July 22, 2025

VIA RESS

Ontario Energy Board
P.O. Box 2319,
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4
Attention: Acting Registrar

Dear Mr. Murray,

Re: Hydro Ottawa Limited ("HOL")
Application for electricity distribution rates and other charges beginning January 1, 2026
Board File No.: EB-2024-0115

We are counsel to the Distributed Resource Coalition ("**DRC**") in the above-noted proceeding. Pursuant to Procedural Order No. 1, please find attached the interrogatories of DRC to HOL.

Sincerely,

DT Vollmer

c. All parties
Cara Clairman, Plug'n Drive
Devin Arthur, Electric Vehicle Society

ONTARIO ENERGY BOARD

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

AND IN THE MATTER OF an application by Hydro Ottawa Limited ("**HOL**") to the Ontario Energy Board for an Order or Orders approving or fixing just and reasonable rates and other charges for the distribution of electricity as of January 1, 2026.

EB-2024-0115

INTERROGATORIES

OF

DISTRIBUTED RESOURCE COALITION

July 22, 2025

Question: **1-DRC-1**

Reference:
- Exhibit 1, Tab 1, Schedule 3, p. 4

Preamble: HOL indicated that "residential and commercial customers are adopting electrified technologies – such as electric vehicles (EVs), solar generation, storage systems and heat pumps – at a steadily rising rate." HOL notes that "the combined effect of these developments is an upward pressure on electricity demand, a pressing need for expanded system capacity, and emerging requirements for tools, programs, and human capital resources to fulfill customer expectations (especially for uninterrupted service) in an increasingly electrified environment."

a) Please discuss the impacts of the growing consumer interest in EVs and associated increase in EV penetration in HOL's service territory, on HOL's distribution system planning, load forecast, productivity, and OM&A costs.

b) Please identify in the record where HOL provides details of how technological advancement will require training their workforce over the course of years to ensure HOL is able to sustain a safe and reliable grid as the energy transition accelerates.

c) Please confirm and comment on whether the anticipated widespread adoption of distributed energy resources ("**DERs**") and EVs over the next five years and beyond will require investments in HOL's workforce and please discuss what will be involved in training the workforce for HOL's proposed approach (timeframes, new approaches, etc.).

d) Please comment on what training, programs, and investments will be needed if a more ambitious energy transition and EV and DER adoption scenario occurs over the next five years and beyond. In your response, please comment on what training and upgrading of workforce skills will be needed to ensure that HOL's workforce is able to meet the challenges of an accelerated energy transition in this and the next decade and how does this compare to HOL's current approach and the approach proposed in the Application.

e) Similarly, please discuss any disadvantages where a lower electrification scenario materializes.

Question: 1-DRC-2

Reference:
- Exhibit 1, Tab 2, Schedule 3

Preamble: HOL notes that it is has already started to experience and observe many of the trends associated with the energy transition in its own service territory, including installation of EV chargers by a growing number of residential and commercial customers.

a) Please explain what steps are required and what costs are incurred for a single residential unit to install and connect an EV charger through the typical layout process. In your response, please discuss any unique challenges encountered by HOL's customers.

b) Please explain what steps are required and what costs are incurred for commercial facilities or multi-unit residential buildings to carry out the necessary upgrades to connect EV chargers. In your response, please discuss any unique challenges encountered by HOL's customers.

c) Please indicate how many of each of the following types of customer connections HOL facilitated in its service territory in 2024-2025:

(i) single residential unit EV charger connections;

(ii) commercial facility EV charger connections; and

(iii) multi-unit residential EV charger connections.

d) Please indicate how many of each of the following types of customer connections HOL anticipates in its service territory over the 2026-2030 rate period:

(i) single residential unit EV charger connections;

(ii) commercial facility EV charger connections; and

(iii) multi-unit residential EV charger connections.

e) Please provide any and all working papers, reports, and analysis conducted to support HOL's demand forecasts of expected EV penetration on its service territory.

f) Please indicate whether or not HOL has considered or will consider bidirectional, “vehicle to grid” (“**V2G**”) flow, and if so, please provide any and all assumptions and data.

Question: **1-DRC-3**

Reference:
- Exhibit 1, Tab 3, Schedule 1

Preamble: HOL's rate framework provides OM&A funding in years two through five of the rate period (i.e. 2027-2030), using a custom annual adjustment known as the Custom Revenue OM&A Factor, as follows:

$$\textbf{CROF} = \textbf{I} - \textbf{X} + \textbf{G}$$

where,

- "I" is the inflation factor;
- "X" is the two-component productivity factor;
- "G" is the weighted growth factor

HOL has determined that the CROF will be 5.18%.

a) Please outline HOL's assumptions in the two-component "X" productivity factor in the above CROF equation regarding capacity, load changes, and leveraging due to EVs and other DERs in each of years two through five.

b) Please outline HOL's assumptions in the "G" term in the above CROF equation regarding capacity, load changes, and leveraging of EVs and other DERs in each of years two through five.

c) How were each of DERs, EVs, and EV charging infrastructure treated for the purpose of setting the "I" factor at which HOL arrived? Please provide all related working papers.

Question: 1-DRC-4

Reference:
- Exhibit 1, Tab 4, Schedule 1

Preamble: HOL undertook customer engagement through (i) Annual Electric Utility Customer Satisfaction Survey, delivered by UtilityPulse, (ii) National Electricity Customer Satisfaction Survey, commissioned by Electricity Canada, and delivered by Innovative Research Group, and (iii) Behind the Meter Survey, commissioned by Canadian Electricity Association (now Electricity Canada), and delivered by Innovative Research Group.

a) Please provide a copy of all written instructions provided by HOL to UtilityPulse, Electricity Canada and/or Innovative Research Group in relation to the respective customer engagement mandate and the reports provided in Exhibit 1, Tab 4, Schedule 1, Attachments C, D, E, and F.

b) Please provide a copy of all written instructions provided by HOL to UtilityPulse, Electricity Canada and/or Innovative Research Group in relation to customer engagement with respect to consumer choice in integrating new technologies like EVs, solar power, and battery storage (including V2G).

c) Please describe all measures undertaken by HOL and UtilityPulse, Electricity Canada and Innovative Research Group to invite and ensure the participation of EV stakeholders and other DER customers (including EV drivers, owners of DERs, EV associations, and DER industry associations) in each of the customer engagement activities noted in the preamble.

d) Please provide any and all notes relating to EVs and DERs from each of the customer engagements that are supplementary to the reports provided in Exhibit 1, Tab 4, Schedule 1.

e) Please discuss how the outcomes and priorities of customers have changed compared to historical equivalents and discuss any trend lines in customer priorities related to the adoption and integration of technologies like DERs, EVs, and battery storage (including V2G).

Question: **2-DRC-5**

Reference:
- Exhibit 2, Tab 5, Schedule 1

Preamble HOL notes that the "increasing adoption of electric vehicles represents a substantial load growth factor, with the electrical demands of EV charging, particularly when concentrated and simultaneous, requiring robust grid reinforcement, especially around public charging facilities."

In HOL's 2021 rates application HOL estimated that, based on provincial EV per capita rates, Ottawa will have 2,959 EVs, as of 2018. By the end of 2019, this number was projected to rise to 4,832, a 63% increase. By 2039, the number of EVs within Ottawa was forecasted to grow to 511,332 and EVs will make up 66% of all light vehicles in Ottawa if trends continue.

a) Pease update the above analysis based on any and all new information reasonably available to HOL and provide the most recent estimate of the number of EVs within the HOL service territory. If an update is available, please indicate whether it alters the 2039 forecast of the number of EVs in Ottawa and the share of light vehicles that are expected to be EVs.

b) Please confirm whether HOL's current EV adoption forecast explicitly incorporates the federal ZEV sales mandate and its 2026/2030/2035 interim targets. If not, please explain why the forecast does not reflect this federal policy, and whether HOL intends to update its assumptions.

c) Please provide HOL's forecasted annual EV sales as a percentage of new vehicle sales in its service area in 2026, 2030, and 2035. Please compare those projected shares to the federal ZEV sales targets and comment on any differences.

d) Please confirm whether HOL considered multiple EV adoption scenarios (e.g., high/medium/low cases) in preparing its forecast. If yes, please provide a summary of each scenario, the adoption levels assumed, and the associated system impacts. If not, please explain why scenario analysis was not considered appropriate or necessary.

e) Has HOL undertaken any benchmarking or comparative analysis of its EV adoption and load forecasts against those of other Ontario LDCs? If not, please explain why HOL did not undertake such

benchmarking. If yes, please provide a summary of the results of any such benchmarking, including a comparison of:

(i) Projected EV penetration rates (as a % of customers or vehicles),

(ii) Projected EV-related annual load (kWh),

(iii) Load growth attributable to EVs over the test period (2026 and beyond).

f) Please indicate how many (and where applicable the number of MW) of each of the following types of customer connections HOL's facilitated in HOL's service territory over the rate period:

(i) single residential unit EV charger connections;

(ii) commercial facility EV charger connections;

(iii) condo EV charger connections; and

(iv) renewable energy and back up generation, including the type of facility (solar roof top, solar thermal, wind, energy storage) and the customer breakdown for such facilities (residential, general service, commercial/industrial, and/or large industrial).

g) Please indicate how many of each of the following types of customer connections HOL anticipates in its service territory over the 2026-2030 rate setting period:

(i) single residential unit EV charger connections;

(ii) commercial facility EV charger connections

(iii) condo EV charger connections; and

(iv) renewable energy and back up generation, including the type of facility (solar roof top, solar thermal, wind, energy storage) and the customer breakdown for such facilities (residential, general service, commercial/industrial, and/or large industrial).

h) Have any HOL customers been prevented from or delayed in installing EV charges as a result of capacity constrains in HOL's distribution system? If so, how many customers have been prevented or delayed and for how long?

Question: **2-DRC-6**

Reference:
- Exhibit 2, Tab 5, Schedule 1

Preamble: HOL's investment priorities for is DSP include: Growth & Electrification: Powering a Growing Community; Renewing Deteriorating Infrastructure; Grid Modernization: Enabling the Energy Transition; and Enhancing Resilience.

a) Please provide details as to the areas in HOL's service territory experience the highest reliability and safety risks associated with EV adoption and DER connections (such as neighbourhood, number of DERs connected, overview of risks and reliability issues, customer concerns, etc.). If HOL is unable to provide further details, please explain why not and whether such information may be obtained in this proceeding or subsequent proceedings.

b) What are the consequences if EV growth rates exceed HOL's forecasts? Please include in your response a discussion on what challenges this will present in terms of HOL's ability to meet the higher demand and any consequences it may have on HOL's ability to meet demand past 2030 if demand continues to accelerate more quickly than anticipated.

c) Please discuss the disadvantages and downside risks to HOL's distribution system, customers, investments in EVs and DERs, infrastructure, and/or workforce of underinvesting in EV infrastructure and DER connection and adoption infrastructure if a higher electrification scenario materializes compared to the one relied upon in the Application. Please also discuss the implications of underinvestment over the rate period (2026-2030), mid-term (2030-2040), and long-term (2040 onwards).

d) Similarly, please discuss any disadvantages where a lower electrification scenario materializes.

e) Please comment on known barriers to EV adoption in HOL's service territory, including for multi-unit rental residential, and how the Application seeks to address these barriers and ensure equitable access to charging infrastructure for all customers.

f) Does HOL have any programs to support the upgrading of supply infrastructure to enable EV charging infrastructure when HOL is planning expansion or upgrades? If yes, please provide details. If no, please discuss what types of programs could be developed to support proactive and future

infrastructure upgrades to enable equitable access to EV charging infrastructure for all customers.

g) Please provide HOL's views on any barriers to EV adoption for residents of multi-unit complexes in HOL's service area. Among any other views, please provide specific comment on whether multi-unit residential complexes represent one of the more challenging venues for EV adoption, and whether HOL agrees that addressing those challenges should be prioritized. Please explain HOL's position on each of these points.

h) Please describe any ongoing activities or initiatives proposed by HOL that can help to address challenges specific to EV transition in multi-unit residences by way of proactive infrastructure upgrades or future upgrades. Please include any planned or anticipated initiatives at the system-wide level in addition to any more localized initiatives.

Question: **2-DRC-7**

Reference:
- Exhibit 2, Tab 5, Schedule 4

Preamble: HOL's proposed EV Everywhere ("**EVE**") pilot project "forecasts the impacts of [EV] charging on the distribution system at the transformer level, and uses artificial intelligence (AI) solutions to optimize EV charging during periods of peak demand." HOL notes that the aim of the pilot project includes "testing how the technology can help address localized system needs as EV adoption increases."

HOL notes that "[l]essons learned from the EV Everywhere BESS portion are intended to support standards creation, selection considerations for BESS units (such as siting, MW and MWh capacity, and battery and energy management system features), BESS Integration (use impact assessment, data value, information visibility to stakeholders), strategic application, and maintenance."

a) Please provide a copy of all written instructions provided by HOL to BluWave-ai in relation to its partnership and mandate for the EVE project.

b) Please provide any and all working papers, reports, and analysis conducted on or in support of the EVE project.

c) Please explain how the BESS units will interact with the AI-optimized charging strategy (e.g., peak-shaving, transformer deferral, V2G/V2H support).

d) Please describe the criteria HOL will use to determine whether the pilot should transition to broader deployment (e.g., performance thresholds, payback targets, customer-adoption thresholds).

e) Please identify any technical, regulatory, or commercial barriers HOL foresees in scaling AI-optimized EV charging or localized BESS to its full service territory.

f) Please provide the anticipated number and type of customers (residential, commercial fleet, municipal fleet) that will participate in the pilot.

Question: **2-DRC-8**

Reference:
- Exhibit 2, Tab 5, Schedule 8

Preamble: HOL's proposed Ottawa DER Accelerator ("**ODERA**") project "will utilize predictive analytics and advanced integration of customer-owned distributed energy resources (DERs)/assets to forecast grid loading and assess available load curtailment potential. This information will enable granular scheduling and deployment of load curtailment to mitigate predicted equipment overload and optimize grid capacity."

HOL notes that the ODERA project is envisioned to build on the learnings from the EVE pilot project and "[w]hen complete, Hydro Ottawa will evaluate the feasibility of scaling the technology for use across its distribution territory."

a) Please provide any and all working papers, reports, and analysis conducted on or in support of the ODERA program.

b) Please provide the customer adoption and outreach plan, including communication plan, budget, and metrics.

c) Please provide and describe the criteria HOL will apply to determine scalability (e.g., technical performance, cost-benefit threshold, customer uptake).

d) Please provide a detailed description (diagrams, data flows, and key algorithmic steps) of the predictive-analytics platform, including any third-party software or cloud services to be procured.

e) Please explain how lessons learned from the ODERA project will inform subsequent DERMS deployments or system-wide non-wires solutions.

f) Please identify the portion of forecast curtailment or flexibility expected from EV chargers and/or V2G resources.

Question: **2-DRC-9**

Reference:
- Exhibit 2, Tab 5, Schedule 4

Preamble: HOL notes that it continues to invest in green fleet vehicles and technology, where it is available for commercial fleets and cost effective.

a) Please complete the following chart indicating the breakdown of vehicle type in HOL's current vehicle fleet:

Vehicle Type	Fully Electric	Plug-in Hybrid	Hybrid	Non-EV/Hybrid	Total
Heavy Duty Vehicles					
Medium Duty Vehicles					
Light Duty Vehicles					

b) What proportion of HOL's planned fleet renewal investment will involve fully electric and/or hybrid vehicles? Please supplement the information provided in Table 37 by completing the following chart indicating HOL's anticipated breakdown of vehicle type in HOL's planned fleet renewal investment (2026 to 2030):

Vehicle Type	Fully Electric	Plug-in Hybrid	Hybrid	Non-EV/Hybrid	2026-2030 Total
Heavy Duty Vehicles					
Medium Duty Vehicles					
Light Duty Vehicles					

c) Please indicate the estimated quantum of efficiency savings (including fuel cost savings) that HOL anticipates it will achieve by utilizing hybrid vehicles and EVs rather than traditional internal combustion engine vehicles.

Question: **3-DRC-10**

Reference:
- Exhibit 3, Tab 1, Schedule 1, Attachment B

Preamble: HOL engaged Itron to complete a weather-normal sales and energy forecast for years 2024-2030. The revenue load forecast includes total energy and demand sales and considers factors such as the adoption of EVs, as well as the electrification of commercial transportation.

a) Please discuss how Itron and HOL's load forecast considers the impact and integration of EVs and EV charging infrastructure and provide any and all related analysis, working papers, and/or reports.

b) Please provide, in the chart format below, an assessment of the impacts on loads and demands — including the load forecast — of your estimate of EVs and distributed generation in each year and any supporting references.

	2024	2025	2026	2027	2028	2029	2030
EVs (number, kW or kWh)							
EV charging infrastructure (number, kW or kWh)							
Distributed Generation (number, type, kW or kWh)							
etc.							

ALL OF WHICH IS RESPECTFULLY SUBMITTED THIS
22nd day of July, 2025

Lisa (Elisabeth) DeMarco
Resilient LLP
Counsel for DRC

DT Vollmer
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Counsel for DRC