transformers)	105	90	**114**	61	●
System Average Interruption Duration Index (excluding Loss of Supply and Major Event Days)	0.82	1.02	**0.91**	1.03	X
Wood Pole Replacement Unit Cost	$8,415 [2]	$9,951	**$8,510**	$9,559	X
Underground Cable Replacement Unit Cost	$62,244	$101,334	**$103,051**	$71,793	●

[1] The "Green-Yellow-Red" indicator system functions as follows:
● = target has either been met or exceeded, resulting in $0 credit obligation
▲ = target has been narrowly missed within a prescribed range, resulting in a partial credit obligation that is proportional to performance
X = target has been missed, resulting in $200,000 credit obligation
[2] 2021 Wood Pole Replacement Unit Cost restated from $8,739 to $8,415 in 2022.

HydroOttawa

Customer Value – Year-to-Date Results Q4-2023
Corporate Performance Measures and Targets

2023 Corporate Performance Measures	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ●X
SATISFACTION						
Contact Centre Satisfaction – Transactional Feedback [2]	87%	88%	84%	**≥85%**	85%	●
Complaints – Total Number Complaints – At Fault	53 24	96 17	114 23	**≤120** **≤20**	216 46	X X
VALUE						
Number of MyAccount Customers	222,608	242,826	256,721	**270,000**	270,281	●
Number of E-bill Accounts	187,912	207,995	221,848	**237,000**	235,986	X
Number of Social Media Followers (All Platforms)	61,544	66,174	88,122	**90,000**	95,269	●
SYSTEM RELIABILITY						
SAIFI – Customer Interruption (Avg # of Times) • Annual excluding Loss of Supply and Major Event Days • Annual including LOS and MEDs	0.72 1.00	0.62 0.98	0.69 1.95	**≤0.71** **N/A**	0.63 1.480	●
SAIDI – Customer Interruption (Avg # of Hours) • Annual excluding Loss of Supply and Major Event Days • Annual including LOS and MEDs	0.83 1.70	0.82 1.11	1.02 39.52	**≤0.86** **N/A**	1.03 6.930	X
FEMI (Feeders Experiencing Multiple Interruptions) • # of Feeders with 10 or More Interruptions per Year	10	5	4	**≤9**	8	●

[1] There is no target set for SAIFI and SAIDI with Loss of Supply (LOS) and Major Event Days (MEDs) included.

HydroOttawa

Organizational Effectiveness – Year-End Results Q4-2023
Corporate Performance Measures and Targets

2023 Corporate Performance Measures	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ● X
OM&A per Customer - HOL only *(excl CDM)*	$284	$275	$319	**≤$305**	$344	X
Revenue per Employee *(excl CDM)* [1]	$0.43M	$0.46M	$0.49M	**≥$0.46M**	$0.514M	●
All Injury/Illness Frequency Rate	0.84	1.01	0.64	**0.89[2]**	1.23	X
Lost Time Severity Rate	2.53	8.93	2.08	**7.21[2]**	3.34	●
OHSE Major Deficiencies Identified by External Audits & Enforcement Agencies	0	0	0	**0**	0	●
Attrition	8.29%	7.08%	10.17%	**≤6%**	10.33%	X
Hours of Training per Employee (includes safety training)	19	23.85	34.78	**≥30[3]**	32.59	●
Delivery of Approved IM/IT Business Projects On Time and On Budget	100%	90.8%	90.2%	**80%**	83%	●
Percentage of IT Spending (% Operate : % Enhance/Innovate)	56% : 44%	N/A	48% : 52%	**50% : 50%**	48% : 52%	X
Click Through Rate for Employee Email Phishing Campaigns	10%	N/A	8.2%	**5%**	3.9%	●

[1] In 2017, these measures excluded CDM and Street Lighting. In 2019, the measure was modified to exclude CDM only, with streetlighting included in Envari base revenue.
[2] These targets are based on current comparators from Electricity Canada's 2021 annual reporting.
[3] The target was decreased in 2022 relative to prior years due to COVID-19 limitations placed on in-person/in-class training and shift in learning strategy; for 2023, the target remains at the 2022 level given the increasing shift to eLearning.

HydroOttawa

Corporate Citizenship – Year-End Results Q4-2023
Corporate Performance Measures and Targets

2023 Corporate Performance Measures	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ●X
STAKEHOLDER ENGAGEMENT						
% of Positive / Neutral Media Stories: • Traditional Media • Social Media	 99% 85%	 99% 90%	 77% 82%	 90% 85%	 87% 80%	 X X
Number of Community Outreach Activities [1]	112	157	137	130	114	X
COMMUNITY INVESTMENT						
Community Investment Program (Discretionary)	$90,214	$125,167	$288,141	$250,000	$207,661	X
Annual Employee United Way Charitable Campaign [2]	$131,994	$135,186	$166,254	$150,000	$142,353	X
Number of Employee Volunteer Days [3]	4	0	48.6	175	9.9	X
CIP Mandated Investments : [4] • Low-Income Energy Assistance Program (LEAP) • Ontario Electricity Support Program (OESP)	94 / $40,656 15,921 / $10.9M	57 / $20,559 15,372 / $10.7M	243 households $132,152 29,617 $10,286,973	N/A N/A	383 / $157,237 32,606 $10.4M	N/A N/A
ENVIRONMENTAL						
Total Non-Hazardous Waste Diversion Rate	98%	94%	95%	>95%	93.5%	X
% of Green Suppliers (% of services and products procured from local suppliers)	43%	46%	45.4%	>50%	40.0%	X
Emissions from Fleet (GHG equivalent tonnes / 200,000 hrs worked)	280	285	278	Reduce 3% from 2022 actual	188	●
Employee Commuting Emissions (Scope III - metric tonnes CO_2)	387[5]	387[5]	620[6]	↓	656[6]	X

[2] Includes money raised by employees, company matching funds, and fundraising events contributed to annual United Way campaign.
[3] Includes days for employees loaned to the United Way.
[4] There are no targets for these provincial programs.
[5] This represents only those field employees who continued to regularly commute to work in 2020/2021 during the COVID-19 pandemic.
[6] This represents all employees and reflects the hybrid work environment for office employees.

- ***Consistent with Strategic Direction commitment to augment ESG reporting, 2023 Corporate Performance Scorecard includes suite of ESG measures***
- ***Intended as first step, with further evolution in 2024/25***

2023 ESG Performance Measures	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ● X
ENVIRONMENTAL						
Scope 1 GHG Emissions (fleet, natural gas consumption, SF6 - metric tonnes)	–	2,359	2,505	↓	1,914	●
Scope 2 GHG Emissions (electricity consumed, line losses - metric tonnes)	–	7,071	5,692	↓	To be completed in April, when inputs are available	To be completed in April, when inputs are available
Priority Spills (#) [1]	0	0	0	**0**	0	●
Non-Hazardous Waste Diversion Rate	98%	94%	94.4%	**>95%**	93.5%	X
Green Suppliers [2]	43%	46%	45.5%	**>50%**	40%	X
Fleet Electrification (electric & hybrid)	–	–	7.4%	↑	12.1%	●
SOCIAL						
Injury/Illness Frequency Rate	0.84	1.01	0.64	**0.89**	1.23	X
Lost Time Severity Rate	2.53	8.93	2.08	**7.21**	3.34	●

[1] As per Electricity Canada definition: "a petroleum spill that is over 500 litres; a spill containing polychlorinated biphenyls (PCBs) over 1 g; and/or any volume of petroleum based or PCB-contaminated substance that enters a water body."
[2] Percentage of goods and services that are procured from local suppliers (i.e. suppliers located within a 100 km radius of the National Capital Region).

2023 ESG Performance Measures	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ● X
SOCIAL (CONTINUED)						
Employee Attrition	8.29%	7.08%	10.17%	**6%**	10.33%	X
eLearning hours per employee	2.3	5.4	5	**5**	6.15	●
Employee Gender Diversity by 2030						
• 30% Women in Trades and Technical	–	10%	9%	↑	8%	X
• 50% Women Engineers & Engineering Interns	–	30%	14%	↑	19%	X
• 50% Women in Leadership	–	36%	36%	↑	36%	●
SAIFI - Customer Interruption (Avg # of Times) [1]	0.72	0.62	0.69	**≤0.71**	0.63	●
SAIDI - Customer Interruption (Avg # of Hours) [1]	0.83	0.82	1.02	**≤0.86**	1.03	X
Community Investments [2]	$90,214	$125,167	$288,141	**$250,000**	$207,661	X
Annual Employee United Way Charitable Campaign	$131,994	$135,186	$166,254	**$150,000**	$142,353	X
GOVERNANCE [3]						
Women Board of Directors [4]	55%	45%	45%	**N/A [6]**	54%	N/A
Board Independence [5]	73%	73%	77%	**N/A [6]**	77%	N/A

[1] Excludes Loss of Supply (LOS) and Major Event Days (MEDs).
[2] Refers to discretionary investments made through Hydro Ottawa's Community Investment Program (i.e. excludes disbursements from provincial programs).
[3] Two governance-related measures are already reported via the Annual Report: (i) Director attendance at Board and Board Committee meetings; and (ii) Officer Compensation.
[4] Percentages for this metric are as of December 31 of the corresponding year.
[5] "Independence" is defined as being independent of Management and the Shareholder.
[6] Any future target setting for these governance measures will be subject to Board approval.

HOL 2021-2025 Custom Performance Scorecard

HOL Custom Performance Measures [1]	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ● X
CUSTOMER FOCUS – Customer Satisfaction [2]						
Contact Centre Satisfaction – Transactional Feedback [3]	87%	88%	84%	≥85%	85%	●
Number of MyAccount Customers	222,608	242,826	256,721	270,000	270,281	●
Number of Online Billing Accounts	187,912	207,995	221,848	237,000	235,986	X
OPERATIONAL EFFECTIVENESS – Safety						
All Injury/Illness Frequency Rate	0.84	1.17	0.74	0.89	1.00	X
Lost Workday Severity Rate	2.53	3.11	2.40	7.21	3.20	●
OPERATIONAL EFFECTIVENESS – System Reliability						
Customer Average Interruption Duration Index	1.82	1.42	29.35	Monitor	6.44	N/A
Feeders Experiencing Multiple Sustained Interruptions	10	5	4	≤10	8	●
Worst Feeder Analysis – Number of Feeders with Very Poor Performance	8	6	7	Reduce	6	●
Stations Exceeding Planning Capacity	13.2	7.7%	4.3%	≤5%	6.5%	X
Feeders Exceeding Planning Capacity	1.9	1.0%	0.9%	≤10%	1.8%	●
Stations Approaching Rated Capacity	0	1.1%	0%	0%	0%	●
Feeders Approaching Rated Capacity	0.1	0.1%	0%	0%	0%	●
OPERATIONAL EFFECTIVENESS – Asset Efficiency						
Technology Infrastructure Cost per Employee	$29,587	$32,301	$33,777	≤$32,084	$38,341	X

[1] Rows shaded in green represent measures that are also included in Hydro Ottawa's enterprise Corporate Performance Scorecard.
[2] In the section headings, the four performance outcomes under the OEB's Renewed Regulatory Framework are written in ALL CAPS. The reporting categories which correspond to these outcomes are written using normal capitalization.
[3] This metric includes phone, email and chat interactions.

HydroOttawa

HOL 2021-2025 Custom Performance Scorecard

HOL Custom Performance Measures	2020A	2021A	2022A	2023 Target	2023 Actual	2023 Assessment ●X
OPERATIONAL EFFECTIVENESS – Cost Control						
Productive Time	69%	73%	69%	**≥72%**	73%	●
Labour Allocation	37%	29%	35%	**≤33%**	35%	X
3-Year Average Cost per Pole – Wood Pole Replacement	$7,951	$8,262	$9,205	**Monitor**	$9,523	N/A
3-Year Average Cost per Meter – Underground Cable	$53	$50	$60	**Monitor**	$77	N/A
Average Cost per Kilometer – Vegetation Management	$4,015	$3,834	$3,797	**Monitor**	$3,682	N/A
Average Cost per Pole – Pole Test & Inspection	$24	$28	$19	**Monitor**	$38	N/A
PUBLIC POLICY RESPONSIVENESS – Environment						
Annual Oil Spills and Costs of Remediation	954 L $1.44M	804 L $1.69M	781 L $1.97M	**Reduce**	1,230 L $1.11M	●
Non-Hazardous Waste Diversion Rate	97.8%	94%	94.4%	**>95%**	93.5%	X
Percentage of Green Suppliers	43%	46%	45.5%	**>50%**	40%	X
FINANCIAL PERFORMANCE – Financial Metrics						
OM&A per Customer [1]	$249.11	$239.83	$249.11	**Monitor**	$249.50	N/A
Bad Debt as % of Total Electricity Revenue	0.25%	≤0.07%	0.25%	**≤0.16%**	0.20%	X
Cumulative Capital Additions per Investment Category	Reported via annual OEB filings			**Per 2021-2025 Rate Plan**	Reported via annual OEB filings	
Annual Capital Spending per Investment Category	Reported via annual OEB filings				Reported via annual OEB filings	

[1] This definition is intended to align with the definition of "Total OM&A per Customer" that is utilized in OEB Appendix 5-A and Interrogatory OEB 51 from Hydro Ottawa's 2021-2025 rate application proceeding. Customer numbers are based on end of the period. This is an annual measurement.

HydroOttawa

2024 FINANCIAL HIGHLIGHTS (CONSOLIDATED)

Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment
Net Income	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Revenue*	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
OM&A – Net*	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Return on Equity	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Cash Flow from Operations	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
CAPEX (excl. Emergency Renewal) CAPEX – Emergency Renewal	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Debt to Capitalization Ratio	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Funds From Operations (FFO) to Debt Ratio	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

ELECTRICITY DISTRIBUTION

Financial Highlights

Performance Measures (HOL)	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ●X
Net Income	$32.7M	$28.8M	$35.0M	$37.2M	●
Revenue*	$229.8M	$241.8M	$264.0M	$266.7M	●
OM&A – Net*	$114.8M	$125.8M	$134.9M	$136.4M	X
Return on Equity	7.7%	6.4%	7.3%	7.7%	●
Cash Flow from Operations	$74.4M	$104.2M	$119.5M	$151.6M	●
Cumulative Capital Additions General Plant (incl. CCRAs) System Renewal & Service	$69.6M $164.0M	$77.5M $222.3M	$92.0M $273.2M	$90.5M $296.1M	X ●
Labour Allocation to Maintenance & Administrative Work (Regular Hrs)	35%	35%	33%	34%	X
Debt to Capitalization Ratio	66.8%	66.2%	66.5%	65.6%	●

* In 2024, these measures include CDM.

- **Rebound in Hydro Ottawa Limited's financial performance, following two challenging years**
  - $266.7M revenue surpasses budget and prior year
- **$37.2M net income**
  - Results in $22.3M dividend, exceeding $20.0M dividend floor and $21.0M budget
- **Improved Debt to Capitalization Ratio, relative to 2023**

Reliability Performance

Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ● ✗
SYSTEM RELIABILITY					
SAIFI – Customer Interruption (Avg # of Times) • Annual excluding LOS and MEDs[1] • Annual including LOS and MEDs	0.69 1.95	0.63 1.48	≤0.68 N/A	0.54 0.79	●
SAIDI – Customer Interruption (Avg # of Hours) • Annual excluding LOS and MEDs • Annual including LOS and MEDs	1.02 39.52	1.03 6.93	≤0.89 N/A	0.88 1.10	●
FEMI (Feeders Experiencing Multiple Interruptions) • # of Feeders with 10 or More Interruptions per Year	4	8	≤10	5	●

[1] LOS = Loss of Supply; MED = Major Event Day

- Strongest system reliability performance in several years; SAIDI and SAIFI better than target; best-ever SAIFI result
- Concerted effort to identify and mitigate deficiencies in segments of the grid with persistent challenges
- Successful execution of System Renewal investments
- Relatively mild year in terms of severe weather; only one Major Event Day
- Feeders Experiencing Multiple Interruptions well below target

Accelerating the digital transformation of our business

Key Technology Projects

- **Back-Up Data Centre:** 2-year migration plan is in place to move back-up data centre from Bank Street to co-location in Québec
- **2-Way Radio System Refresh:** working with vendors and City on potential solution options
- **Modernized Meeting Rooms:** enhanced audio and video capabilities, boosting hybrid work collaboration
- **Automated Intake for Reliability Crews:** solution providing centralized pre-work & escalation process

Cybersecurity Program

- **Local Area Network Segmentation:** implemented first phases of multi-year project to mitigate ransomware and malware risks
- **Employee Awareness Training:** remedial training prepared, aimed at boosting ongoing awareness around phishing campaigns and threats
- **Ransomware Business Response Tabletop:** held by PwC, with key internal stakeholders; takeaways captured in After Action Report
- Strengthened cybersecurity protections for critical information and operational technology systems

Grid Modernization

- **SCADA upgrade:** successful cutover to upgraded Supervisory Control and Data Acquisition (SCADA) system for grid monitoring and control
- **Advanced Distribution Management System:** signature project to integrate core grid operations platforms; resourcing constraints and cascading effects from earlier project delays have resulted in corrective action being required and re-prioritization of plans; impacts for overall IT portfolio health

Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ●X
IT Portfolio Performance to Plan	90.2%	83%	80%	86%	●
Percentage of IT Spending (% Operate : % Enhance/Innovate)	48%:52%	48%:52%	50%:50%	45%:55%	●
Click Through Rate for Employee Email Phishing Campaigns	8.2%	3.9%	5%	4.99%	●

KEY IT / OT WATCH ITEMS:

Escalation of IT costs

Quality of vendor delivery

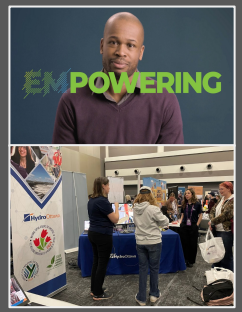
Budget/resource constraints

HydroOttawa Holding Inc.

Building organizational capacity, culture and leadership

Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ● X
All Injury/Illness Frequency Rate	0.64	1.23	0.89	1.22	X
Lost Time Severity Rate	2.08	3.34	7.21	0.76	●
Attrition	10%	10%	≤6%	7.5%	X
Vacancy Rate	11%	12%	8%	12%	X
Hours of Training per Employee (includes safety training)	35	33	≥30	48	●

TALENT ATTRACTION



- Top priority for management in 2024
- 164 new hires (highest single-year total); represents 1 out of 5 employees
- Targeted recruitment campaigns, supported by third-party agencies for hard-to-fill jobs
- Established Employee Referral Program
- Expanded participation in local job fairs
- Lower attrition; missed 2024 targets for attrition and vacancy rate

ORG. CAPACITY – MEETING EVOLVING BUSINESS NEEDS

- New positions created to adapt to change drivers in business landscape (energy transition, artificial intelligence, strategic logistics)
- Vice President roles established, fulfilling need for greater leadership capacity in the face of growing business complexity
- Executive team transitions (Portage Power, Chief Human Resources Officer)
- 50% of Directors were new to their role in 2024

Providing best-in-class customer service

Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ●/X
Contact Centre Satisfaction – Transactional Feedback	84%	85%	85%	85%	●
% of Positive / Neutral Media Stories: • Traditional Media • Social Media	77% 82%	87% 80%	85% 85%	98% 96%	●
CIP Mandated Investments: • Low-Income Energy Assistance Program (LEAP) • Ontario Electricity Support Program (OESP)	243 households $132,152 14,868 / $10.3M	383 / $157,237 15,338 / $10.4M	N/A	537 / $272,040 16,554 / $11.7M	N/A N/A

Service Quality Excellence

92% customer satisfaction

18,000 unique customer interactions every month (phone, email, chat)

100% on-time connection for new residential & commercial customers

87% first call resolution

MyAccount & Outage Reporting Upgrade

- Redesigned our online customer portal, offering new features to improve the customer experience

- Mobile-based account management; optimized views of payment and billing options; enhanced login security; improved search functionality; new data dashboards for usage, billing and outages
- **Outage Alerts:** 2-Way SMS notifications launched (customers can both report outages and register for alerts); fulfills key commitment from 2022 Derecho report

Service Enhancements

- By Q2 2024, service request backlog caused by 2023 labour strike was cleared
- **Service Desk:** increased headcount to support electrification-driven work
- **Net Metering:** transitioned away from manual to automated billing for customers generating their own electricity through net metering, reducing significant administrative burden for billing agents
- **Key Accounts:** strengthened dedicated engagement program, including “Powering Our Future” symposium featuring 100 attendees from 47 customer organizations

HOL Custom Performance Scorecard *(required under 2021-2025 Rate Plan)*

HOL Custom Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ● X
CUSTOMER FOCUS – Customer Satisfaction [1]					
Contact Centre Satisfaction – Transactional Feedback [2]	84%	85%	≥85%	85%	●
Number of MyAccount Customers	256,721	270,281	284,000	294,970	●
Number of Online Billing Accounts	221,848	235,986	252,000	261,236	●
OPERATIONAL EFFECTIVENESS – Safety					
All Injury/Illness Frequency Rate	0.74	1.00	0.89	1.09	X
Lost Workday Severity Rate	2.40	3.20	7.21	0.78	●
OPERATIONAL EFFECTIVENESS – System Reliability					
Feeders Experiencing Multiple Sustained Interruptions	4	8	≤10	5	●
Customer Average Interruption Duration Index [3]	29.35	6.44	Monitor	1.68	N/A
Worst Feeder Analysis – Number of Feeders with Very Poor Performance [3]	7	6	Reduce	1	●
Stations Exceeding Planning Capacity [3]	4.3%	8.7%	≤5%	6.5%	X
Feeders Exceeding Planning Capacity [3]	0.9%	2.2%	≤10%	2.6%	●
Stations Approaching Rated Capacity [3]	0%	0%	0%	0%	●
Feeders Approaching Rated Capacity [3]	0%	0%	0%	0%	●
OPERATIONAL EFFECTIVENESS – Asset Efficiency					
Technology Infrastructure Cost per Employee	$33,777	$38,341	$36,936	$38,749	X

[1] In the section headings, the four performance outcomes under the OEB's Renewed Regulatory Framework are written in ALL CAPS. The reporting categories which correspond to these outcomes are written using normal capitalization.
[2] This metric includes phone, email and chat interactions.
[3] Data not available at the time of submission.

HOL Custom Performance Scorecard *(required under 2021-2025 Rate Plan)*

HOL Custom Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ✓ X
OPERATIONAL EFFECTIVENESS – Cost Control					
Productive Time	69%	73%	≥73%	71%	X
Labour Allocation	35%	35%	≤33%	34%	X
3-Year Average Cost per Pole – Wood Pole Replacement [1]	$9,205	$9,523	Monitor	$11,590	N/A
3-Year Average Cost per Meter – Underground Cable [1]	$60	$77	Monitor	$82	N/A
Average Cost per Kilometer – Vegetation Management [1]	$3,797	$3,682	Monitor	$4,840	N/A
Average Cost per Pole – Pole Test & Inspection [1]	$19	$38	Monitor	$46	N/A
PUBLIC POLICY RESPONSIVENESS – Environment					
Annual Oil Spills and Costs of Remediation	781 L $1.97M	1,230 L $1.11M	Reduce	950 L $1.86M	X
Non-Hazardous Waste Diversion Rate	94.4%	93.5%	>95%	90.3%	X
Percentage of Green Suppliers	45.5%	40%	>50%	35%	X
FINANCIAL PERFORMANCE – Financial Metrics					
OM&A per Customer [2]	$249.11	$308.67	Monitor	$308.74	N/A
Bad Debt as % of Total Electricity Revenue	0.18%	0.20%	≤0.16%	0.22%	X
Cumulative Capital Additions per Investment Category	Reported via annual OEB filings		Per 2021-2025 Rate Plan	Reported via annual OEB filings	
Annual Capital Spending per Investment Category	Reported via annual OEB filings			Reported via annual OEB filings	

[1] Data not available at the time of submission.
[2] This definition is intended to align with the definition of "Total OM&A per Customer" that is utilized in OEB Appendix 5-A and Interrogatory OEB 51 from Hydro Ottawa's 2021-2025 rate application proceeding. Customer numbers are based on end of the period. This is an annual measurement.

HOL Performance Outcomes Accountability Mechanism Deferral Account

- This item was established as part of the settlement agreement for the 2021-2025 rate application
- Intent is to link achievement of outcomes with revenue recovery and customer interests
- Mechanism is centered around five performance metrics with annual targets; an indicator system is used to assess Hydro Ottawa's performance
- Hydro Ottawa Limited will report against performance to the OEB on an annual basis
- Maximum annual credit obligation is $1.0M; maximum five-year obligation is $5.0M
- Account balance (if any) will be refunded to ratepayers at the end of the five-year term

Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment [1] ●▲X
Number of Interruptions Caused by Defective Equipment – Overhead System (excluding Major Event Days)	82	82	111	50	●
Number of Interruptions Caused by Defective Equipment – Underground System (excluding Major Event Days and Leaking Padmount Transformers)	90	61	110	90	●
System Average Interruption Duration Index (excluding Loss of Supply and Major Event Days)	1.02	1.03	0.89	0.88	●
Wood Pole Replacement Unit Cost	$9,951	$9,559	$8,510	$15,301	X
Underground Cable Replacement Unit Cost	$101,334	$71,793	$103,051	$53,623	●

[1] The "Green-Yellow-Red" indicator system functions as follows:
● = target has either been met or exceeded, resulting in $0 credit obligation
▲ = target has been narrowly missed within a prescribed range, resulting in a partial credit obligation that is proportional to performance
X = target has been missed, resulting in $200,000 credit obligation

NOTES

First underground cable replacement project started in Q4 2024

Implemented measures have improved SAIDI from narrowly missing target in Q3 to met target for 2024

Measures underway to improve performance:

- Wood Pole Unit Cost – component charges analysis to identify key cost drivers; civil rate reduction will help offset unit cost impacts

ESG Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ● X
ENVIRONMENTAL					
Scope 1 GHG Emissions (fleet, natural gas consumption, SF6 - metric tonnes)	2,505	1,914	Reduce	1,746	●
Scope 2 GHG Emissions (electricity consumed, line losses - metric tonnes) [1]	5,692	5,846	Reduce	**	**
Priority Spills (#) [2]	0	0	0	0	●
Non-Hazardous Waste Diversion Rate	94.4%	93.5%	>95%	90.3%	X
Green Suppliers [3]	45.5%	40.4%	>50%	35%	X
Fleet Electrification (electric & hybrid)	7.4%	12.1%	Increase	15.5%	●
SOCIAL					
Injury/Illness Frequency Rate	0.84	1.23	0.89	1.22	X
Lost Time Severity Rate	2.53	3.34	7.21	0.76	●

[1] Line losses data not available at the time of submission.
[2] As per Electricity Canada definition: “a petroleum spill that is over 500 litres; a spill containing polychlorinated biphenyls (PCBs) over 1 g; and/or any volume of petroleum based or PCB-contaminated substance that enters a water body.”
[3] Percentage of goods and services that are procured from local suppliers (i.e. suppliers located within a 100 km radius of the National Capital Region).

ESG Performance Measures	2022A	2023A	2024 Target	2024 Actual	2024 Assessment ● X
SOCIAL (CONTINUED)					
Employee Attrition	10.17%	10.33%	≤6%	7.61%	X
eLearning hours per employee	5	6.15	≥6	8.5	●
EMPLOYEE GENDER DIVERSITY BY 2030					
• 30% Women in Trades and Technical	9%	8%	Increase	9%	●
• 50% Women Engineers & Engineering Interns	14%	19%	Increase	12%	X
• 50% Women in Leadership	36%	36%	Increase	38%	●
SAIFI - Customer Interruption (Avg # of Times) [1]	0.69	0.63	≤0.68	0.54	●
SAIDI - Customer Interruption (Avg # of Hours) [1]	1.02	1.03	≤0.89	0.88	●
Community Investments [2]	$288,141	$207,661	≥$250,000	$163,323	X
Annual Employee United Way Charitable Campaign	$166,254	$142,353	$160,000	$141,974	X
GOVERNANCE [3]					
Women Board of Directors [4]	45%	54%	N/A [6]	50%	N/A
Board Independence [4, 5]	77%	77%	N/A [6]	75%	N/A

[1] Excludes Loss of Supply (LOS) and Major Event Days (MEDs).
[2] Refers to discretionary investments made through Hydro Ottawa Limited's Community Investment Program (i.e. excludes disbursements from provincial programs).
[3] Two governance-related measures are already reported via the Annual Report: (i) Director attendance at Board and Board Committee meetings; and (ii) Officer Compensation.
[4] Percentages for this metric are as of December 31, 2024.
[5] "Independence" is defined as being independent of Management and the Shareholder.
[6] Any future target setting for these governance measures will be subject to Board approval.

Q2 financial highlights (consolidated)

Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
Net Income	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Revenue[1]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
OM&A – Net[1]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Return on Equity	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Cash Flow from Operations	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
CAPEX (excl. Emergency Renewal, incl. JVs) CAPEX – Emergency Renewal	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Debt to Capitalization Ratio[2] (excludes non-recourse debt)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Funds From Operations (FFO) to Debt Ratio	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

Hydro Ottawa Group

Electricity distribution

Financial highlights

Performance Measures (HOL)	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
Net Income	$28.8M	$37.2M	$33.8M	$19.4M	$15.5M	●
Revenue[1]	$241.8M	$266.7M	$268.2M	$135.5M	$134.8M	●
OM&A – Net[1]	$125.8M	$136.4M	$135.3M	$68.5M	$70.3M	●
Return on Equity	6.4%	7.7%	6.6%	6.3%	6.6%	X
Cash Flow from Operations	$104.2M	$151.6M	$128.1M	$102.9M	$59.0M	●
Cumulative Capital Additions General Plant (incl. CCRAs) System Renewal & Service	$77.5M $222.3M	$90.5M $296.1M	$114.8M $354.2M	$94.1M $313.1M	$101.4M $291.8M	X ●
Labour Allocation to Maintenance & Administrative Work (Regular Hrs)	35%	34%	≤33%	35%	≤33%	X
Debt to Capitalization Ratio	66.2%	65.6%	66.3%	65.2%	66.0%	●

[1] In 2024 and 2025, these measures include CDM.

- Positive financial results in Q2 YTD
- Net income exceeded budget by $3.9M (25%) due to an increase in distribution revenue (with warmer temperatures driving higher usage) and decrease in OM&A, resulting in higher EBITDA
- Increased cash flow from operations partially driven by increases in accounts payable and accruals
- Debt to capitalization improved from 2023 and 2024, primarily due to higher cash flow from operations than budget in the first half of 2025

HydroOttawa

Reliability performance

Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
SYSTEM RELIABILITY						
SAIFI – Customer Interruption (Avg # of Times) • Annual excluding LOS and MEDs[1] • Annual including LOS and MEDs	0.63 1.48	0.54 0.79	≤0.64 N/A	0.34 0.86	≤0.29 N/A	X
SAIDI – Customer Interruption (Avg # of Hours) • Annual excluding LOS and MEDs • Annual including LOS and MEDs	1.03 6.93	0.88 1.10	≤0.92 N/A	0.47 1.26	≤0.41 N/A	X
FEMI (Feeders Experiencing Multiple Interruptions) • # of Feeders with 10 or More Interruptions per Year	8	5	≤7	6	≤7	●

[1] LOS = Loss of Supply; MED = Major Event Day

- **Q2 YTD SAIFI and SAIDI results are off target**
- At 2025 mid-point, several outage cause codes are above typical range (e.g. equipment failure, foreign interference); task force in place focusing on mitigation controls
- New process implemented for significant outage reviews; 24-hour review and establishment of priority levels for action resolution across divisions
- Several initiatives in progress or planned to enhance performance: pole by pole patrols; tree trimming optimization; resolution of defective faulted circuit indicators; drone inspections
- Two Major Event Days in Q2 (3 total YTD):
  - April 29 & June 22: severe windstorms; ~40,000 and ~31,000 customers affected (respectively)

HydroOttawa

Accelerating the digital transformation of our business

Priority Technology Projects

- **Back-Up Data Centre:** tracking towards late Q3 for key milestones (network redundancy, with hiboo as service provider; beginning of application migration)
- **Enterprise Asset Management:** project roadmap kicked off in Q2; will inform scope and direction, leading up to 2026 launch of Phase 1 implementation
- **2-Way Radio System:** upgraded solution selected; cutover planned for early 2026
- **Fleet Management System:** transitioning from legacy software to new solution; data mapping and business process reviews in progress; go-live in Q3

Cybersecurity

- **Security Governance:** completion of threat modeling framework; continuing to implement cyber roadmap
- **Security Awareness**: new employee orientation training was piloted with cohort of summer students; expected company-wide go-live in Q3
- **Event Monitoring Strategy:** project charter developed; resource allocation underway; kickoff scheduled for Q3
- **Local Area Network Segmentation:** procurement method developed, application segmentation design underway; expected to run into 2026 due to migration complexity

Grid Modernization

- **Advanced Distribution Management System:** signature project to integrate core grid operations platforms; Black & Veatch engaged as system integrator; Phase 1 release anticipated by end of year
- **Advanced Metering Infrastructure 2.0:** RFP issued for Technical Partner; structured as Master Service Agreement, allowing flexibility; proposals due mid-September, followed by evaluation and selection

Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
IT Portfolio Performance to Plan	83%	86%	80%	73%	80%	X
Percentage of IT Spending (% Operate : % Enhance/Innovate)	48%:52%	45%:55%	45%:55%	43%:57%	45%:55%	●
Click Through Rate for Employee Email Phishing Campaigns	3.9%	4.99%	5%	2.94%	5%	●

Key IT / OT Watch Items:

Escalation of IT costs (including in context of U.S. tariffs)

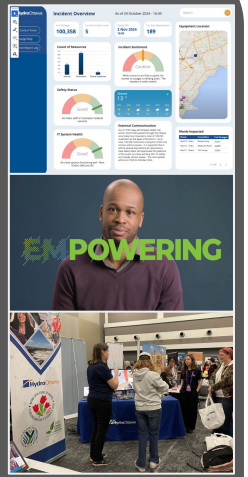
Resource constraints (rate app prioritization)

Grid modernization project re-scoping

Building organizational capacity, culture and leadership

BUSINESS CONTINUITY MANAGEMENT (BCM)

- **Electricity Emergency Response Plan (EERP):** completed implementation of refreshed EERP, marking transition to sustainment phase; onboarded new EERP BCM Specialist
- Drafted new BCM and Crisis Management plans aligned with best practices
- Preparing for participation in North America-wide grid security exercise in Q4



SAFETY EXCELLENCE

- Installment of safety campaign focused on traffic setup
- Recognition of 1 million hours without lost time injury milestone through custom hoodies for employees
- Scheduled and executed annual tool and equipment inspection week

Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
All Injury/Illness Frequency Rate	1.23	1.22	0.79	0.56	0.40	X
Lost Time Severity Rate	3.34	0.76	2.15	0.00	1.08	●
Attrition	10.3%	7.61%	≤6%	2.75%	≤3%	●
Vacancy Rate (HOL)[1]	N/A	N/A	8%	9%*	8%	X
Hours of Training per Employee (includes safety training)	32.59	48.10	≥30	24.37	≥15	●

[1] As of Q1 2025, focus for vacancy rate reporting has shifted to HOL.

TALENT ATTRACTION & MANAGEMENT

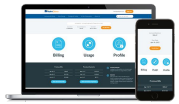
- Largest summer student program to date (74 students)
- Ongoing pilot of resume screening and candidate ranking tool to increase efficiencies in recruitment process
- Targeted recruitment campaigns for hard-to-fill roles

ORGANIZATIONAL CAPACITY – MEETING EVOLVING BUSINESS NEEDS

- **Succession planning:** launched formal program for Supervisor cohort
- **Powerline Technician apprenticeships:** 23 completed YTD across training levels 1-4 (15 internal candidates, 8 external candidates)
- Conducted first talent review for Engineer Career Advancement Program (6 engineers approved for advancement to Intermediate Engineer and 2 to Senior Engineer)
- [redacted]

Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment
Contact Centre Satisfaction – Transactional Feedback	85%	85%	85%	86%	85%	●
% of Positive / Neutral Media Stories: • Traditional Media • Social Media	 87% 80%	 98% 96%	 85% 85%	 100% 96%	 85% 85%	 ● ●
CIP Mandated Investments: • Low-Income Energy Assistance Program (LEAP) • Ontario Electricity Support Program (OESP)	 383 / $157K 15,338 / $10.4M	 537 / $272K 16,554 / $11.7M	 N/A	 466 / $259K 18,367/ $6.6M	 N/A	 N/A N/A

Providing best-in-class customer service



Key Project Updates

- **Cloud Contact Centre:** completed platform selection, following RFI process; expedited review of implementation partner, with procurement process to follow; platform will contain capabilities for AI chatbot
- **Project Deferrals:** resource constraints associated with rate app have pushed key projects to later in the year (360^0 customer view; customer journey process mapping)

Technology Updates

- **AI Call Analysis:** leveraging AI call insights to understand trends and identify automation opportunities; automating bill balances, move-out requests and payment processing could reduce call volume by 20%
- **MyAccount Updates:** six batches of enhancements released YTD; Large Commercial customer portal under development, with scheduled testing in Q3

Operational Updates

- **Financial Assistance:** 77% increase in LEAP program applicants compared to Q2 2024; 32% of applications through new online portal; YTD grants nearing 2024 total
- **E-Bill Notification:** PDF copies of bills now included directly in emails to customer; strong uptick from customers
- **E-Bill Enrollment:** taking proactive approach to automate eBill customer enrollment; aiming to reach 80% adoption by year-end; 77.7% adoption Q2 YTD

Appendix 2

HOL Custom Performance Scorecard *(required under 2021-2025 Rate Plan)*

HOL Custom Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
CUSTOMER FOCUS – Customer Satisfaction [1]						
Contact Centre Satisfaction – Transactional Feedback [2]	85%	85%	≥85%	86%	≥85%	●
Number of MyAccount Customers	270,281	294,970	310,000	304,721	301,858	●
Number of Online Billing Accounts	235,986	261,236	300,000	288,038	279,000	●
OPERATIONAL EFFECTIVENESS – Safety						
All Injury/Illness Frequency Rate	1.00	1.09	0.79	0.50	0.40	X
Lost Workday Severity Rate	3.20	0.78	2.15	0.00	1.08	●
OPERATIONAL EFFECTIVENESS – System Reliability						
Feeders Experiencing Multiple Sustained Interruptions	8	5	7	6	7	●
Customer Average Interruption Duration Index	6.44	1.68	Monitor	*[Metrics reported annually]*		
Worst Feeder Analysis – Number of Feeders with Very Poor Performance	6	1	Reduce			
Stations Exceeding Planning Capacity	6.5%	6.5%	≤5%			
Feeders Exceeding Planning Capacity	1.8%	2.6%	≤10%			
Stations Approaching Rated Capacity	0%	0%	0%			
Feeders Approaching Rated Capacity	0%	0%	0%			
OPERATIONAL EFFECTIVENESS – Asset Efficiency						
Technology Infrastructure Cost per Employee	$38,341	$38,749	≤$39,703	$20,447	≤$19,814	X

[1] In the section headings, the four performance outcomes under the OEB's Renewed Regulatory Framework are written in ALL CAPS. The reporting categories which correspond to these outcomes are written using normal capitalization.
[2] This metric includes phone, email and chat interactions.

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HOL Custom Performance Scorecard *(required under 2021-2025 Rate Plan)*

HOL Custom Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
OPERATIONAL EFFECTIVENESS – Cost Control						
Productive Time	73%	71%	≥73%	73%	≥73%	●
Labour Allocation	35%	34%	≤33%	35%	≤33%	X
3-Year Average Cost per Pole – Wood Pole Replacement	$9,523	$11,590	Monitor	*[Metrics reported annually]*		
3-Year Average Cost per Meter – Underground Cable	$77	$82	Monitor			
Average Cost per Kilometer – Vegetation Management	$3,682	$4,840	Monitor			
Average Cost per Pole – Pole Test & Inspection	$38	$46	Monitor			
PUBLIC POLICY RESPONSIVENESS – Environment						
Annual Oil Spills and Costs of Remediation	1,230 L $1.11M	950 L $1.86M	Reduce	*[Metrics reported annually]*		
Non-Hazardous Waste Diversion Rate	93.5%	90.3%	>95%			
Percentage of Green Suppliers	40%	35%	>50%	35%	>50%	X
FINANCIAL PERFORMANCE – Financial Metrics						
OM&A per Customer [1]	$308.67	$308.74	Monitor	$166.92	Monitor	N/A
Bad Debt as % of Total Electricity Revenue	0.20%	0.22%	≤0.18%	0.12%	≤0.12%	●
Cumulative Capital Additions per Investment Category	Reported via annual OEB filings		Per 2021-2025 Rate Plan	Reported via annual OEB filings		
Annual Capital Spending per Investment Category						

[1] This definition is intended to align with the definition of "Total OM&A per Customer" that is utilized in OEB Appendix 5-A and Interrogatory OEB 51 from Hydro Ottawa's 2021-2025 rate application proceeding. Customer numbers are based on end of the period. This is an annual measurement.

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HOL Performance Outcomes Accountability Mechanism Deferral Account

- This item was established as part of the settlement agreement for the 2021-2025 rate application
- Intent is to link achievement of outcomes with revenue recovery and customer interests
- Mechanism is centered around five performance metrics with annual targets; an indicator system is used to assess Hydro Ottawa's performance
- Hydro Ottawa Limited will report against performance to the OEB on an annual basis
- Maximum annual credit obligation is $1.0M; maximum five-year obligation is $5.0M
- Account balance (if any) will be refunded to ratepayers at the end of the five-year term

Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment [1] ●▲X
Number of Interruptions Caused by Defective Equipment – Overhead System (excluding Major Event Days)	82	50	111	18	56	●
Number of Interruptions Caused by Defective Equipment – Underground System (excluding Major Event Days and Leaking Padmount Transformers)	61	90	110	25	55	●
System Average Interruption Duration Index (excluding Loss of Supply and Major Event Days)	1.03	0.88	0.89	0.47	0.37	X
Wood Pole Replacement Unit Cost	$9,559	$15,301	$8,510	$19,517	$8,510	X
Underground Cable Replacement Unit Cost	$71,793	$53,623	$103,051	$0	$103,051	●

[1] The "Green-Yellow-Red" indicator system functions as follows:
● = target has either been met or exceeded, resulting in $0 credit obligation
▲ = target has been narrowly missed within a prescribed range, resulting in a partial credit obligation that is proportional to performance
X = target has been missed, resulting in $200,000 credit obligation

NOTES

No underground cable replacement projects completed in Q2

Wood Pole Replacement:
- Target missed due to inherent complexity of projects; increased costs attributable to labour, materials, and external services

Measures have been implemented to improve SAIFI and SAIDI performance (see slide 7)

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Appendix 3

ESG Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
ENVIRONMENTAL						
Scope 1 GHG Emissions (fleet, natural gas consumption, SF6 - metric tonnes)	1,914	1,746	↓	*[Metrics reported annually]*		
Scope 2 GHG Emissions (electricity consumed, line losses - metric tonnes)	5,846	7,303	↓			
Priority Spills (#) [1]	0	0	0	0	0	●
Non-Hazardous Waste Diversion Rate	93.5%	90.3%	>95%	*[Metric reported annually]*		
Green Suppliers [2]	40.4%	35%	>50%	35%	>50%	X
Fleet Electrification (electric & hybrid)	12.1%	15.5%	↑	*[Metric reported annually]*		
SOCIAL						
Injury/Illness Frequency Rate	1.23	1.22	0.79	0.56	0.40	X
Lost Time Severity Rate	3.34	0.76	2.15	0.00	1.08	●

[1] As per Electricity Canada definition: "a petroleum spill that is over 500 litres; a spill containing polychlorinated biphenyls (PCBs) over 1 g; and/or any volume of petroleum based or PCB-contaminated substance that enters a water body."
[2] Percentage of goods and services that are procured from local suppliers (i.e. suppliers located within a 100 km radius of the National Capital Region).

Hydro Ottawa Group

ESG Performance Measures	2023A	2024A	2025 Target	Q2 YTD Actual	Q2 YTD Target	Q2 YTD Assessment ●X
SOCIAL (CONTINUED)						
Employee Attrition	10.33%	7.61%	≤6%	2.75%	≤3%	●
eLearning hours per employee	6.15	8.5	≥7	5.28	3.5	●
EMPLOYEE GENDER DIVERSITY BY 2030						
• 30% Women in Trades and Technical	8%	9%	↑	*[Metrics reported annually]*		
• 50% Women Engineers & Engineering Interns	19%	12%	↑			
• 50% Women in Leadership	36%	38%	↑			
SAIFI - Customer Interruption (Avg # of Times) [1]	0.63	0.54	≤0.64	0.34	≤0.29	X
SAIDI - Customer Interruption (Avg # of Hours) [1]	1.03	0.88	≤0.92	0.47	≤0.41	X
Community Investments [2]	$207,661	$163,323	≥$200,000	$170,876	$100,000	●
Annual Employee United Way Charitable Campaign	$142,353	$141,974	$150,000	*[Metric reported annually]*		
GOVERNANCE [3]						
Women Board of Directors [4]	54%	50%	N/A [6]	*[Metrics reported annually]*		
Board Independence [5]	77%	75%	N/A [6]			

[1] Excludes Loss of Supply (LOS) and Major Event Days (MEDs).
[2] Refers to discretionary investments made through Hydro Ottawa's Community Investment Program (i.e. excludes disbursements from provincial programs).
[3] Two governance-related measures are already reported via the Annual Report: (i) Director attendance at Board and Board Committee meetings; and (ii) Officer Compensation.
[4] Percentages for this metric are as of December 31 of the corresponding year.
[5] "Independence" is defined as being independent of Management and the Shareholder.
[6] Any future target setting for these governance measures will be subject to Board approval.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO CONSUMERS COUNCIL OF CANADA

JT2.22

EVIDENCE REFERENCE:

1-CCC-1 Table A

UNDERTAKING(S):

Advise the inflation rate applied in 2025 for the five categories of assets listed in 1 CCC-1, part (f), table A

RESPONSE(S):

Please see Table A below, from 1-CCC-1, part f), with the inflation rate applied in 2025 for the five categories listed. During the preparation of undertakings some deviations from the original inflation assumptions stated in 1-CCC-1 were noted, and Table A below has been updated accordingly. The changes made to 1-CCC-1 are highlighted in Table A.

Table A - Equipment and Materials Inflation Adjustments

Asset Type	Inflation Rate			Relevant Programs
	2025	2026	2027-2030	
Transformer Station Equipment >50 kV Distribution Station Equipment <50 kV Storage Battery Equipment Poles, Towers & Fixtures Overhead Conductors & Devices Underground Conduit Underground Conductors & Devices Line Transformers Services (Overhead & Underground) Meters (Smart Meters Excluding Metering Renewal AMI 2.0 Project) Measurement & Testing Equipment Power Operated Equipment Communications Equipment System Supervisor Equipment	5.0%	5.0%	5.0%	All System Access, System Renewal, and System Service Programs
Metering Renewal AMI 2.0 Project	3.0%	3.0%	3.0%	Metering Renewal
Tools, Shop & Garage Equipment	3.0%	2.1% ~~3.0%~~	2.1%	Tools Replacement
Transportation Equipment	5.0%	5.0% ~~3.5%~~	5.0% ~~3.5%~~	Fleet Replacement
Buildings Buildings & Fixtures	3.5%	3.5%	3.5%	Buildings - Facilities
Computer Software Computer Equipment - Hardware	3.0%	2.1% ~~3.0%~~	2.1%	Grid Technologies, Meter to Cash, Enterprise Solutions, and Infrastructure and Cybersecurity

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO CONSUMERS COUNCIL OF CANADA

JT2.24

EVIDENCE REFERENCE:

2-CCC-14 - Table A

UNDERTAKING(S):

Provide actual in-service months for CCC-14, Table A

RESPONSE(S):

Table A below includes the actual in service month for the projects contained in Table A of 2-CCC-14. The column Actual In-Service Date in Table A of 2-CCC-14 only contained years; this table has been modified to also include the months, however as noted in the footnotes, certain projects have capital additions that occur throughout the year. For these projects the table has not been updated with every month.

Table A - 2021-2025 Overview of Significant In-Service Additions with Actual In-Service Month and Year ($'000 000s)[1][2]

Investment Category	Capital Program	Project	Planned in-Service Date	Planned Capital Cost	Actual In-Service Date	Actual Capital Cost	Cost Variance ($)
General Plant	CCRA	Cambrian 28KV Substation	October 2021	$ 50.1	October 2021, March 2022, October 2023[3]	$ 44.6	$ (5.5)
General Plant	CCRA	Riverdale Switchgear Upgrade	Phase 1 December 2024; Phase 2 December 2025	$ 2.4	N/A	-	$ (2.4)
General Plant	CCRA	Piperville Station Capacity Upgrade-New East	December 2025	$ 6.1	N/A	-	$ (6.1)
General Plant	Customer Service	Elster EA-MS Upgrade	Phase 1 June 2021; Phase 2 June 2025	$ 1.6	November 2022	$ 0.4	$ (1.2)
General Plant	Operations Initiatives	AMI Program	December 2022	$ 1.6	N/A	-	$ (1.6)
General Plant	Customer Engagement Platform	MyAccount	N/A	-	December 2023, December 2024, December 2025	$ 6.8	$ 6.8
General Plant	Enterprise Solutions	ERP Program	December 2025	$ 9.7	N/A	-	$ (9.7)
General Plant	Enterprise Solutions	Service Now	N/A	-	December 2022,	$ 2.7	$ 2.7

[1] Projects in this table with actual in-service additions dates that are in the future are forecasted in-service dates.
[2] Projects in this table with an asterisk (*) have their capital additions occur throughout the years indicated.
[3] The Cambrian CCRA was energized in two phases that aligned with the in-service date of the respective transmission line extensions (October 2021 and March 2022). In October 2023, a construction credit was received and subsequently transferred to capital additions.

Investment Category	Capital Program	Project	Planned in-Service Date	Planned Capital Cost	Actual In-Service Date	Actual Capital Cost	Cost Variance ($)
					December 2023, November 2024, December 2025		
System Renewal	Stations and Buildings Infrastructure Renewal	Fisher AK Station Rebuild	Phase 1 December 2022; Phase 2 December 2023; Phase 3 December 2024	$ 9.6	N/A	-	$ (9.6)
System Renewal	Stations and Buildings Infrastructure Renewal	Dagmar Voltage Conversion	December 2025	$ 6.0	N/A	-	$ (6.0)
System Renewal	Stations and Buildings Infrastructure Renewal	Bayswater Transformer Replacement	December 2021	$ 3.4	December 2021, November 2022, 2023, 2024[4]	$ 5.0	$ 1.6
System Renewal	Stations and Buildings Infrastructure Renewal	Bell's Corners Station Rebuild	Phase 1 December 2021; Phase 2 December 2022; Phase 3 December 2023	$ 10.3	December 2022, December 2023, July 2024	$ 13.6	$ 3.3
System Renewal	Stations and Buildings Infrastructure Renewal	Overbrook TO Switchgear Replacement	Phase 1 December 2022; Phase 2 December 2023; Phase 3 December	$ 6.7	August 2021, December 2022, December 2023, July	$ 9.3	$ 2.6

[4] The Bayswater Transformer Replacement project was completed by November 2022; there were immaterial remaining project costs that occurred sporadically throughout 2023 and 2024.

Investment Category	Capital Program	Project	Planned in-Service Date	Planned Capital Cost	Actual In-Service Date	Actual Capital Cost	Cost Variance ($)
			2024; Phase 4 December 2025		2024		
System Renewal	Stations and Buildings Infrastructure Renewal	Lincoln Heights P&C Renewal	Phase 1 December 2021; Phase 2 December 2022	$ 1.1	March 2021, November 2022, August 2023, May 2024	$ 2.3	$ 1.2
System Renewal	Stations and Buildings Infrastructure Renewal	Rideau Heights DS T1 Renewal	December 2024	$ 3.2	N/A	-	$ (3.2)
System Renewal	Stations and Buildings Infrastructure Renewal	Shillington AD Station Renewal	December 2025	$ 2.5	N/A	-	$ (2.5)
System Renewal	Metering Renewal	2.5EL to 3EL*	2021-2025	$ 2.4	2021-2025	$ 1.1	$ (1.3)
System Renewal	Metering Renewal	TR Communications Update*	2021-2025	$ 2.1	2021-2025	$ 1.8	$ (0.3)
System Renewal	Metering Renewal	SC Communications Update*	2021-2022	$ 2.0	2022-2025	$ 2.2	$ 0.2
System Renewal	Metering Renewal	TR Service to 200A SC*	2021-2025	$ 1.1	2021-2025	$ 1.0	$ (0.1)
System Renewal	Metering Renewal	REX 1 Upgrade*	2021-2025	$ 5.0	2023-2025	$ 5.3	$ 0.3
System Service	Capacity Upgrades	Cambrian 28KV Substation	March 2022	$ 26.9	December 2021, March 2022, June 2023	$ 25.6	$ (1.3)
System Service	Capacity Upgrades	Uplands MS Second Transformer	Phase 1 January 2021; Phase	$ 11.4	April 2021, December 2021,	$ 14.7	$ 3.3

Investment Category	Capital Program	Project	Planned in-Service Date	Planned Capital Cost	Actual In-Service Date	Actual Capital Cost	Cost Variance ($)
			2 December 2021		2022, 2023[5]		
System Service	Capacity Upgrades	Riverdale Switchgear Upgrade	Phase 1 December 2024; Phase 2 December 2025	$ 11.8	November 2024, December 2025	$ 5.5	$ (6.3)
System Service	Capacity Upgrades	Limebank MTS 4th Transformer	Phase 1 December 2021; Phase 2 December 2022	$ 3.0	December 2021, March 2022	$ 2.8	$ (0.2)
System Service	Capacity Upgrades	Piperville Station Capacity Upgrade-New East	December 2025	$ 24.6	June 2024, November 2025	$ 14.7	$ (9.9)
System Service	Capacity Upgrades	New Mer Bleue Station	N/A	-	November 2024	$ 6.6	$ 6.6
System Service	Grid Technologies	Advanced Distribution Management System (ADMS)	2021-2025	$ 5.0	December 2024[6]	$ 17.9	$ 12.9
System Service	Field Area Network	Field Area Network*	2021-2025	$ 5.0	2023, 2024, 2025	$ 1.0	$ (4.0)

1

[5] The Uplands MS Second Transformer project was completed by December 2021; there were immaterial remaining project costs that occurred sporadically throughout 2022 and 2023.
[6] In the response to 2-CCC-14, the ADMS actual and forecasted capital additions were based on information available at original submission.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO CONSUMERS COUNCIL OF CANADA

JT2.25

EVIDENCE REFERENCE:

2-CCC-15(C)

UNDERTAKING(S):

Provide final costs of the MyAccount redesign project, broken out between operational and capital costs

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RESPONSE(S):

Table A provides the costs for Phase One of the MyAccount redesign project, broken out between operational and capital costs, totaling $3.2M. This compares to the $3.6M stated on page 8 of Attachment 2-CCC-15(C) - MyAccount Redesign Project Charter Release One. Hydro Ottawa wishes to note that these costs, as well as the budget shown on page 8 of Attachment 2-CCC-15(C), are for Phase One only, while the $6.8M cost for the MyAccount project in Table 16 of Schedule 2-1-1 - Rate Base Overview is for all phases of the project.

Table A - MyAccount Redesign Phase One Costs

	Capital	Operating
Internal Labour	$ 124,828	
Outside Services	$ 2,707,984	$ 234,274
Burdens/AFUDC*	$ 106,246	
Total	**$ 2,939,058**	**$ 234,274**
PHASE ONE TOTAL		**$ 3,173,331**
*AFUDC stands for Allowance for Funds Used During Construction		

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO CONSUMERS COUNCIL OF CANADA

JT2.26

EVIDENCE REFERENCE:

Schedule 4-1-2

UNDERTAKING(S):

Consider providing 2024 actuals in same format as seen in Table 9

RESPONSE(S):

As noted in the Day 2 Transcript of the Technical Conference, page 170, line 8, this undertaking was answered during the proceeding via reference to interrogatory 4-Staff-138 Table B, however the Undertaking was not removed.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

JT2.27

EVIDENCE REFERENCE:

July 4, 2025 letter to OEB Registrar Murray

UNDERTAKING(S):

Hydro Ottawa to consider filing the comprehensive review completed in early 2025 referred to in the July 4, 2025 letter to OEB Registrar Murray

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RESPONSE(S):

Please refer to 2-CCC-15 Attachment(D) ADMS Program Charter.

TECHNICAL CONFERENCE UNDERTAKING RESPONSES TO ENERGY PROBE RESEARCH FOUNDATION

JT2.29

EVIDENCE REFERENCE:

2-Staff-69

UNDERTAKING(S):

Provide the general plant expenditures and OM&A expenditures on ODERA in 2026

RESPONSE(S):

There are no expenditures related to ODERA within the General Plant Investment Category. All costs associated with the ODERA project and requested through rates are captured within the System Service Investment Category, Distribution Enhancements Capital Program and specifically within the Distribution Enhancements Budget Program, as outlined within Section 3 of Schedule 2-5-8 - System Service Investments. The OM&A expenditures associated with the ODERA project are expected to be funded through third parties.

For details with respect to the planned expenditures for 2026 please refer to the response to interrogatory 2-SEC-54, part (b), Table B.