

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 1-ED-1**

4  
5                   Reference: Exhibit 1

6  
7                   Question(s):

8  
9                   a) Please describe how Alectra will address situations where, mid-term, it is able to defer or  
10                   avoid a capital expenditure included in the capital budget with a NWS that involves an  
11                   alternative capital investment, increased operational costs (e.g. payments to an  
12                   aggregator), or a combination of both. Please provide examples with sample figures to  
13                   explain the impacts.

14  
15                   b) Please discuss a mechanism to reallocate costs between capital and operational budgets  
16                   as necessary to reflect an NWS that reduces capital costs but increases operational  
17                   costs.

18  
19                   c) Please provide the criteria for NWS that can be implemented mid-term without seeking  
20                   OEB approval. Please also provide the criteria or checklist that Alectra believes would  
21                   trigger the need for OEB approval. Please explain the response.

22  
23                   **RESPONSE:**

24  
25                   a) and b)

26  
27                   Alectra Utilities considered NWS options for all significant distribution investments as part  
28                   of the capital planning process. The utility identified five station-level needs that can be  
29                   deferred using NWS, as set out in Appendix B13 – Stations Capacity. The deferral of  
30                   these five investments is already reflected in the DSP. Alectra Utilities does not expect  
31                   that any other material investments that are currently included in the DSP and for which

1 funding is sought in this application could reasonably be deferred through the use of  
2 NWS. Accordingly, the utility cannot provide a meaningful example illustrating the  
3 impacts of such a hypothetical scenario.

4  
5 To the extent that NWS allow Alectra Utilities to defer capital investment that would  
6 otherwise be necessary to address incremental needs that arise during the 2027-2031  
7 period (i.e., capital investments that are not included in the DSP), Alectra Utilities  
8 proposes to use the NWSDA deferral account to record the incremental operational cost  
9 and incentive payments.

10

11 c) Alectra Utilities will use criteria set in Exhibit 2A, Tab 1, Schedule 1, Chapter 5.3.5 to  
12 assess NWS implemented during the rate period. Alectra Utilities proposes to use the  
13 NWSDA deferral account to record the incremental operational cost. Please also see  
14 response to 2-Staff-47.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 1-ED-2**

4  
5                   Reference: Exhibit 1, Tab 6, Schedule 2

6  
7                   Question(s):

8  
9                   a) The evidence indicates that over 90% of micro-generation projects were connected within  
10                   the prescribed time frame or at an agreed-upon date with the customer. Please indicate  
11                   for each year the percent connected (i) within the prescribed time frame and (b) an  
12                   agreed-upon date. For the five most recent projects connected on an agreed-upon date,  
13                   please provide the correspondence in which the customer agreed upon an alternative  
14                   date (with personal information redacted).

15  
16                   b) Please provide the same information for other DER categories (small, mid-sized, large).

17  
18                   **RESPONSE:**

19  
20                   a) Table 1-6-17 in Exhibit 1, Tab 6, Schedule 2 (Page 20) is reproduced below. The Table  
21                   provides the percentage of micro DERs connected within the prescribed timeframe for  
22                   each year:

23                   **Table 1 - Restated Table 1-6-17**

	2019	2020	2021	2022	2023	5 Yr Avg
Alectra Utilities	78.3%	98.4%	100.0%	93.3%	98.4%	93.7%

24  
25                   Alectra Utilities further confirms that, for the years presented in Table 1-6-17, the  
26                   percentage of micro-generation projects connected on an agreed-upon alternative date  
27                   is 0% in each year. Accordingly, Alectra Utilities has no customer correspondence to  
28                   provide in response to the request for the five most recent projects connected on an  
29                   agreed-upon date.

1 b) Alectra Utilities notes that prescribed service connection timelines are not established for  
2 other DER categories. The only prescribed timeframe applicable to these categories is  
3 the 60-day requirement to complete a Customer Impact Assessment (CIA). As a result,  
4 the annual percentages requested in part (a) for “connected within the prescribed  
5 timeframe” and “connected on an agreed-upon date” are not applicable for non-micro  
6 DER categories. Alectra Utilities works collaboratively with prospective DERs to meet  
7 their service delivery expectations.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 1-ED-3**

4  
5                   Reference: Exhibit 1, Tab 9, Schedule 6

6  
7                   Question(s):

- 8  
9                   a) Does Alectra agree that consolidation is beneficial for efforts to address the energy  
10                   transition because fixed costs relating to planning and efforts to address the energy  
11                   transition can be spread over a larger number of customers?  
12  
13                   b) What additional relief could be granted by the OEB in this proceeding to facilitate further  
14                   consolidation with respect to Alectra and its contiguous LDCs?

15  
16                   **RESPONSE:**

- 17  
18                   a) The OEB has acknowledged in its *Handbook to Electricity Distributor and Transmitter*  
19                   *Consolidations*, revised July 11, 2024, that consolidation is expected to enable  
20                   distributors to address challenges in an evolving electricity industry. At pp. 3-4 of the  
21                   Handbook, the OEB states: “Emerging challenges facing the energy sector include  
22                   (among others) impacts of net-zero carbon initiatives such as increased use of electric  
23                   vehicles and other electrification initiatives; challenges related to cybersecurity; the need  
24                   for system resiliency in the face of climate change; management of distributed energy  
25                   resources, and considerations of distribution system operator models.”  
26  
27                   b) Alectra Utilities declines to comment on what additional relief could be granted in this  
28                   proceeding to facilitate further consolidation. The relief sought in this proceeding is  
29                   specific to Alectra’s Custom IR application, and the OEB must decide the merits of the  
30                   case based on the evidence and proposals in the application.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 1-ED-4**

4  
5                   Reference: Exhibit 1

6  
7                   Question(s):

8  
9                   a) Does Alectra survey its customers regarding the likelihood that they will purchase a cold  
10                   climate heat pump in the near future? If yes, please provide the results. If not, why not,  
11                   and is Alectra willing to do so in the future? For an example of survey questions, see the  
12                   Burlington Hydro customer engagement survey.

13  
14                   b) Please summarize the results of all surveys on EV adoption and compare those to the  
15                   EV adoption assumptions underlying Alectra's load forecast.

16  
17                   **RESPONSE:**

18  
19                   a) Alectra does not currently conduct customer surveys to assess the likelihood of  
20                   customers purchasing cold-climate heat pumps. At this time, cold climate heat pumps  
21                   have not emerged as a material area of demand through routine customer interactions  
22                   or inquiries. Alectra does, however, anticipate demand to increase - driven largely by  
23                   introduction of new incentives and marketing focus through the Electricity Demand Side  
24                   management (eDSM) IESO framework. In response, Alectra Utilities - has engaged its  
25                   third-party survey provider, J.D. Power, to consider inclusion of questions on cold climate  
26                   heat pumps in future surveys.

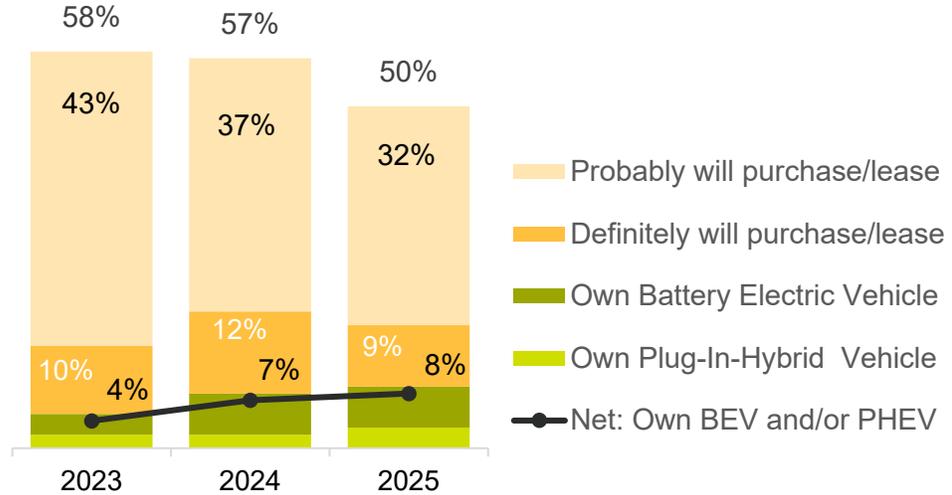
27  
28                   b) Alectra has undertaken multiple studies on EVs, but has placed particular emphasis on  
29                   the J.D. Power results as they consistently incorporate "adoption" rates to support trend  
30                   analysis. The additional studies provided more detailed insights into adoption drivers,

1 segmentation of early versus late adopters, expectations regarding utility support, and  
 2 charging behaviours. The studies include the following:

- 3 • 2022 UtilityPulse Customer Satisfaction Survey – 50% interest with 7%  
 4 planned purchase over next 2 years.
- 5 • 2023/2024/2025 J.D. Power – as noted below.

6  
 7 Chart 1 shows J.D. Power survey insights for EV market ownership and purchase intent  
 8 within Alectra’s service area. While the purchase intent declined in 2025, ownership has  
 9 increased. Moreover, the 2025 survey shows a potential of 50% across Alectra Utilities’  
 10 service area, including 8% current ownership, 9% short-term intent (Definitely will  
 11 purchase/lease), and 32% long-term intent (Probably will purchase/lease).

12  
 13 **Chart 1 - EV Ownership and Purchase/Lease intent,**  
 14 J.D. Power Survey Engagements within Alectra Service Area



15  
 16 *Source: Derived data from J.D. Power Survey Dashboard of Syndicated Results, Brand*  
 17 *Name Alectra Utilities, Study Year 2023 n = 873, 2024 n = 1,000, 2025 n = 1,647.*  
 18

19 The customer survey results for EV ownership trends since 2023 support Alectra’s EV  
 20 adoption projections underlying Alectra’s load forecast, which reflect 70,717 EVs in 2025  
 21 (7% EV adoption rate out of 989,905 residential customers), with a breakdown of 45,300  
 22 BEVs and 25,416 PHEVs (5% and 3% adoption, respectively), and steady year over year

1 growth reaching 533,551 EVs combined by 2031 (53% EV adoption rate out of forecasted  
2 1,015,576 residential customers). Please see Exhibit 2A, Tab 1, Schedule 1, Part 5 of 5,  
3 Appendix J (3.6 Future Electric Vehicles Impact, p32-34) and Alectra's Customer Forecast  
4 in Exhibit 3, Tab 1, Schedule 1, Attachment 3-2 (Overview, page 4).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-5**

4  
5                   Reference: Exhibit 2A, 5.2.3 (DSP - NWS)

6  
7                   Question(s):

8  
9                   a) Please confirm that Ontario’s Integrated Energy Plan includes a DER Strategy.

10  
11                  b) Please discuss potential additional performance measures that would be aligned with  
12                  Ontario’s DER strategy.

13  
14                  **RESPONSE:**

15  
16                  a) Alectra Utilities understands that the term “Ontario’s Integrated Energy Plan” refers to the  
17                  Government of Ontario’s Integrated Energy Plan titled *Energy for Generations: Ontario’s*  
18                  *Integrated Plan to Power the Strongest Economy in the G7*, released on June 12, 2025,  
19                  together with related implementation direction. That document includes a section on page  
20                  89 entitled “Ontario’s DER Strategy.”

21  
22                  DER-related policy and activities in Ontario continues to advance through formal  
23                  provincial and agency processes (including IESO and OEB-led initiatives and working  
24                  groups), in which Alectra Utilities is an active participant.

25  
26                  b) Alectra Utilities has not identified and is not proposing performance measures specifically  
27                  based on the discussion of DER in Ontario’s Integrated Energy Plan. Alectra Utilities’  
28                  proposed DSP performance measures are filed in *Exhibit 2A, Tab 1, Schedule 1, Section*  
29                  *5.2.3* (including *Table 5.2.3-1*).

1        *Appendix B14 – Enabling Resiliency and Modernization* describes the enabling  
2        capabilities being proposed to support a DER-ready grid and to implement DER-related  
3        use cases as requirements evolve over the DSP period. Please refer to *Exhibit 2A, Tab*  
4        *1, Schedule 1, Appendix B14*.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-6**

4  
5                   Reference: Exhibit 2A, 5.5.3 (DSP - NWS)

6  
7                   Question(s):

8  
9                   a) If the NWSDVA were not to be implemented (e.g. due to an OEB order or a settlement),  
10                   what incremental O&M costs would Alectra include in its rates application? Please  
11                   provide an annual breakdown. To account for the uncertainty, please include a high and  
12                   low estimate.

13  
14                   b) Is the NWSDA important in part because likely O&M costs for NWS are minimal for the  
15                   test year and much greater for the later years in the rate term? If yes, please discuss.

16  
17                   c) What are the total estimated deferral savings over the rate term for deferring the 5  
18                   stations via NWSs.

19  
20                   d) Please discuss potential additional performance measures that would be aligned with  
21                   Ontario's DER strategy.

22  
23                   **RESPONSE:**

24  
25                   a) If the Non-Wires Solutions Deferral Account (NWSDA) were not approved, the  
26                   incremental OM&A costs required to implement the NWS Program would need to be  
27                   addressed through other regulatory means. For reference, the expected incremental  
28                   OM&A costs associated with the NWS Program are set out in *Exhibit 9, Tab 8, Schedule*  
29                   *3 Non-Wires Solution Deferral Account* and total approximately \$13.2 million over the  
30                   2027-2031 period. The annual breakdown is provided below:

1 **Table 1 – Annual Breakdown**

\$MM	2027	2028	2029	2030	2031
DER Payments	\$1.1	\$1.7	\$2.5	\$3.4	\$3.3
NWS OM&A Cost	\$0.1	\$0.2	\$0.2	\$0.3	\$0.3
Incremental OM&A Costs	\$1.2	\$1.9	\$2.7	\$3.8	\$3.6

2

3 Please refer to *Interrogatory Response 2-Staff-47, Attachment 2-Staff-47\_Attach1\_NWS*  
 4 *BCA Template* for additional detail.

5

6 With respect to high and low estimates, Alectra Utilities has not developed high/low  
 7 ranges because the viability and cost profile of the NWS Program is materially sensitive  
 8 to DER pricing, achievable deferral duration, and dispatch performance/certainty. The  
 9 requested NWSDA is proposed to allow prudent scaling and customer protection in light  
 10 of this uncertainty.

11

12 b) No. Although the forecast incremental OM&A costs increase over the 2027-2031 period  
 13 as procurements scale (as reflected in the table above in Part A above), the principal  
 14 rationale for the requested NWSDA is to manage material uncertainty and variability  
 15 (including DER pricing, deferral duration, and dispatch certainty) and to avoid embedding  
 16 uncertain amounts in base rates. Alectra Utilities noted this uncertainty in *Exhibit 2A, Tab*  
 17 *1, Schedule 1, 5.3.5 Non-Wires Solutions to Address System Needs, p. 338* and *Exhibit*  
 18 *9, Tab 8, Schedule 3, 9.3 Non-Wires Solution Deferral Account (NWSDA), p. 1.*  
 19 Consistent with this rationale, Alectra Utilities has not included NWS OM&A costs in the  
 20 revenue requirement forecast in this Application.

21

22 c) Please refer to *Interrogatory Response 2-Staff-47, Attachment 2-Staff-47\_Attach1\_NWS*  
 23 *BCA Template*. The BCA results indicate total estimated deferral savings of \$31.1 million  
 24 and total net DST benefits of \$17.3 million, calculated over the life-cycle of the station/line

1 assets. Alectra Utilities notes that “deferral savings over the 2027-2031 rate term” is not,  
2 on its own, a meaningful metric because deferral value is driven by the duration of deferral  
3 and the timing of the wires investment beyond the rate term. However, for completeness,  
4 the difference in revenue requirement between the Reference Case (wires solution) and  
5 the Deferred Case (NWS Program) over the 2027-2031 period is \$52.6 million.

6

7 d) Please refer to Interrogatory Response 2-ED-05-B.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-7**

4  
5                   Reference: Exhibit 2A (DSP - NWS)

6  
7                   Question(s):

8  
9                   a) Please provide all underlying documentation relating to NWS assessments Alectra has  
10                   undertaken with respect to each project during the rate term over \$2 million. If it is not  
11                   clear from that underlying documentation, please indicate each of the NWSs explored for  
12                   each project and why each was ruled out.

13  
14                   b) Has Alectra already completed a full NWS assessment for each project over \$2 million  
15                   planned during the rate term? If not, please list the projects for which an NWS  
16                   assessment has not yet been completed and the value of each.

17  
18                   c) Please provide a table with a row for each project over \$2 million and columns to indicate  
19                   whether each of the following NWSs was considered: demand response, energy  
20                   efficiency, storage, solar/storage, and a combination of those solutions. Please also  
21                   include a column to indicate whether one or more third party NWS developers or  
22                   aggregators were approached to assess whether they could meet the distribution needs  
23                   at a lower cost.

24  
25                   d) In assessing NWSs, did Alectra approach one or more third party NWS developers or  
26                   aggregators were approached to assess whether they could meet the distribution needs  
27                   at a lower cost? If yes, please indicate which ones were approached and provide the  
28                   documentation provided to them (e.g. a request for proposal or equivalent).

29  
30                   e) For each, please also indicate, if Alectra decides that a NWS would be appropriate during  
31                   the rate period, will it request OEB approval or do so via its existing funding envelopes?

1 **RESPONSE:**

2

3 a) Please refer to the following Interrogatory Responses:

4 - *2A-SEC-40 and Attachment 2A-SEC-40\_Attach 1\_Station-level evaluation*

5 - *2A-SEC-41 and Attachment 2A-SEC-41\_Attach1\_NWS\_BCA*

6 - *2-Staff-46*

7 - *2-Staff-47 and Attachment 2-Staff-47\_Attach1\_NWS BCA Template*

8

9 Please see the attached file *2-ED-7\_Attach 1\_Lines-level evaluation* for the potential  
10 application of NWS to Lines Capacity projects, in addition to Stations Capacity projects  
11 addressed in *Attachment 2A-SEC-40\_Attach 1\_Station-level evaluation*.

12

13 For this DSP filing, Alectra Utilities' NWS work was implemented as a principles-based,  
14 four-gate screening framework and was applied to capacity-driven investments. Please  
15 refer to *Exhibit 2A, Tab 1, Schedule 1, Sections 5.3.5.4 and 5.3.5.5*.

16

17 Alectra Utilities further notes that the DSP evidence explicitly contemplates the  
18 development of detailed internal checklists and decision matrices as part of internal  
19 planning practices as the Framework matures. Accordingly, other than the filed DSP  
20 evidence and the project-specific rationale referenced in the Interrogatory Responses  
21 above, there is no additional standalone NWS assessment documentation.

22

23 b) No. As indicated in the *Interrogatory Response to 2-Staff-46*, Alectra Utilities has not  
24 completed a full NWS assessment for each project over \$2 million across the entire DSP  
25 capital plan. For this filing, Alectra Utilities proactively applied its preliminary NWS  
26 Framework to capacity-related needs and advanced only those needs that were suitable  
27 candidates to Gate 3 (BCA and Engineering).

28

29 c) Please refer to the following Interrogatory Responses *2A-SEC-40, Attachment 2A-SEC-*  
30 *40\_Attach 1\_Station-level evaluation and 2-ED-7 Attachment 2-ED-7\_Attach 1\_Line-*  
31 *level evaluation*.

- 1 d) No. For this DSP filing, Alectra Utilities did not approach third-party NWS developers or  
2 aggregators as part of the application of the preliminary NWS Framework. Market  
3 engagement with third-party providers will occur, as applicable, during the  
4 implementation stage of the proposed NWS Program (e.g., through a competitive  
5 procurement process). Accordingly, there is no request for proposal (or equivalent  
6 documentation) to provide at this time.  
7
- 8 e) For each of the identified five station related projects, Alectra Utilities proposes to address  
9 cost recovery for the NWS Program through the Non-Wires Solutions Deferral Account  
10 (NWSDA), with disposition to be sought at the end of the 2027-2031 rate term. Please  
11 refer to *Exhibit 9, Tab 8, Schedule 3, 9.3 Non-Wires Solution Deferral Account*.

**2-ED-7**

**Attachment 1  
Lines-level Evaluation**

**Please see live Excel**

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-8**

4  
5                   Reference: Exhibit 2A (DSP - NWS)

6  
7                   Question(s):

8  
9                   a) At least arguably, the proposal for an NWSDVA coupled with the proposed Margin on  
10                   Payments does not create an incentive to minimize the cost of non-wires solutions.  
11                   Please respond to this.

12  
13                   b) Please identify additional options to address the concern noted above while still  
14                   addressing the drivers for those proposals, including uncertainty regarding the cost of  
15                   non-wires solutions and the need to remove disincentives to replace capital spending (on  
16                   traditional solutions) with O&M spending (on non-wires solutions).

17  
18                   c) What would Alectra's next preferred option be to address the uncertainty of NWS costs  
19                   if it is not allowed to adopt the NWSDVA and/or proposed Margin on Payments?

20  
21                   d) Would Alectra consider only including costs in that will be competitively procured in the  
22                   NWSDVA and include other costs in the standard O&M budget?

23  
24                   e) What is the approximate percentage of anticipated NWSDVA costs that will be (a)  
25                   competitively procured versus (b) non-competitively procured costs (e.g. Alectra staffing  
26                   or programmatic approaches to DER procurement)? We understand that precision is  
27                   impossible at this stage - please provide an approximate estimate on a best-efforts basis.

28  
29                   f) What steps will Alectra take to ensure that it secures NWSs at the lowest cost?

1 **RESPONSE:**

2

3 a) Alectra Utilities does not agree that the proposed NWSDA coupled with the proposed  
4 Margin-on-Payments (“MoP”) removes incentives to minimize NWS costs.

5

6 Amounts recorded in the NWSDA are incremental, net of third-party funding and inclusive  
7 of any OEB-approved incentive revenues (including MoP), and Alectra Utilities will file  
8 procurement results, costs, and performance evidence when seeking disposition.

9

10 MoP is a constrained OEB mechanism with embedded cost discipline. The OEB’s recent  
11 Distribution System Code amendments<sup>1</sup> establish a default MoP of 25%, require a  
12 positive net benefit under the Distribution Service Test (DST), and cap the MoP such that  
13 the NPV of the MoP cannot exceed 50% of the NPV of forecast net benefits. The OEB  
14 also requires a completed Benefit-Cost Analysis (“BCA”) including the DST as part of the  
15 MoP application.

16

17 Furthermore, to minimize the NWS Program costs, Alectra Utilities will rely on competitive  
18 procurement (e.g., RFI/RFP and local auctions), contract performance provisions, and  
19 Evaluation, Measurement and Verification (“EM&V”) mechanisms.

20

21 b) Alectra Utilities notes the OEB has expressly identified three incentive mechanisms for  
22 third-party DERs as non-wires alternatives: (i) shared savings, (ii) performance  
23 target/scorecard, and (iii) margin on payments.<sup>2</sup>

24

25 Alectra Utilities notes that a Shared Savings Mechanism (“SSM”) is an available option  
26 because it directly creates an incentive to minimize NWS costs. The mechanism is  
27 designed to calculate customer savings from DER solutions and allocate a formula-based

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<sup>1</sup> OEB. Notice of Amendments to the Distribution System Code. November 25, 2025

<sup>2</sup> OEB. Filing Guidelines for Incentives for Electricity Distributors to Use Third-Party DERs as Non-Wires Alternatives, March 28, 2023.

1 portion of savings to shareholders. Therefore, lower-cost procurement (for a given level  
2 of service) increases net savings and the associated shareholder share. The SSM still  
3 supports the objective of removing the capex/opex disincentive, by providing an earnings  
4 opportunity tied to customer value rather than capital deployment.

5

6 c) Alectra Utilities cannot speculate on what proposals it may advance in the hypothetical  
7 scenario that the utility's proposals around NWS were rejected. Alectra Utilities has  
8 proposed to adopt the MoP incentive payment mechanism in this application because of  
9 its relative simplicity and consistency with the approach set out by the OEB in Section 11  
10 of the Distribution System Code. As the utility and the sector continue to gain experience  
11 with the evolving DER market, the company will continue to consider incentive  
12 mechanisms and may propose other approaches in subsequent applications.

13

14 d) Alectra Utilities does not propose limiting the NWSDA to only competitively procured  
15 costs. Alectra Utilities notes that the incremental OM&A required to deliver NWS scales  
16 with, and is directly caused by, the size and operation of the NWS portfolio (e.g.,  
17 contracting/procurement administration, EM&V, coordination, and operational program  
18 costs). These OM&A costs are enabling costs that are integral to securing, integrating,  
19 dispatching (where applicable), and verifying third-party DER services, and therefore are  
20 not standalone costs that can be readily separated from DER payments. Segregating  
21 these costs out of the NWSDA would not reflect how the program is delivered and would  
22 risk reintroducing the O&M disincentive the NWSDA is intended to address.

23

24 e) Based on current planning, Alectra Utilities estimates that ~90% of anticipated NWSDA  
25 costs would be competitively procured (principally third-party DER payments), and ~10%  
26 would be non-competitively procured (e.g., internal staffing, program administration,  
27 EM&V, coordination), on a best-efforts basis. This estimate is based on (i) forecast DER  
28 payments of approximately \$12.0MM over the DSP period and (ii) total NWS Program  
29 OM&A forecast of up to approximately \$13.2MM.

- 1 f) Alectra Utilities has defined specific steps in its NWS Framework (*Exhibit 2A, Tab 1,*  
2 *Schedule 1, 5.3.5. Non-Wires Solutions to Address System Needs*) and NWSDA  
3 Accounting Order (*Exhibit 9, Tab, 8, Schedule 3, 9.2 Non-Wires Solution Deferral*  
4 *Account (NWSDA)*) to ensure lowest cost:
- 5 1. Alectra Utilities will utilize competitive, transparent RFI/RFP/RFQ processes and/or  
6 local auctions to secure pricing from the market rather than setting administrative  
7 prices.
  - 8 2. The NWS program is designed to be "technology-neutral," allowing various resources  
9 to compete, maximizing the pool of suppliers to drive down price.
  - 10 3. Alectra Utilities will develop clear eligibility and auction rules, with performance  
11 obligations, penalties/remedies, and settlement tied to verified availability and  
12 delivered capacity (or energy where applicable).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-9**

4  
5                   Reference: Exhibit 2A, 5.5.3 (DSP - NWS)

6  
7                   Question(s):

- 8  
9                   a) Please provide a copy of Alectra’s internal NWS screening methodology and any other  
10                   internal NWS guidance documents.  
11  
12                   b) Page 338 states: “The preliminary BCA results indicated positive economics under  
13                   conservative assumptions, 20 supporting a deferral path during the DSP Period.” Please  
14                   provide the results/BCA underlying this statement.

15  
16                   **RESPONSE:**

17  
18                   Alectra Utilities assumes that the intended reference is to Exhibit 2A Tab 1 Schedule 1  
19                   section 5.3.5.

- 20  
21                   a) The Preliminary NWS Framework described in *Exhibit 2A, Tab 1, Schedule 1, Section*  
22                   *5.3.5.4*, including the gate-based screening process used to screen, evaluate, and select  
23                   candidate NWS opportunities for further assessment, serves as Alectra Utilities’ internal  
24                   NWS screening methodology. Alectra Utilities plans for the 2027-2031 period include  
25                   enhancements to the Copperleaf platform to incorporate BCA analysis for applicable  
26                   investments. Please refer to Exhibit 2A Schedule 1 Tab 1 section 5.3.5.3 Page 329.  
27  
28                   b) Please refer to *Interrogatory Response 2-Staff-47, Attachment 2-Staff-47\_Attach1\_NWS*  
29                   *BCA Template*, and *2A-SEC-41, Attachment 2A-SEC-41\_Attach1\_NWS\_BCA*.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3   **INTERROGATORY # 2-ED-10**

4

5   Reference: Exhibit 2A, Appendix A (DSP - REG)

6

7   Question(s):

8

9   a) Please provide a breakdown of forecasted DER facility connections over the rate term  
10       with a breakdown by generation type (e.g. solar, storage, gas, etc.). Please include both  
11       number and expected MW, and the total over the term.

12

13   **RESPONSE:**

14

15   a) Table 1 below provides quantities of forecasted DER connections over the rate term,  
16       broken down by generation type. Note that Other refers to technologies such as natural  
17       gas, biomass, and diesel.

18   **Table 1 - Forecasted DER Connection**

DER Technology	2027	2028	2029	2030	2031	Total
Solar	388	392	397	402	407	<b>1986</b>
Energy Storage	3	3	4	4	4	<b>18</b>
Other	7	7	7	7	7	<b>35</b>
<b>Totals (Count)</b>	<b>398</b>	<b>402</b>	<b>408</b>	<b>413</b>	<b>419</b>	<b>2040</b>

19

20

21   Table 2 below provides the forecasted MW additions from DER connections over the rate  
22       term, broken down by generation type.

1 **Table 2 - Forecasted MW Additions from DER Connections**

REG Technology	2027	2028	2029	2030	2031	Total
Net Metering	6.60	6.68	6.76	6.84	6.92	<b>33.81</b>
Energy Storage	2.56	2.65	2.75	2.86	2.96	<b>13.78</b>
Other	8.45	8.53	8.62	8.70	8.79	<b>43.10</b>
<b>Totals (Count) MW</b>	<b>17.61</b>	<b>17.87</b>	<b>18.13</b>	<b>18.40</b>	<b>18.68</b>	<b>90.69</b>

2

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-11**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP - system access)

6  
7                   Question(s):

8  
9                   a) These questions concern the proposed system access spending, including the spending  
10                   to connect new housing developments. Please provide a table showing the average  
11                   connection costs per lot for residential developments. Please provide a breakdown  
12                   showing the average costs for developments with and without gas heating. Please  
13                   include the full costs, including the amounts that will be included in rate base and the  
14                   amounts that will be covered by the developer. Please provide the information based on  
15                   the previous 5 years of connections. If that is not feasible, please select a feasible  
16                   timeframe.

17  
18                   b) Please provide a figure comparing the results in (a) to the figures on page 14 of the  
19                   following PwC report prepared for the OEB:  
20                   [https://www.oeb.ca/sites/default/files/uploads/documents/reports/2024-10/Report-Back-](https://www.oeb.ca/sites/default/files/uploads/documents/reports/2024-10/Report-Back-to-Minister-on-System-Expansion-for-Housing-Developments-20241021.pdf)  
21                   [to-Minister-on-System-Expansion-for-Housing-Developments-20241021.pdf.](https://www.oeb.ca/sites/default/files/uploads/documents/reports/2024-10/Report-Back-to-Minister-on-System-Expansion-for-Housing-Developments-20241021.pdf)

22  
23                   c) Please discuss additional steps that Alectra could take to fulfill the Ontario Government's  
24                   goal of reducing the cost of electrical connections for housing developments. Please  
25                   address, in particular, steps that could be taken to reduce the costs of all-electric  
26                   developments (i.e. those without gas heating).

1 **RESPONSE:**

2

3 a) Alectra Utilities does not differentiate the costs between developments with and without  
4 gas heating. Alectra's standard service offering of 200A is adequate for typical sized  
5 homes with or without gas heating.

6

7 Alectra Utilities has provided the average gross unit cost, Developer contribution, and net  
8 cost for residential developments over the past 5 years from 2021 to 2025, as shown in  
9 Table 1 below. The calculations for Table 1 are explained in EB-2025-0252, Tab 1,  
10 Schedule 1, B10, Page 407, lines 6 to 11.

11

12 **Table 1 - Historical Residential Subdivision Per Unit Pricing – EEM Approach**

<b>YEAR</b>	<b>Gross \$MM</b>	<b>Developer Contribution (58%) \$MM</b>	<b>Net \$MM</b>	<b>AVG Gross Unit Cost</b>
<b>2021</b>	\$ 26.1	\$ 15.1	\$ 11.0	\$ 4,652
<b>2022</b>	\$ 36.9	\$ 21.4	\$ 15.5	\$ 6,810
<b>2023</b>	\$ 39.8	\$ 23.1	\$ 16.7	\$ 8,642
<b>2024</b>	\$ 39.5	\$ 22.9	\$ 16.6	\$ 7,380
<b>2025 (Actual)</b>	\$ 30.1	\$ 17.5	\$ 12.6	\$ 8,591

13

14 b) Alectra Utilities has provided statistics of various costs derived from OTCs issued in 2025  
15 and compared this data to the figures on page 14 of the PwC report that was referenced.  
16 Please refer to Table 2 below.

1 **Table 2 - Alectra Average Unit Cost Comparison to PwC Statistics**

<b>Statistic</b>	<b>Gas Heated-Other LDCs</b>	<b>All Electric-Other LDCs</b>	<b>Alectra Utilities-2025-EEM Approach</b>
<b>Median</b>	\$ 8,100	\$ 12,200	\$ 8,479
<b>Mean</b>	\$ 7,500	\$ 12,200	\$ 8,591
<b>Min</b>	\$ 3,300	\$ 11,900	\$ 3,959
<b>Max</b>	\$ 11,300	\$ 12,400	\$ 30,543

2

3 c) Alectra Utilities supports Ontario’s goal of managing the costs of electrical connections  
 4 for housing development. However, these costs are influenced by a wide range of factors,  
 5 including material pricing, labour rates, Municipal and Regulatory requirements, site  
 6 conditions, weather constraints and third-party coordination, many of which extend  
 7 beyond Alectra’s direct control.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-12**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP - DER connection capacity)

6  
7                   Question(s):

- 8
- 9                   a) Please provide the approximate number and percent of Alectra customers that are unable  
10                   to connect a distributed energy resource (i.e. DERs or BTM generation) due to electricity  
11                   system constraints (e.g. thermal or short circuit constraints). This can be estimated, for  
12                   instance, by determining the number of customers on restricted/constrained feeders. If  
13                   possible, please provide the number that are unable to connect due to (i) thermal  
14                   constraints, (ii) short circuit constraints, or (iii) both.
- 15
- 16                   b) Please provide the approximate number and percent of customers for whom a technical  
17                   restriction (e.g. short circuit or thermal constraint) on connecting a DER will be removed  
18                   due to investments that Alectra is planning.
- 19
- 20                   c) Please describe the measures that Alectra is undertaking to reduce restrictions on its  
21                   customers connecting DERs.
- 22
- 23                   d) Does Alectra offer Flexible Interconnection Capacity Solutions?<sup>1</sup> If not, does it intend to  
24                   do so in the future, and if yes, when?
- 25
- 26                   e) Does Alectra have DER Management Systems (DERMS) in place to cost effectively  
27                   monitor and, where appropriate, control DERs? If not, does it intend to do so in the future,  
28                   and if yes, when?

---

<sup>1</sup> For a description of Flexible Interconnection Capacity Solutions and their benefits see  
<https://restservice.epri.com/publicdownload/000000003002022432/0/Product>.

1 f) Does Alectra have DER Management Systems (DERMS) in place to cost effectively  
 2 monitor and, where appropriate, control micro-generation and small DERs (e.g. utilizing  
 3 less expensive solutions such as PCS and TCP/IP)? If not, does it intend to do so in the  
 4 future, and if yes, when?  
 5

6 **RESPONSE:**  
 7

8 a) Alectra Utilities estimates that 65,746 customers that are presently unable to connect a  
 9 DER due to system constraints. This represents approximately 6% of the total Alectra  
 10 Utilities customer base. All existing constraints are due to short-circuit limitations. Details  
 11 are provided in the table below:  
 12

13 **Table 1 - Customers Unable to Connect to a DER**

Data	ERZ	BRZ	PRZ	GRZ	HRZ	Alectra
Total number of customers (December 2025)	209709	174926	395209	58293	258145	1096282
Number of restricted customers	3185	228	46718	8571	7044	65746
Percentage of customers who are restricted	1.52%	0.13%	11.82%	14.70%	2.73%	6.00%

14  
 15 The table below also shows the split in restricted customers between those supplied from  
 16 feeders from Alectra Utilities stations and those supplied from Hydro One (HONI)  
 17 stations:  
 18

19 **Table 2 - Split in Restricted Customers**

	# of Restricted Customers	Alectra-HONI Split	% of Total Alectra Customers
Alectra TS's	43962	67%	4%
HONITS's	21784	33%	2%
<b>Alectra Total</b>	<b>65746</b>		

20  
 21  
 22 b) No specific investments are currently planned that would remove DER connection  
 23 constraints.

1 c) Alectra Utilities is investigating solutions to reduce restrictions on DER connections.  
2 These solutions require further study to determine their feasibility and cost-effectiveness.  
3 Alectra Utilities also works with Hydro One on potential solutions for restricted feeders  
4 supplied from Hydro One TS's.

5 Potential measures include:

- 6 1) policy measures, such as implementing a threshold limitation within which  
7 additional micro-DER connections could be permitted;  
8 2) operational measures, such as switching feeders to different station buses to  
9 mitigate short-circuit limitations; and  
10 3) technical measures, such as installing neutral reactors.

11

12 d) No, Alectra Utilities does not currently offer Flexible Hosting Capacity Solutions. Alectra  
13 Utilities is evaluating the operational, process and technology implications of offering  
14 such solutions. Alectra Utilities expects to further explore and develop the necessary  
15 enabling capabilities over the 2027-2031 rate period. However, Alectra Utilities is not in  
16 a position at this time to confirm a date for offering Flexible Hosting Capacity Solutions.

17

18 e) No, Alectra Utilities does not currently have a DERMS system in place, but plans to do  
19 so in the future.

20

21 Alectra Utilities' existing SCADA system provides monitoring capabilities for connected  
22 DERs, including the monitoring of current, voltage, and operating states. This enables  
23 Alectra to enforce operating limits at the feeder or device level. However, this functionality  
24 is a precursor to DERMS and does not provide the DERMS-related functionality  
25 described in Appendix B14, Sections 4.3.4 and 4.4.2, within the Advanced Distribution  
26 Management System (ADMS) initiative. Expanded DER monitoring, coordination, and  
27 control will be implemented through the phased ADMS deployment, with DER market  
28 participation and T-D coordination enabled through DER Wholesale Market  
29 Preparedness (DWMP), as set out in Appendix B14, Section IV.

1 f) No, please see the response to ED-12 e).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-13**

4  
5                   Reference: Exhibit 2a (DSP - DER connection capacity)

6  
7                   Preamble: Hydro Ottawa exhibit JT2.6-ED-2 states as follows:

8  
9                   Hydro Ottawa currently has one station with short-circuit limitations and consequently  
10                  all stations fed downstream of this station are short-circuit constrained. More details  
11                  on these stations can be found in Section 9.3.3 of Schedule 2-5-4 - Asset  
12                  Management Process. To alleviate the technical constraints for DER connections in  
13                  stations with short-circuit limitations Hydro Ottawa is evaluating the option of running  
14                  the substation with bus-tie open. This approach isolates the two bus sections,  
15                  reducing the fault current and enabling safer DER integration. A significant outage  
16                  will occur if a transformer or incoming feeder fails while the bus-tie is open, as the  
17                  entire bus section it serves will lose power. This is the primary disadvantage of  
18                  operating with an open bus-tie.

19  
20                  Fast-switching protective devices can be used to minimize this reliability impact.  
21                  These devices are designed to detect a fault and switch the load from the faulted  
22                  source to a healthy one in a matter of milliseconds. This offers a significantly faster  
23                  response time compared to conventional mechanical circuit breakers. By  
24                  incorporating these devices, a substation can operate with an open bus-tie, achieving  
25                  the lower fault levels necessary for DER connection, while simultaneously  
26                  maintaining a high level of service reliability. If this solution is implemented, Hydro  
27                  Ottawa will be able to remove limitations to connect DERs in its short-circuit  
28                  constrained stations.

29  
30                  Hydro Ottawa is in the early planning stages of implementing fast switching devices  
31                  to enable DERs and has not finalized equipment manufacturers or cost details for

1 such devices. This is something that Hydro Ottawa will explore in the near future, and  
2 as such, cannot comment on these details at this time.

3

4 Question(s):

5

6 a) Please comment on the above-noted option to resolve DER connection capacity  
7 constraints and its potential application to Alectra service territory. If this has not been  
8 explored, please comment on whether/when it will be. Please also comment in relation  
9 to both Alectra's and Hydro One's stations.

10

11 **RESPONSE:**

12

13 a) Alectra Utilities has not explored this specific approach described in the preamble (i.e.,  
14 operating with the station bus-tie open, supplemented by fast-switching devices) and,  
15 accordingly, cannot comment on its suitability or effectiveness for Alectra Utilities. Any  
16 potential application would require a technical study to assess feasibility, costs, and  
17 impacts, including station configuration, protection and control requirements, short-circuit  
18 performance, power quality, and reliability implications.

19

20 Alectra Utilities may consider this approach as part of the broader set of potential  
21 solutions as described in its response to IR 2-ED-12 c).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-14**

4  
5                   Reference: Exhibit 2a, Appendix X (DSP - DER connection capacity)

6  
7                   Question(s):

- 8  
9                   a) We have trouble understanding the tables on pages 397 to 401 regarding connection  
10                   capacity constraints. For the restricted/constrained feeders, please provide a table  
11                   with additional columns to show the underlying calculations and to separately account  
12                   for thermal and short circuit constraints. Please indicate for each the number of  
13                   Alectra customers connected to the feeder downstream.

14  
15                   **RESPONSE:**

- 16  
17                   a) Alectra Utilities notes that Exhibit 2A, Appendix A (pp. 397–401) summarizes DER  
18                   connection capacity constraints at the Transformer Station. To address the  
19                   Interrogatory, Alectra Utilities has provided tables that (i) show the intermediate  
20                   values used in the calculation of remaining DER connection capacity, (ii) separately  
21                   identify thermal and short-circuit limitations (including identification of the binding  
22                   constraint), and (iii) include the number of customers downstream of restricted  
23                   feeders.

24  
25                   Two Alectra-owned stations have DER capacity constraints - VTS3 and MTS2. In both cases,  
26                   the constraints are due to short-circuit limitations. The Table below provides the constrained  
27                   Alectra-owned stations, the nature of the constraint, and the limitations.

1 **Table 1 - Constrained Alectra owned Stations**

Restricted Transformer Station	Bus	Maxmum Allowable SC (3-Phase) (kA)	Connected SC Contribution (3 Phase) (kA)	Maxmum Allowable SC (1-Phase) (kA)	Connected SC Contribution (1 Phase) (kA)
<b>Alectra Stations</b>					
Vaughan MTS #3	A	17	14.81	12	11.96
Vaughan MTS #3	B	17	14.94	12	11.90
Markham MTS#2	EZ	17	17.22	12	11.47

2  
3

4 In addition, a number of Hydro One Networks Inc (HONI) stations that supply Alectra feeders  
 5 are also constrained. The table below provides the restricted HONI stations and indicates  
 6 whether the constraint is due to short-circuit or thermal limitations, to the extent that  
 7 information is available to Alectra Utilities. Alectra Utilities does not have access to HONI's  
 8 detailed short-circuit modelling and station-bus fault level calculations. Accordingly, the  
 9 underlying short-circuit contributions in relation to limitations cannot be provided.

10

11 **Table 2 - HONI Stations**

Station Name	Limitation Type
KLEINBURG TS	SHORT CIRCUIT
WOODBIDGE TS DESN1	THERMAL
BRAMALEA TS DESN 3 EZ	SHORT CIRCUIT
RICHVIEW TS DESN3 BY	SHORT CIRCUIT
WOODBIDGE TS DESN 1 EQ	SHORT CIRCUIT
LAKE TS DESN1	SHORT CIRCUIT
DUNDAS TS BY	SHORT CIRCUIT
GAGE TS DESN 2	SHORT CIRCUIT
GAGE TS DESN 3	SHORT CIRCUIT
GAGE TS DESN 4	SHORT CIRCUIT
BIRMINGHAM TS DESN 2 DK	SHORT CIRCUIT
CAMPBELL TS – DESN 2, ZE Bus	SHORT CIRCUIT

12

1 Alectra Utilities notes that Table A-6 on page 398 of Exhibit 2A, Tab 1, Schedule 1, Appendix  
2 A indicates that HONI-owned Dundas TS has a Thermal limitation. Alectra Utilities wishes to  
3 correct this error, as the restriction at Dundas TS is due to short-circuit constraints.

4

5 The Table below lists all Alectra Utilities feeders – whether supplied from an Alectra- or HONI-  
6 owned station – that presently are constrained from connecting any more DERs and lists  
7 restricted feeders and the total number of customers connected downstream on restricted  
8 feeders.

9 Note: PRZ = PowerStream rate zone

10 GRZ = Guelph rate zone

11 HRZ = Horizon rate zone

12 BRZ = Brampton rate zone

13 ERZ = Enersource rate zone

14

15 **Table 3 - Alectra Utilities feeders**

Owner	Station	Restricted F	of feeder Custor	Rate Z
Alectra	Markham T.S. #2 - A.M. Walker	24M1	4360	PRZ
Alectra	Markham T.S. #2 - A.M. Walker	24M2	3337	PRZ
Alectra	Markham T.S. #2 - A.M. Walker	24M3	1446	PRZ
Alectra	Markham T.S. #2 - A.M. Walker	24M4	4832	PRZ
Alectra	Markham T.S. #2 - A.M. Walker	24M5	3999	PRZ
Alectra	Markham T.S. #2 - A.M. Walker	24M6	1871	PRZ
Alectra	Markham T.S. #2 - A.M. Walker	24M7	4914	PRZ
Alectra	Markham T.S. #2 - A.M. Walker	24M8	3971	PRZ
Alectra	Vaughan T.S. #3 - Lorna D. Jackson	5122M4	185	PRZ
Alectra	Vaughan T.S. #3 - Lorna D. Jackson	5122M6	1732	PRZ
Alectra	Vaughan T.S. #3 - Lorna D. Jackson	5122M8	3313	PRZ
Alectra	Vaughan T.S. #3 - Lorna D. Jackson	5122M10	5961	PRZ
Alectra	Vaughan T.S. #3 - Lorna D. Jackson	5122M11	0	PRZ
Alectra	Vaughan T.S. #3 - Lorna D. Jackson	5122M12	4039	PRZ
Alectra	Vaughan T.S. #3 - Lorna D. Jackson	5122M14	0	PRZ
Alectra	Arlen T.S.	7356F11	1	GRZ
Alectra	Arlen T.S.	7356F23	1	GRZ
Hydro One	Birmingham T.S.	50L71 (M71)	0	HRZ
Hydro One	Birmingham T.S.	50L81 (M81)	0	HRZ
Hydro One	Bramalea T.S.	74M43	15	BRZ
Hydro One	Bramalea T.S.	74M44	15	BRZ
Hydro One	Bramalea T.S.	74M45	11	BRZ
Hydro One	Bramalea T.S.	74M46	155	BRZ
Hydro One	Bramalea T.S.	74M47	26	BRZ
Hydro One	Bramalea T.S.	74M48	6	BRZ
Hydro One	Bramalea T.S.	74M50	0	BRZ
Hydro One	Campbell T.S.	36M51	170	GRZ
Hydro One	Campbell T.S.	36M52	2972	GRZ
Hydro One	Campbell T.S.	36M53	214	GRZ
Hydro One	Campbell T.S.	36M54	65	GRZ
Hydro One	Campbell T.S.	36M61	58	GRZ
Hydro One	Campbell T.S.	36M62	3744	GRZ
Hydro One	Campbell T.S.	36M63	1286	GRZ
Hydro One	Campbell T.S.	36M64	60	GRZ
Hydro One	Dundas T.S.	M1	0	HRZ
Hydro One	Dundas T.S.	2D2X (M2)	2618	HRZ
Hydro One	Dundas T.S.	2D7X (M7)	4401	HRZ
Hydro One	Dundas T.S.	M8	0	HRZ
Hydro One	Gage T.S.	M13	1	HRZ
Hydro One	Gage T.S.	M16	1	HRZ
Hydro One	Gage T.S.	M17	1	HRZ
Hydro One	Gage T.S.	M19	1	HRZ
Hydro One	Gage T.S.	M20	1	HRZ
Hydro One	Gage T.S.	M23	1	HRZ
Hydro One	Gage T.S.	M26	1	HRZ
Hydro One	Gage T.S.	M31	1	HRZ
Hydro One	Gage T.S.	M32	1	HRZ
Hydro One	Gage T.S.	M33	1	HRZ
Hydro One	Gage T.S.	M34	1	HRZ
Hydro One	Gage T.S.	M35	1	HRZ
Hydro One	Gage T.S.	M37	1	HRZ
Hydro One	Gage T.S.	M38	1	HRZ
Hydro One	Gage T.S.	M39	1	HRZ
Hydro One	Gage T.S.	M40	1	HRZ
Hydro One	Glendale T.S.	GLM31	1	HRZ
Hydro One	Glendale T.S.	GLM32	1	HRZ
Hydro One	Glendale T.S.	GLM33	1	HRZ
Hydro One	Glendale T.S.	GLM34	1	HRZ
Hydro One	Glendale T.S.	GLM9	5	HRZ
Hydro One	Kleinburg T.S.	45M3	110	PRZ
Hydro One	Kleinburg T.S.	45M4	2648	PRZ
Hydro One	Richview T.S.	88M4	1	ERZ
Hydro One	Richview T.S.	88M7	0	ERZ
Hydro One	Woodbridge T.S.	D6M11	0	ERZ
Hydro One	Woodbridge T.S.	D6M12	0	ERZ
Hydro One	Woodbridge T.S.	D6M13	727	ERZ
Hydro One	Woodbridge T.S.	D6M14	0	ERZ
Hydro One	Woodbridge T.S.	D6M16	2457	ERZ

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 2-ED-15**

4

5                   Reference: Exhibit 2a, Appendix B14 (DSP - DER connection capacity)

6

7                   Question(s):

8

9                   a) Please provide, on a best-efforts basis, an estimate of the monetized benefits of the  
10                   investments outlined in Parts II and IV of Appendix B14. For instance, where the benefit  
11                   is improved reliability, please estimate the quantum of reduced outages and outage  
12                   duration and the dollar value thereof. Or where the benefit is fewer truck rolls, please  
13                   estimate the value thereof. Please provide the response on an annual benefits basis as  
14                   well as the total benefits over the lifetime of the equipment to be installed. Please include  
15                   any necessary caveats. We understand that the response will need to involve significant  
16                   simplifications and assumptions.

17

18                   **RESPONSE:**

19

20                   a) Please see the table below for the monetized benefits of the investments outlined in Parts  
21                   II and IV. Please note that investments under Part IV, Grid Modernization, do not include  
22                   the installation of equipment and that the ADMS project is expected to continue beyond  
23                   the rate filing period and that benefits will accrue beyond that point. Please refer to 2A-  
24                   SEC-28\_Attach 1\_Copperleaf Optimization Output.xlsx for the NPV Benefit calculations  
25                   for all Alectra projects.

1 **Table 1 - Program Benefits**

<b>Program Benefits (\$MM) – Bridge and Forecast Period</b>									
<b>Program</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>Beyond 2031</b>	<b>Total Benefits</b>
SCADA, Automation and System Control	\$25.73	\$35.70	\$42.71	\$54.22	\$64.40	\$81.22	\$91.99	\$2034.03	\$2430.01
Grid Modernization	\$1.20	\$2.62	\$2.92	\$3.07	\$2.64	\$2.98	\$3.47	\$16.73	\$35.63

2

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-16**

4  
5                   Reference: Exhibit 2a, Appendix B14 (DSP - DER connection capacity)

6  
7                   Question(s):

- 8
- 9                   a) Do rear lot poles raise issues related to Alectra's right to have a pole on private
  - 10                   property?
  - 11
  - 12                   b) Does Alectra have formal easements on title for each home where it has a backyard
  - 13                   electricity poll?
  - 14
  - 15                   c) If not, what is the basis of Alectra's right to have a pole placed thereon?
  - 16
  - 17                   d) Is Alectra also seeking to move poles placed in backyards that are directly adjacent to
  - 18                   laneways, or only those where there is no laneway? If the former, do those situations
  - 19                   raise different issues in relation to land rights and access?
  - 20

21                   **RESPONSE:**

- 22
- 23                   a) Rear lot poles create issues related to physical accessibility, but not necessarily with
  - 24                   respect to Alectra Utilities' right to have a pole on private property. As noted in Exhibit
  - 25                   2A, Tab 1, Schedule 1, Appendix B14, Section 3.3, Page 603 (Lines 4 – 7) and Page 606
  - 26                   (Lines 5 – 9), the challenge is accessing these assets after they are installed to maintain
  - 27                   them or perform corrective action when required. Similarly, the physical accessibility
  - 28                   issues associated with rear lot configurations constrain the ability to connect DER's and
  - 29                   perform grid modernization upgrades, as referenced in Exhibit 2A, Tab 1, Schedule 1,
  - 30                   Appendix B14, Section 3.3, Page 608 (Lines 3 – 11).

- 1 b) No, Alectra Utilities does not have a formal easement on title for each property with rear  
2 lot infrastructure.  
3
- 4 c) Rear lot infrastructure was generally installed between the 1960s and the 1980s.  
5 Sections 46(1) and 46.1(3) of the Electricity Act establish that utilities do not need  
6 easements for rear lot assets by providing that where electrical infrastructure was in place  
7 prior to March 31, 1999, a distributor has the right to maintain its infrastructure on the  
8 property until that right expires or the distributor releases its right. Moreover, Section  
9 40(1) of the Electricity Act provides that for all electrical infrastructure, a distributor may,  
10 at reasonable times, enter land on which its distribution system is located, (a) to inspect,  
11 maintain, repair, alter, remove, replace or disconnect wires or other facilities used to  
12 transmit or distribute electricity; or (b) to install, inspect, read, calibrate, maintain, repair,  
13 alter, remove or replace a meter.  
14
- 15 d) Alectra Utilities does not limit rear lot conversion activity only to locations where there is  
16 no laneway. Alectra Utilities evaluates rear lot configurations on a location-specific-basis  
17 and considers the multiple approaches described in Exhibit 2A, Tab 1, Schedule 1,  
18 Appendix B14, Section 3.4, Pages 609 and 610.  
19
- 20 Front lot installations (underground or overhead) provide the most accessibility and are  
21 the standard for new construction. Where a laneway exists, laneway access may reduce  
22 access constraints for certain field activities at those specific locations. However, it does  
23 not eliminate the safety and operability issues associated with rear lot configurations  
24 (including infrastructure in proximity to customer recreation space and the need to work  
25 within constrained clearance).  
26
- 27 Alectra Utilities' planning objective is to remove legacy rear lot infrastructure from private  
28 backyards (customer properties) and to relocate supply to standardized front-lot / road  
29 allowance configurations.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-17**

4  
5                   Reference: Exhibit 2, Tab 5, Schedule 1, (DSP - general plant, buildings)

6  
7                   Question(s):

8  
9                   a) Whenever Toronto Hydro is replacing fossil fuel heating equipment, it is replacing it with  
10                   electric heat pumps (per EB-2023-0195, 1B-ED-3). Is Alectra planning and committing to  
11                   do the same? If yes, the remaining parts in this question need not be answered.

12  
13                   b) Please provide a table listing each building owned by Alectra, how they are heated, their  
14                   approximate annual gas consumption, the age of any fossil fuel heating equipment, the  
15                   approximate life left in any fossil fuel heating equipment, the annual fossil fuel costs (all  
16                   inclusive, including commodity, delivery, and fixed charges), and the annual incremental  
17                   electricity costs that would arise were the fossil fuel equipment with an appropriate  
18                   electric heat pump.

19  
20                   c) Please provide a table showing all fossil fuel heating equipment in its buildings that is at  
21                   the end of its expected useful life or will reach the end of its useful life within the rate  
22                   term. For each piece of equipment, please indicate whether Alectra expects to replace it  
23                   with fossil fuel or electric equipment, and why.

24  
25                   **RESPONSE:**

26  
27                   a) Alectra Utilities has not planned to replace fossil fuel equipment over the 2027-2031  
28                   forecast period. Accordingly, Alectra Utilities has not responded to the remainder of this  
29                   question.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-18**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP - asset sizing)

6  
7                   Question(s):

8  
9                   a) How many kms of conductors does Alectra expect to replace or install in each of the rate  
10                   term years? How many transformers does Alectra expect to purchase and install over the  
11                   rate term? What is the average physical lifetime of the conductors and transformers that  
12                   Alectra is currently installing?

13  
14                   b) How will Alectra ensure that the conductors and transformers that it will install over the  
15                   rate term will not need to be replaced before the end of their lives due to demand growth  
16                   outstripping their capacity?

17  
18                   c) If all homes heated with gas were to be electrified by 2050, approximately what percent  
19                   of the conductors and transformers that Alectra expects to install over the rate term would  
20                   need to be replaced by 2050 to meet the increased demand (with all other aspects of  
21                   Alectra's load forecast remaining unchanged)? Please provide as much of a specific  
22                   answer to this question as possible and make and state assumptions as necessary. For  
23                   instance, Alectra could assume that homes are electrified via 50% air-source and 50%  
24                   ground-source heat pumps.

25  
26                   d) If all transportation were to be electrified by 2050, approximately what percent of the  
27                   conductors and transformers that Alectra expects to install over the rate term would need  
28                   to be replaced by 2050 to meet the increased demand (with all other aspects of Alectra's  
29                   load forecast remaining unchanged)? Please provide as much of a specific answer to this  
30                   question as possible and make and state assumptions as necessary.

1   **RESPONSE:**

2

3   a) Alectra Utilities plans to renew an estimated 2,235 km of overhead conductor (refer to 2-  
4       Staff-79-d) and 665.7 km of underground cable (per Moderate Pacing strategy in Exhibit  
5       2A Tab 1 Schedule 1 Appendix B02 Page 85 Table B02-6) over the DSP timeframe of  
6       2027 – 2031 based on System Renewal programs.

7

8       As cited in Exhibit 2A Tab 1 Schedule 1 Appendix B03 Section 5 Page 137 Line 10 Table  
9       B03-8, under the Moderate Pacing strategy, Alectra Utilities plans to replace 4,771  
10      transformers through the Transformer Renewal program.

11

12      The typical useful life (TUL) of conductors is 60 years and is indicated in Exhibit 2A Tab  
13      1 Schedule 1 Section 5.3.2.2 Sub-section A.1.4, page 193 Line 13. The TUL for XLPE  
14      cables depends on the type of cable, with Non Tree-Retardant XLPE (Non-TR) having a  
15      TUL of 30 years, Tree-Retardant XLPE that is direct-buried (TR-DB) having a TUL of 35  
16      years and Tree-Retardant XLPE or Strand-blocked XLPE installed in-duct (TR-ID) having  
17      a TUL of 40 years, as indicated in Exhibit 2A Tab 1 Schedule 1 Section 5.3.2.2 Sub-  
18      section A.1.6.3 page 213 lines 6 – 11.

19

20      The TUL of transformers depends on the type of transformer; pole-mounted and pad-  
21      mounted transformers have a TUL of 40 years, while vault-mount transformers have a  
22      TUL of 35 years. Each of these are indicated in Exhibit 2A Tab 1 Schedule 1 Section  
23      5.3.2.2 Sub-section A.1.1 page 176 and 177 Figures 5.3.2 – 22 to 5.3.2 - 24.

24

25   b) Alectra Utilities employs a structured approach to conductor and transformer sizing. The  
26      considerations balance technical requirements, customer loading information, and long-  
27      term operational planning, accounting for future load growth due to electrification. The  
28      approach is designed to minimize the risk that the conductors and transformers before  
29      the end of the rate term due to demand growth outstripping their capacity.

1 For new customer connections or electrical service upgrades, the sizing of transformers  
2 is evaluated on a case-by-case basis following customer service request submission.  
3 Alectra Utilities evaluates customer loading information together with current loading (if  
4 applicable) and potential for future load growth, during the detailed design process. The  
5 conductors are typically sized for the maximum rated current to be carried. Alectra Utilities  
6 actively monitors and controls the loading of its high-voltage primary feeder cables to  
7 ensure that the loading does not exceed 2/3 of the maximum current-carrying capacity.

8

9 For transformer replacement, Alectra Utilities performs loading analysis to determine  
10 capacity utilization, load diversity, and an anticipated future load increase. This analysis  
11 forms the basis for choosing a new transformer size. As cited in the DSP Section 5.3.3.  
12 Asset Replacement Practices, Alectra Utilities has standardized the sizing of residential  
13 transformers to 100kVA to support growing Electric Vehicles (EV) uptake.

14

15 c) The conductors and distribution transformers installed over the 2027-2031 period of this  
16 application would be sufficiently sized to meet increased demand driven by electrification.  
17 Alectra Utilities does not anticipate needing to replace these conductors and transformers  
18 due to capacity exceedance. To meet increasing system peak demands, Alectra Utilities'  
19 practice of adding additional capacity to the system follows the Distribution System Code  
20 for anticipated growth. Alectra Utilities also considers the implementation of NWS as per  
21 the OEB's NWS Guidelines to meet future needs.

22

23 d) The conductors and transformers installed over the forecasted period of this application  
24 would be sufficiently sized to meet increased demand driven by transport electrification  
25 by 2050. Alectra Utilities does not anticipate needing to replace these conductors and  
26 transformers due to capacity exceedance.

27

28 To meet increasing system peak demands, Alectra Utilities' practice of adding additional  
29 capacity to the system follows the Distribution System Code for anticipated growth.  
30 Alectra Utilities also considers the implementation of NWS as per the OEB's NWS  
31 Guidelines to meet future needs.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-19**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP, system access)

6  
7                   Question(s):

8  
9                   a) Please provide a table showing the number of residential service upgrades in the past  
10                   five years and a forecast for the rate term. Please provide columns for the total costs for  
11                   service upgrades, the proportion covered by the homeowners whose service is being  
12                   increased, and the proportion covered by ratepayers. Please include both capital costs  
13                   (e.g. new conductors or transformers) and O&M costs (e.g. costs to de-energize and  
14                   energize the home).

15  
16                   b) Please discuss the feasibility and potential savings from offering customers seeking a  
17                   service upgrade an alternative option via a load sharing device (e.g. circuit pauser or  
18                   smart panel).<sup>1</sup>

19  
20                   c) Please discuss the feasibility and potential savings from offering customers seeking a  
21                   service upgrade an alternative option via a SPAN Edge.<sup>2</sup>

22  
23                   d) If Alectra has not considered the steps outlined in (b) and (c), will it commit to doing so?  
24                   If yes, by when?

25  
26                   e) If customers are able to avoid a service upgrade, how does that impact the need for  
27                   potential upstream capacity increases? For example, can upgrades to street-level

---

<sup>1</sup> <https://www.passivehousecanada.com/wp-content/uploads/2023/08/20231026-Electrification-without-a-service-upgrade-report.pdf>

<sup>2</sup> <https://www.span.io/blog/span-expands-beyond-smart-electrical-panels-creating-new-category-of-at-the-meter-products>

1 transformers that may be needed if multiple homes upgrade their service be avoided if  
 2 those service upgrades are avoided via the technologies noted above? What, if any,  
 3 electricity infrastructure is built based on the size of residential services?  
 4

5 **RESPONSE:**

6  
 7 a) Please refer to EB-2025-0252, Exhibit 2A, Tab1, Schedule 1, Appendix B10, pg 402-403.  
 8 Below is a table detailing the number of residential service upgrades over the past five  
 9 years, along with the forecasts. The table includes columns for the total costs associated  
 10 with these upgrades, the proportion of costs covered by homeowners, and the proportion  
 11 covered by ratepayers.  
 12

13 **Table 1- Number of Residential Service Upgrades, Gross, Contributions and Net Costs**

	Service Layouts				
	Year	Project Count	Capital Costs		
			Gross \$ MM	Cust Cost \$ MM	Net Cost \$ MM
Actuals	2021	2768	\$11.8	\$5.9	\$5.8
	2022	3321	\$15.6	\$7.1	\$8.5
	2023	3468	\$18.2	\$8.8	\$9.5
	2024	3325	\$21.8	\$9.2	\$12.6
	2025	2521	\$25.0	10.7	\$14.3
Forecast	2026	3678	\$15.9	\$7.7	\$8.2
	2027	4139	\$18.1	\$9.6	\$8.4
	2028	4613	\$20.4	\$10.9	\$9.5
	2029	5214	\$22.9	\$12.2	\$10.7
	2030	5825	\$25.9	\$13.8	\$12.1
	2031	5732	\$26.1	\$13.9	\$12.2

14 NOTE: All dollar amounts are shown in \$MM. Minor variances may exist due to rounding.

15  
 16 O&M costs do not apply to residential layout projects. Please refer to EB-2025-0252,  
 17 Exhibit 2A, Tab 1, Schedule 1, Page 395, Lines 8-15, which provides the investment  
 18 description for a service layout.

- 1 b) Alectra Utilities is aware of alternative solutions being offered in the market such as load-  
2 sharing devices, circuit splitters, managed charging, and smart panels, to help manage  
3 customer loads. At present, these technologies are installed beyond Alectra Utilities  
4 demarcation point (i.e., behind the meter). While Alectra Utilities recognizes that, in  
5 certain circumstances, customer-installed solutions can mitigate the need for a service  
6 upgrade based on specific load profiles and equipment configurations, the selection, and  
7 performance of such solutions remain outside of Alectra Utilities' business activities.  
8
- 9 c) While Alectra Utilities has not undertaken a formal feasibility study to quantify potential  
10 customer or systems savings associated with the use of smart panels, load sharing or  
11 via a SPAN Edge, Alectra Utilities is exploring alternative options including grid-edge  
12 technologies and recent investments in an integrated new customer connections platform  
13 to support customer education, awareness and assessment of these technology options.  
14
- 15 d) Alectra Utilities has not committed to implementing such technologies at this time since  
16 they are beyond Alectra's current business activities.  
17
- 18 e) Generally speaking, the impact associated with individual service upgrades is limited to  
19 the secondary connection assets. It is possible that a street level distribution transformer  
20 may be required if multiple homes upgrade their service. Electricity infrastructure  
21 associated with residential services include distribution transformer size and secondary  
22 conductor size.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-20**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP, system access) also Exhibit 8 (service  
6                   charges)

7  
8                   Question(s):

9  
10                  a) Please confirm whether the proposed capital investments are sufficient to ensure that  
11                  each Alectra residential customer would be able to install an EV charger or electric heat  
12                  pump without delay in any part of Alectra's system. If not, please indicate where on its  
13                  system there would be insufficient capacity.

14  
15                  b) What does Alectra charge to facilitate upgrading a residential customer's service to 200  
16                  amps? Please provide a breakdown of the costs (e.g. application fee,  
17                  disconnect/connection costs, conductor upgrade where necessary, transformer upgrade  
18                  where necessary).

19  
20                  c) Please create a table to compare the charges in (b) to those charged by Hydro One,  
21                  Toronto Hydro, and Elexicon Energy.

22  
23                  d) Please provide excerpts from the Alectra conditions of service and the DSC that allow  
24                  Alectra to levy the charges/fees described above.

25  
26                  e) Please provide all studies and calculations justifying the fixed fees for a panel upgrade  
27                  charged by Alectra.

28  
29                  f) On average, how long does it take for Alectra to carry out a service upgrade once  
30                  requested by a customer?

31

1 **RESPONSE:**

2

3 a) Alectra Utilities confirms that the proposed investment for 2027-2031 is sufficient on the  
4 primary system to accommodate Alectra customers who wish to connect an EV charger  
5 and/or heat pump to Alectra's distribution system unless the number of connections is  
6 materially above the forecast that was relied upon in the DSP. More specifically, Alectra  
7 Utilities' investment in Customer Connections, Station and Lines Capacity (refer to Exhibit  
8 2A Tab 1 Schedule 1 Appendix B10, B12 and B13) are intended to meet these needs.  
9 To date, Alectra Utilities is not aware of any instances when a customer was unable to  
10 install an EV charger and/or electric heat pump within a reasonable time following their  
11 request.<sup>1</sup>

12

13 b) Please refer to EB-2025-0252, Exhibit 2A, Tab 1, Schedule 1, lines 2 to 17. The variable  
14 connection costs vary for each project based on the amount of civil and electrical work  
15 required for the connection assets up to the demarcation point. For Typical Layout costs  
16 charged to the customer, please refer to IR# 8-ED-50 (a).

17

18 c) Alectra Utilities cannot provide a table with Hydro One-, Toronto Hydro-, or Elexicon  
19 Energy-specific data.

20

21 d) Please refer to Alectra's Conditions of Service (COS) sections 2.1.1.1, 2.1.7, 3.1.4, and  
22 3.7.1.2. Please refer to the OEB DSC section 3.1.6 - variable connection charges.

23

24 e) Alectra does not offer services for upgrading a customer's panel since it is beyond/after  
25 the demarcation point. If a service panel upgrade requires larger service conductors, or  
26 the meter base and metering units are required to be replaced or upgraded, Alectra would  
27 provide a service layout in accordance with its COS and the DSC.

---

<sup>1</sup> <https://www.oeb.ca/ontarios-energy-sector/centralized-capacity-information-map>, accessed on  
January 31, 2026

- 1 f) The average timeline for a connection provided by a service layout request is between  
2 30-45 days (based on 2022-2025 data). Typically, there are various factors (e.g.,  
3 information required by the customer, when the customers' electrical contractor will have  
4 the site ready) which contribute to the timeline. Once the Connection Authorization is  
5 received (i.e., ESA Permit), Alectra typically connects/energizes the service within five  
6 (5) business days as per Alectra's Conditions of Service section 2.1.2.7.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-21**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP, system access)

6  
7                   Question(s):

- 8
- 9                   a) Please provide a table showing, for each year from 2025 to 2029, the forecast number of  
10                   new connections, the forecast contribution to co-incident system peak demand (summer  
11                   and winter) for those that are gas heated, the forecast contribution to co-incident system  
12                   peak demand (summer and winter) for those that are electrically heated, the forecast total  
13                   demand for those that are electrically heated and those that are gas heated.  
14
- 15                   b) Please provide the information requested in (a) but for the most recent year of historical  
16                   data.  
17
- 18                   c) Please provide a list of all expected connection requests during the rate period, the  
19                   forecast peak (summer and winter) and annual demand of each, and how each is forecast  
20                   to be heated.  
21
- 22                   d) If all new construction in the Alectra service area over 2025 to 2029 were to be heated  
23                   with efficient heat pumps (i.e. no fossil fuels), would Alectra be able to provide the  
24                   required electrical service? If not, what would the shortfall be and how would it arise?  
25
- 26                   e) Please provide a sample of the Appendix B DCF calculations for a typical new  
27                   condominium construction with geothermal heating versus gas heating? Please indicate  
28                   (i) the electricity connection capital costs for each heating scenario and (ii) the 25-year  
29                   revenue offset for the connection costs under Appendix B (i.e. how much more  
30                   distribution revenue would be paid and thus be used to offset the contribution in aid of

1 construction).

2

3 **RESPONSE:**

4

5 a) As provided in EB-2025-0252, Exhibit 2A, Tab 1, Schedule 1, Appendix B10, Page 402,  
6 Table B10-6, Alectra Utilities has provided the forecast number of new residential  
7 subdivision connections from 2025 to 2029 as shown in Table 1 below.

8

9 **Table 1- Forecast Residential Subdivision Connections – EEM Approach**

Forecast Residential Lots (EEM Data)	
YEAR	QTY-Res Lots
2025 (Actual)	3505
2026	5231
2027	5283
2028	5336
2029	5389

10

11 Alectra Utilities does not have the data available to determine the number of homes within  
12 its service territory that are heated by natural gas and/or electric heating.

13

14 b) Alectra Utilities has provided the quantities of residential subdivisions for the most recent  
15 historical year (2025) as shown by the actuals in Table 1 above.

16

17 c) As provided in EB-2025-0252, Exhibit 2A, Tab 1, Schedule 1, Appendix B10, Page 402,  
18 Table B10-6, Alectra Utilities has provided the expected quantities of residential  
19 subdivisions for the rate period from 2027 to 2031 as shown in Table 2 below.

1 **Table 2 - Forecast Residential Subdivision Connections-EEM Approach**

Forecast Residential Lots (EEM Data)	
YEAR	QTY-Res Lots
2027	5283
2028	5336
2029	5389
2030	5443
2031	5498

2

3 Alectra Utilities does not have the data available to determine the number of homes within  
4 its service territory that are heated by natural gas and/or electric heating.

5

6 d) If all new construction in Alectra Utilities' service area over 2025-2029 is heated by utilizing  
7 efficient heat pumps, Alectra Utilities will be able to provide the required electrical service.

8

9 e) Alectra Utilities does not have visibility on the type of heating system selected by the  
10 developer. The capacity required and the service type are based on the developer's  
11 request. Based on our understanding, if a condominium development shifts to geothermal  
12 heating, then its peak electrical demand could increase by 25% to 40% during peak winter  
13 conditions. As requested, a summary of the Appendix B DCF calculation for a typical new  
14 condominium development and one with a 25% increase in the load, has been included  
15 in Table 3 below. Connection costs for an individual condo are 100% recoverable,  
16 meaning the developer is fully responsible for the costs. If a system expansion is required  
17 to service the condo connection, then a DCF is applied to the expansion only portion of  
18 the project. In the examples below, we assumed the same capital costs for a typical condo  
19 expansion. This is for illustration purposes only. Please note that not all connections  
20 require a system expansion.

21 i) Alectra Utilities has used the same expansion cost for both scenarios in Table 3  
22 below. This represents a typical expansion cost and is used for illustration purposes  
23 only.

1        ii)    The question refers to using a 25-year revenue offset. For both scenarios in Table  
 2            3, we have used the 25-year revenue offset as mentioned in the question and have  
 3            further included a 40-year revenue offset that was introduced by the OEB in  
 4            December 2024 as shown in Table 4.

5  
 6

**Table 3 - Sample Appendix B DCF Calculation for a Typical Condo Tower-25 year**

<b>Sample Condo Tower Calculation (EEM Data)-25 Year Revenue Horizon</b>				
<b>Load Type Scenario</b>	<b>Anticipated Load (kW)</b>	<b>Capital Costs</b>	<b>Developer Contribution</b>	<b>Alectra Contribution</b>
<b>Typical Condominium</b>	700	\$750,000	\$469,000	\$281,000
<b>Typical Condominium + 25%</b>	875	\$750,000	\$406,000	\$344,000

7  
 8

**Table 4 - Sample Appendix B DCF Calculation for a Typical Condo Tower-40 year**

<b>Sample Condo Tower Calculation (EEM Data)-40 Year Rev Horizon</b>				
<b>Load Type Scenario</b>	<b>Anticipated Load (kW)</b>	<b>Capital Costs</b>	<b>Developer Contribution</b>	<b>Alectra Contribution</b>
<b>Typical Condominium</b>	700	\$750,000	\$360,000	\$390,000
<b>Typical Condominium + 25%</b>	875	\$750,000	\$271,000	\$479,000

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 2-ED-22**

4

5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP, system access)

6

7                   Question(s):

8

9                   a) If customer connection costs are higher than forecast, how would Alectra manage the  
10                   cost?

11

12                   b) Please confirm that DSC allows utilities to apply a longer revenue horizon beyond the  
13                   standard horizon for calculating contributions in aid of construction. Has Alectra ever  
14                   done this? Would Alectra consider doing this where the customer implements technology  
15                   that  
16                   lowers its impact on the system peak (such as geothermal, which lowers summer cooling  
17                   requirements)?

18

19                   c) Please compare the co-incident peak summer electricity demand from a typical  
20                   commercial or residential tower that is cooled with geothermal versus traditional air  
21                   conditioning.

22

23                   d) Please provide the 20 highest winter demand hours and summer demand hours for each  
24                   of the past five years for Alectra's system, including the date, hour, and demand.

25

26                   e) On average, what is the peak demand on Alectra's system in the summer versus the  
27                   winter?

1   **RESPONSE:**

2

3   a) Alectra Utilities uses the Economic Evaluation Model to calculate the applicable customer  
4       connection costs for system expansion projects. If the customer connections costs  
5       (customer contributions) are higher than forecast, the result would be a reduction in  
6       Alectra’s capital contribution. Connection costs not involving a system expansion are  
7       100% chargeable to the customer.

8

9   b) Alectra applies the standard revenue horizon for calculating customer contributions by  
10       utilizing the Economic Evaluation model. For Residential Subdivision projects, the  
11       revenue horizon is currently 40 years as required by the OEB. This came into effect in  
12       2024 – it was previously 25 years. All other revenue horizons are currently set at 25  
13       years. Any considerations for a longer revenue horizon would be based on OEB  
14       requirements and would be implemented as mandated.

15

16   c) Alectra currently does not differentiate between a typical commercial or residential tower  
17       that is cooled with geothermal versus traditional air conditioning.

18

19   d) The 20 highest summer coincident peak demand hours and winter coincident peak  
20       demand hours are provided from 2021-2025 in Table 1

1 **Table 1 – Summer Coincident Peak Demand Hours**

#	2021		2022		2023		2024		2025	
	MW	Hour	MW	Hour	MW	Hour	MW	Hour	MW	Hour
1	5,348	8/26/2021 13:00	5,516	6/22/2022 12:00	5,340	9/5/2023 14:00	5,440	6/19/2024 15:00	5,889	6/23/2025 15:00
2	5,325	8/26/2021 12:00	5,468	6/22/2022 11:00	5,305	9/5/2023 13:00	5,427	6/19/2024 16:00	5,859	6/23/2025 14:00
3	5,265	6/28/2021 14:00	5,464	6/22/2022 13:00	5,300	9/5/2023 15:00	5,377	6/19/2024 13:00	5,822	6/24/2025 15:00
4	5,263	6/29/2021 11:00	5,404	6/22/2022 14:00	5,294	9/6/2023 13:00	5,370	6/19/2024 14:00	5,820	6/24/2025 14:00
5	5,258	8/23/2021 13:00	5,382	6/22/2022 15:00	5,288	9/6/2023 12:00	5,334	6/19/2024 17:00	5,819	6/23/2025 13:00
6	5,257	8/24/2021 14:00	5,359	6/22/2022 10:00	5,283	9/6/2023 14:00	5,315	6/18/2024 15:00	5,812	6/24/2025 13:00
7	5,247	8/24/2021 15:00	5,351	7/19/2022 14:00	5,265	9/5/2023 16:00	5,309	6/18/2024 14:00	5,795	6/24/2025 12:00
8	5,246	8/26/2021 14:00	5,348	7/19/2022 15:00	5,243	9/6/2023 15:00	5,276	8/27/2024 14:00	5,760	6/23/2025 12:00
9	5,245	8/23/2021 14:00	5,333	7/19/2022 16:00	5,233	9/5/2023 12:00	5,260	6/19/2024 12:00	5,746	6/24/2025 11:00
10	5,244	6/29/2021 12:00	5,301	7/19/2022 13:00	5,214	9/6/2023 11:00	5,249	7/31/2024 14:00	5,726	6/23/2025 16:00
11	5,240	8/26/2021 11:00	5,282	6/22/2022 16:00	5,162	7/5/2023 14:00	5,248	6/18/2024 13:00	5,691	6/24/2025 16:00
12	5,240	6/28/2021 13:00	5,236	7/19/2022 12:00	5,133	7/5/2023 15:00	5,241	7/31/2024 15:00	5,670	6/23/2025 11:00
13	5,232	8/23/2021 12:00	5,232	7/20/2022 13:00	5,125	7/5/2023 13:00	5,229	8/27/2024 13:00	5,650	6/23/2025 17:00
14	5,232	6/28/2021 15:00	5,212	7/19/2022 17:00	5,118	9/5/2023 11:00	5,209	7/31/2024 16:00	5,637	7/24/2025 15:00
15	5,223	8/24/2021 13:00	5,207	7/20/2022 12:00	5,117	9/6/2023 16:00	5,208	7/31/2024 13:00	5,632	7/24/2025 16:00
16	5,217	6/28/2021 12:00	5,194	7/20/2022 14:00	5,109	9/5/2023 17:00	5,199	6/18/2024 16:00	5,630	6/24/2025 10:00
17	5,211	8/24/2021 16:00	5,180	6/21/2022 16:00	5,091	7/5/2023 16:00	5,197	8/1/2024 14:00	5,618	7/24/2025 14:00
18	5,201	8/11/2021 15:00	5,169	6/21/2022 15:00	5,090	7/5/2023 12:00	5,184	6/19/2024 18:00	5,606	8/11/2025 14:00
19	5,198	8/23/2021 15:00	5,153	7/20/2022 11:00	5,049	9/6/2023 10:00	5,177	6/20/2024 14:00	5,597	8/11/2025 13:00
20	5,197	6/28/2021 16:00	5,150	7/20/2022 15:00	5,042	7/6/2023 11:00	5,160	8/1/2024 13:00	5,585	6/24/2025 17:00

**Table 2: Winter Coincident Peak Demand Hours**

#	2021		2022		2023		2024		2025	
	MW	Hour	MW	Hour	MW	Hour	MW	Hour	MW	Hour
1	3,861	2/16/2021 18:00	4,037	1/11/2022 17:00	3,956	2/3/2023 18:00	3,993	1/15/2024 17:00	4,130	1/22/2025 17:00
2	3,855	12/8/2021 17:00	3,979	1/11/2022 11:00	3,939	2/3/2023 12:00	3,987	1/16/2024 17:00	4,104	12/15/2025 17:00
3	3,855	2/8/2021 18:00	3,976	1/10/2022 17:00	3,925	2/3/2023 11:00	3,984	12/12/2024 17:00	4,099	1/22/2025 18:00
4	3,854	12/7/2021 17:00	3,975	1/20/2022 18:00	3,923	2/3/2023 13:00	3,966	1/16/2024 18:00	4,085	1/20/2025 17:00
5	3,847	2/10/2021 18:00	3,972	1/11/2022 12:00	3,918	2/3/2023 17:00	3,959	1/15/2024 18:00	4,081	1/20/2025 18:00
6	3,839	12/9/2021 17:00	3,971	1/20/2022 17:00	3,916	2/3/2023 19:00	3,936	1/17/2024 17:00	4,075	12/11/2025 17:00
7	3,837	1/28/2021 17:00	3,967	2/3/2022 17:00	3,893	2/1/2023 18:00	3,933	12/12/2024 18:00	4,068	12/9/2025 17:00
8	3,836	2/18/2021 18:00	3,964	1/11/2022 18:00	3,891	11/28/2023 17:00	3,930	1/17/2024 18:00	4,058	1/20/2025 19:00
9	3,826	1/28/2021 18:00	3,958	2/3/2022 18:00	3,888	11/29/2023 17:00	3,925	1/16/2024 19:00	4,057	1/22/2025 19:00
10	3,821	2/17/2021 18:00	3,945	1/24/2022 17:00	3,885	2/3/2023 10:00	3,907	1/15/2024 19:00	4,032	12/15/2025 18:00
11	3,817	2/9/2021 18:00	3,943	1/10/2022 18:00	3,874	2/3/2023 20:00	3,900	12/12/2024 19:00	4,025	1/22/2025 13:00
12	3,814	2/11/2021 18:00	3,940	2/14/2022 18:00	3,871	2/3/2023 14:00	3,896	1/17/2024 19:00	4,025	12/11/2025 18:00
13	3,810	2/10/2021 17:00	3,936	1/27/2022 18:00	3,861	11/27/2023 17:00	3,889	12/5/2024 17:00	4,022	1/22/2025 11:00
14	3,806	2/12/2021 11:00	3,933	1/28/2022 18:00	3,858	2/3/2023 16:00	3,889	1/22/2024 17:00	4,021	1/21/2025 18:00
15	3,806	2/1/2021 17:00	3,931	1/27/2022 17:00	3,842	2/1/2023 19:00	3,883	12/4/2024 17:00	4,018	1/22/2025 16:00
16	3,805	1/20/2021 17:00	3,927	1/11/2022 13:00	3,842	1/11/2023 17:00	3,873	1/19/2024 17:00	4,017	1/21/2025 17:00
17	3,805	2/12/2021 18:00	3,924	1/26/2022 18:00	3,842	11/29/2023 16:00	3,870	1/17/2024 11:00	4,016	1/22/2025 12:00
18	3,801	2/1/2021 18:00	3,921	1/25/2022 18:00	3,840	2/3/2023 15:00	3,870	1/18/2024 17:00	4,008	12/9/2025 16:00
19	3,797	2/18/2021 17:00	3,918	1/24/2022 18:00	3,839	12/13/2023 17:00	3,866	1/17/2024 10:00	4,007	12/4/2025 17:00
20	3,795	2/8/2021 17:00	3,911	1/11/2022 10:00	3,839	2/2/2023 18:00	3,865	1/16/2024 20:00	4,005	1/22/2025 14:00

- 1 e) The average coincident peak demand from 2021-2025 on Alectra's system is 5,507MW
- 2 in the summer versus 3,995MW in the winter.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-23**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP)

6  
7                   Question(s):

- 8  
9                   a) What barriers exist to installing EV chargers in existing multi-residential buildings?
- 10  
11                  b) What roles does Alectra typically play with respect to the installation of EV chargers in  
12                   the parking area of multi-residential buildings.
- 13  
14                  c) Please provide a breakdown of the number of and percent of multi-residential buildings  
15                   in each rate class, with a description of how distribution charges are levied in each class  
16                   (fixed, per kWh, or per kVA?).
- 17  
18                  d) If distribution system upgrades are required to allow a multi-residential building to install  
19                   EV chargers, how are the costs to be paid by the building customer calculated? Is the  
20                   forecast incremental revenue from the incremental load considered as part of those  
21                   calculations? If not, why not. Please describe two cases: (i) with individual meters for  
22                   each unit and (ii) a single meter for the property.
- 23  
24                  e) How many and what percent of multi-residential buildings have a meter for each unit?
- 25  
26                  f) What additional steps could Alectra take to ease the connection of EV chargers in multi-  
27                   residential buildings?

28  
29                   **RESPONSE:**

- 30                  a) Please refer to the response in 1-DRC-02 b).

1 b) Alectra Utilities' role is limited to assessing and providing service up to the utility  
 2 demarcation point. This includes evaluating available capacity, determining whether  
 3 service or upstream distribution upgrades are required under the Distribution System  
 4 Code, and performing the associated economic evaluation where applicable.

5  
 6 Alectra Utilities does not design, install, or manage electrical infrastructure within the  
 7 building beyond the demarcation point. Internal wiring, panel upgrades, and load  
 8 management solutions remain the responsibility of the building owner or condominium  
 9 corporation.

10 c) Alectra Utilities does not categorize buildings by structural type for rate purposes;  
 11 however, buildings identified as multi-unit residential for billing classifications purposes  
 12 are summarized below. The service applications are submitted as a New Service or  
 13 Service Upgrade and details if it is a single-phase or three-phase service. A multi-unit  
 14 residential building is only identified if a customer has self-declared as a multi-unit  
 15 building for the purposes of RPP and OER rate applicability. Table 1 below represents  
 16 all identified multi-unit buildings within Alectra Utilities' service territory along with their  
 17 relevant rate classes.

18  
 19

**Table 1 - The Number of Multi-Unit Buildings Within Alectra's Territory**

Customer Type	Number of Multi-Unit Residential Buildings	Multi-Unit Residential % by	
		Rate Class	Distribution Rate
G>50	1,252	75%	Fixed charge + Per kW
G<50	239	14%	Fixed charge + Per kWh
Residential	191	11%	Fixed charge + Per kWh
Total	1,682	100%	

20  
 21  
 22

d) Where EV charging installations trigger a system expansion, the treatment of costs and capital contributions is determined in accordance with the Distribution System Code. In

1 such cases, an Economic Evaluation Model (EEM) is applied, and forecast incremental  
2 revenue associated with the increased load is considered in determining the capital  
3 contribution requirement. The costs associated for upgrading any dedicated connection  
4 assets (i.e., transformer and conductors) are the responsibility of the customer.

5

6 Where upgrades are limited to customer-owned infrastructure beyond the demarcation  
7 point, the cost associated with upgrading the service is the responsibility of the customer.

8

9 Alectra Utilities bulk meters and does not meter individual units in a high-rise.

10

11 e) Alectra Utilities does not track or maintain records of privately owned sub-metering  
12 arrangements within multi-unit residential buildings. For billing purposes, condominium  
13 buildings are typically served via a bulk service to the building corporation, while  
14 individual apartment units may be individually metered or bulk metered depending on the  
15 specific configuration and legacy arrangements. Alectra Utilities does not maintain data  
16 on internal metering arrangements beyond the demarcation point.

17

18 Alectra currently services a total of 186 multi-unit residential buildings within its service  
19 territory that have Alectra Utilities-owned suit metering. There is a total of 14,019 suit  
20 meters within this building count.

21

22 f) Alectra's approach to supporting EV adoption in multi-unit residential settings focuses on  
23 maintaining adequate distribution system capacity and incorporating electrification trends  
24 into its load forecasting and distribution system planning processes.

25

26 At a system-wide level, EV adoption assumptions are incorporated into long-term  
27 planning to identify areas where reinforcement may be required. At a project-specific  
28 level, Alectra Utilities assesses connection requests on a case-by-case basis and  
29 determines appropriate service configurations in accordance with the Distribution System  
30 Code.

1       As many constraints related to EV installations in existing multi-unit residential buildings  
2       arise from customer-owned infrastructure, Alectra Utilities' role is primarily to ensure that  
3       distribution system impacts are assessed and addressed in a prudent and non-  
4       discriminatory manner.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-24**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1, (DSP)

6  
7                   Question(s):

- 8  
9                   a) What number and percent of residential meters does Alectra plan to replace with an AMI  
10                   2.0 meter over the rate term?  
11  
12                   b) What percentage of Alectra meters already have bi-directional capabilities such that no  
13                   meter replacement is needed for a customer to move to net metering?  
14  
15                   c) Are the AMI 2.0 meters that Alectra will be installing bi-directional such that customers  
16                   moving to net metering would not need a meter replacement?  
17  
18                   d) Would Alectra agree to prioritize the rollout of AMI 2.0 meters for customers installing a  
19                   DER by installing AMI 2.0 meters for those customers out of the AMI 2.0 meter  
20                   replacement budget versus cost recovery from the customer?  
21

22                   **RESPONSE:**

- 23  
24                   a) Alectra Utilities plans to replace approximately 810,000 AMI 1.0 meters during the plan  
25                   period of 2027 to 2031.  
26  
27                   b) As of January 2026, approximately 25% of Alectra Utilities' meters have bi-directional  
28                   capabilities, ensuring that these customers can transition to net metering without a meter  
29                   change. This includes 10% of premises that already have an AMI 2.0 meter, and 15% of  
30                   AMI 1.0 meters with this capability.

1 c) Yes, all AMI 2.0 meters have bi-directional capability, ensuring that customers can benefit  
2 from net metering without a meter change.

3

4 d) AMI 1.0 and AMI 2.0 meters are not inter-operable as they are connected to proprietary  
5 network infrastructure. As such, a customer with an AMI 1.0 meter, seeking to benefit  
6 from a DER, would typically require the installation of an AMI 1.0 meter with bi-directional  
7 functionality.

8

9 In the Guelph service territory, the AMI 1.0 network was provided by Itron, and is  
10 backwards compatible with Alectra Utilities' Itron AMI 2.0 network infrastructure. In this  
11 case, an AMI 2.0 meter can be installed on the AMI 1.0 network and Alectra Utilities could  
12 agree to do so from its AMI Renewal budget where the customer requires a bi-directional  
13 meter.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 2-ED-25**

4

5                   Reference: Exhibit 2, Tab 1, Schedule 1, p. 103 (DSP)

6

7                   Question(s):

8

9                   a) Please discuss emerging AMI 2.0 meters that are able to act as a DERMS (i.e. monitor  
10                   and control a DER.

11

12                   b) Will the Alectra AMI 2.0 meters have that capability?

13

14                   c) If that capability is still emerging, when does Alectra believe it will be commercially  
15                   available at a cost-effective price.

16

17                   **RESPONSE:**

18

19                   a) Alectra Utilities is monitoring initiatives using AMI 2.0 meters for testing limited, localized  
20                   monitoring and control capabilities for DERs and electric vehicles, and Alectra is  
21                   monitoring the development of such trials.

22

23                   b) Any potential adoption of these capabilities would be evaluated in alignment with our  
24                   control room technology approach set out in Appendix B14, Section IV, and assessed for  
25                   cost-effectiveness, scalability, and benchmarking against mature, purpose-built  
26                   solutions.

27

28                   c) Please refer to the response in b).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-26**

4  
5                   Reference: Exhibit 2a, Tab 1, Appendix J&K (DSP, decarbonization)

6  
7                   Question(s):

8  
9                   a) Please confirm that the Cost-Effective Pathways Study prepared for the Ontario  
10                   Government<sup>1</sup> used a cost optimization model to assess the most cost-effective pathways  
11                   to decarbonize the province.

12  
13                   b) Does Alectra agree that this study prepared for the Ontario Government is credible?  
14                   Please confirm that the most cost-effective pathway to reach net zero resulted in almost  
15                   a complete elimination of gas as a source of energy for residential customers (as shown  
16                   on page 56).

17  
18                   c) Please compare this cost-optimal pathway with the forecasts used by Alectra.

19  
20                   **RESPONSE:**

21  
22                   a) Alectra Utilities is not in a position to comment on the credibility of the *Cost-Effective*  
23                   *Energy Pathway* study, and did not rely on its findings in the development of the 2027-  
24                   2031 DSP. Alectra Utilities understands that the Cost-Effective Energy Pathway study  
25                   was used as one of numerous inputs to inform the development of Province of Ontario's  
26                   *Energy For Generations: Ontario's Integrated Plan to Power the Strongest Economy in*  
27                   *G7 (June 2025)*, and Alectra Utilities 2027-2031 DSP is consistent and aligned with that  
28                   plan.

---

<sup>1</sup> <https://www.ontario.ca/files/2025-06/mem-cost-effective-energy-pathways-study-for-ontario-en-2025-06-10.pdf>

- 1 b) See response in a).
- 2
- 3 c) See response in a).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-27**

4  
5                   Reference: Exhibit 2a, Tab 1, Appendix J&K (DSP, decarbonization)

6  
7                   Question(s):

- 8
- 9                   a) Please confirm that the Canadian Climate Institute used a cost optimization model to  
10                   assess the most cost-effective pathways to decarbonize the country and each province.<sup>1</sup>
- 11
- 12                   b) Does Alectra agree that this study is credible?
- 13
- 14                   c) Please confirm that this study concludes that the most cost-effective path to net zero  
15                   would result in a 96% decline in gas use in Ontario (see page 17).
- 16
- 17                   d) The study concludes as follows: “Feedstock constraints are an important limiting factor  
18                   for biomethane production. Recent studies estimate that, given current feedstock  
19                   availability and existing production technologies, Canada could feasibly produce between  
20                   90 and 218 petajoules of biomethane per year (Abboud et al. 2010; Kelleher  
21                   Environmental 2013; Stephen et al. 2020). This is equivalent to only 2 to 5 per cent of  
22                   Canada’s total 2021 gas demand (CER 2023).” (p. 30) Does Alectra and its experts  
23                   agree?
- 24
- 25                   e) Please comment on the following conclusion from this study: “Likewise, low-carbon gases  
26                   like hydrogen and biomethane will not serve as replacement fuels on a scale that can  
27                   justify continued gas network expansion. Our modelling and numerous other studies find  
28                   that these gases are either too scarce or too costly to heat more than a small fraction of

---

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

1 Canada's buildings and are instead taken up by other sectors such as heavy industry.  
2 Even under lower-cost assumptions for these fuels, electrification of building heat still  
3 dominates."(p.III)

4

5 **RESPONSE:**

6

7 a) The Canadian Climate Institute Heat Exchange Report findings, data and conclusions  
8 have not been used or relied upon by Alectra Utilities in the preparation of this application.  
9 Alectra Utilities is not in a position to comment on the Report or its findings.

10

11 b) See response in a).

12

13 c) See response in a).

14

15 d) See response in a).

16

17 e) See response in a).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 2-ED-28**

4

5                   Reference: Exhibit 2a, Tab 1, Appendix J&K (DSP, decarbonization)

6

7                   Question(s):

8

9                   a) Please provide a copy of any studies, calculations, or analysis underlying Alectra's  
10                   forecasts relating to the electrification of heating and transportation.

11

12                   **RESPONSE:**

13

14                   a) Alectra Utilities electrification forecast including the supporting methodology, analysis  
15                   and assumptions for electrification of transportation and building heating are provided in  
16                   Exhibit 2A, Tab 1, Appendix J, Load Forecast & System Adequacy Assessment Report  
17                   (the "Report").

18                   With respect to transport electrification, please refer to Section 3.6 Future Electric  
19                   Vehicles (EV) Impact of the Report, which describes the forecast, key assumptions and  
20                   sources used. The underlying EV adoption forecast for Alectra Utilities' service territory  
21                   was developed by Guidehouse (engaged to develop a twenty-year EV uptake forecast)  
22                   and is attached as part of the response to 1-DRC-2 as "1-DRC-02\_Attach\_1 Guidehouse  
23                   Total EV Population in Alectra Utilities Service Territory with Forecast".

24                   With respect to decarbonization of building heating, please refer to Section 3.8.3 Non-  
25                   Coincident Winter Peak Load Forecast with CDM, EV, and Decarbonization of the  
26                   Report.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-29**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1 (DSP, NWS)

6  
7                   Question(s):

8  
9                   a) How many Alectra customers have EVs?

10  
11                  b) How many Alectra customers have EVs that are capable of bi-directional charging?

12  
13                  **RESPONSE:**

14  
15                  a) Alectra Utilities does not collect or track information on individual customers who own  
16                     Electric Vehicles (EVs) and therefore cannot quantify the number of customers with EVs.  
17                     For informational purposes, Alectra Utilities tracks EV population statistics based on the  
18                     Forward Sortation Area of registered address within Alectra Utilities' service territory.  
19                     Based on the Ministry of Transportation's published vehicle registration statistics as of  
20                     December 31, 2025, there are approximately 81,016 total EVs, including Battery Electric  
21                     Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs) within Alectra Utilities'  
22                     service territory. Alectra Utilities notes that this figure represents registered vehicles, not  
23                     unique customers.

24  
25                  b) Consistent with the response to part (a), Alectra Utilities does not collect or track  
26                     information on individual customers who own EVs and therefore cannot determine how  
27                     many Alectra Utilities customers have EVs capable of bi-directional charging. Alectra  
28                     Utilities is also not aware of a reliable, publicly available dataset that would enable Alectra  
29                     Utilities to quantify bi-directional-capable EVs within its service territory for the purposes  
30                     of this interrogatory.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-30**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1 (DSP)

6  
7                   Question(s):

8  
9                   a) Please provide a list of all capital investments that are predominantly driven by efforts to  
10                   facilitate and benefit from the installation of DERs. For each, please provide the amounts  
11                   budgeted annually and over the rate term. Please also include a column explaining how  
12                   the investment will facilitate DERs. Please do not include investments that are required  
13                   in order to meet load growth or reliability, with DERs facilitation as an ancillary benefit  
14                   that is irrelevant to the decision to pursue the investment.

15  
16                   **RESPONSE:**

17  
18                   a) Alectra Utilities interprets this interrogatory as requesting capital investments whose  
19                   primary purpose is to facilitate and benefit from the installation of DERs, and excluding  
20                   investments required to meet load growth or reliability where DER facilitation is ancillary  
21                   and not determinative to the investment decision.

22  
23                   Consistent with that interpretation, Alectra Utilities' capital investments that are  
24                   predominantly driven by DER enablement are Planning Tools and Automation (PTA) and  
25                   DER Wholesale Market Preparedness (DWMP), which are Grid Modernization enabling-  
26                   technology investments identified in Appendix B14, Section IV, Table B14-9. Please refer  
27                   to Appendix B14, Section IV, Sub-Sections 4.1–4.3 for additional information.

28  
29                   Alectra Utilities provides the requested annual capital amounts for PTA and DWMP in the  
30                   table below, including a brief explanation of how each investment facilitates DER  
31                   installation and integration.

1 Alectra Utilities notes that other initiatives described in the DSP relate to broader  
2 planning, evaluation, or program development activities associated with DER/NWS  
3 considerations. These activities are not included in the table below, as Alectra Utilities  
4 has focused this response on capital investments whose primary purpose is to directly  
5 facilitate and benefit from DER installation and integration, consistent with the intent of  
6 the interrogatory.

1 Table 1 - Annual Capital Amounts for PTA and DWMP

Capital Investment (Grid Modernization)	2027 (\$MM)	2028 (\$MM)	2029 (\$MM)	2030 (\$MM)	2031 (\$MM)	Total 2027–2031 (\$MM)	How the investment will facilitate DERs
Planning Tools and Automation (PTA)	0.0	0.1	2.0	3.4	0.8	6.3	Planning Tools and Automation streamlines system analysis and supports compliance with evolving DER-related requirements, improving Alectra’s ability to plan for and integrate DERs efficiently.
DER Wholesale Market Preparedness (DWMP)	0.9	0.7	0.0	0.0	0.4	2.0	DER Wholesale Market Preparedness supports compliance with IESO market rules and enables real-time coordination of DERs, supporting DER participation and coordination in operational and market contexts (including NWS applications where applicable).

2

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 2-ED-31**

4  
5                   Reference: Exhibit 2, Tab 1, Schedule 1 (DSP)

6  
7                   Question(s):

8  
9                   a) Please provide a list of all capital investments that are predominantly driven by efforts to  
10                   enable non-wires solutions. For each, please provide the amounts budgeted annually  
11                   and over the rate term. Please also include a column explaining how the investment will  
12                   enable non-wires solutions. Please include the investments described in the following  
13                   passage: "Further, Alectra Utilities' ability to deploy these and future NWS is contingent  
14                   on funding and technical implementation of enabling technologies proposed in this  
15                   application, including Advanced Distribution Management System, Integrated Network  
16                   Management, Planning Tools and Automation, and DER Wholesale Market  
17                   Preparedness..." (DSP s. 5.3.5, p. 326)

18  
19                   **RESPONSE:**

20  
21                   a) Alectra Utilities interprets this interrogatory as requesting capital investments whose  
22                   primary purpose is to enable the identification, evaluation, and/or operationalization of  
23                   Non-Wires Solutions (NWS), and excluding traditional distribution infrastructure  
24                   investments that are principally driven by load growth, asset condition, or reliability needs  
25                   (even where NWS is considered as an option within a project's options analysis).

26  
27                   Consistent with that interpretation, and as specifically referenced in DSP Section 5.3.5,  
28                   Alectra Utilities' capital investments that are predominantly driven by enabling NWS are  
29                   the enabling-technology platform investments proposed in this application, which include  
30                   Advanced Distribution Management System (ADMS), Integrated Network Management  
31                   (INM), Planning Tools and Automation (PTA), and DER Wholesale Market Preparedness

1 (DWMP). These initiatives are described in Appendix B14 (Grid Modernization), including  
2 the annual capital amounts in Table B14-9. Please refer to Appendix B14, Section IV  
3 (including Sub-Sections 4.1–4.3) for additional information.

4  
5 Alectra Utilities provides the requested annual capital amounts for these enabling-  
6 technology platforms in the table below, including a brief explanation of how each  
7 investment enables NWS.

8  
9 Alectra Utilities notes that the DSP also describes other activities that may support NWS  
10 outcomes, including broader planning processes, project-specific alternatives analyses  
11 (including consideration of NWS), and program development, stakeholder/customer  
12 engagement, coordination, and implementation-readiness work. These activities are not  
13 included in the table below because this response is focused on the enabling-technology  
14 platforms identified in DSP Section 5.3.5 as contingent to Alectra Utilities' ability to deploy  
15 NWS (i.e., ADMS, INM, PTA, and DWMP) and accordingly provides the capital amounts  
16 for those enabling-technology platforms. Other NWS-supporting activities may be  
17 addressed elsewhere in the DSP evidence and may include both capital and non-capital  
18 elements, but they are not part of the enabling-technology platform investments  
19 summarized in the table below.

1 Table 1 - Annual Capital Amounts for Enabling-technology Platforms

Capital Investment (Grid Modernization)	2027 (\$MM)	2028 (\$MM)	2029 (\$MM)	2030 (\$MM)	2031 (\$MM)	Total 2027–2031 (\$MM)	How the investment enables NWS
<b>Advanced Distribution Management System (ADMS)</b>	0.0	0.0	0.7	5.3	7.3	<b>13.3</b>	Provides a unified operational platform (integrating functions such as SCADA/DMS/OMS) to improve real-time visibility, control, and automation needed to operationalize flexible resources used in NWS (e.g., monitoring constraints, coordinating dispatch/response, and supporting operational decision-making).
<b>Integrated Network Management (INM)</b>	1.1	1.2	1.6	1.4	0.7	<b>6.0</b>	Establishes a governed, harmonized network data model (“single source of truth”) that supports NWS identification and evaluation by improving data quality/consistency for planning studies, constraint identification, and downstream tools/platforms used to assess and deploy NWS.
<b>Planning Tools and Automation (PTA)</b>	0.0	0.1	2.0	3.4	0.8	<b>6.3</b>	Implements advanced planning analytics and workflow automation to support scalable NWS screening and evaluation (including benefit-cost

Capital Investment (Grid Modernization)	2027 (\$MM)	2028 (\$MM)	2029 (\$MM)	2030 (\$MM)	2031 (\$MM)	Total 2027-2031 (\$MM)	How the investment enables NWS
							assessment and prioritization), enabling Alectra to more efficiently assess NWS as alternatives to traditional wires investments where cost-effective.
<b>DER Wholesale Market Preparedness (DWMP)</b>	0.9	0.7	0.0	0.0	0.4	<b>2.0</b>	Establishes telemetry, coordination, and market-operational capabilities to enable dispatch/coordination of DERs and aggregations (including through IESO market constructs), supporting NWS implementation where DER services can be used to address identified distribution needs.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 3-ED-32**

4  
5                   Reference: Exhibit 3, Customer and Load Forecast

6  
7                   Question(s):

8  
9                   a) Please list the differing assumptions and methodologies used when forecasting peak load  
10                   for the purposes of billing determinants and for assessing capital needs at the various  
11                   levels of the electricity system (e.g. transmission, large scale distribution, street-level  
12                   distribution). For each, please ensure that assumptions regarding distributed energy  
13                   resources (e.g. whether they are assumed to be generating, not generating, or  
14                   otherwise).

15  
16                   b) If a residential customer increases their service (e.g. from 40 amp to 200 amp), how will  
17                   that impact the various peak load forecasts (if at all). For the purpose of this question,  
18                   please assume that the customer's peak and annual load remains the same. The purpose  
19                   of this question is to determine whether efforts to help customers avoid service upgrades  
20                   when electrifying heating or transportation can help reduce costs driven by peak demand  
21                   in any part of the electricity system.

22  
23                   c) Please provide a table showing for each customer class: the number of customers, the  
24                   annual demand, and the peak demand, including historical figures for the past 5 years  
25                   and forecast figures for as long as is available. If possible, please include a breakdown  
26                   of summer and winter peak demand.

27  
28                   **RESPONSE:**

29  
30                   a) The assumptions and methodologies used when forecasting load for the purposes of  
31                   billing determinants are provided in Exhibit 3, Tab 1, Schedule 1, Attachment 3-2,

1 2026-2031 Sales and Customer Forecast Report (the Itron Report). The assumptions  
2 and methodologies used when forecasting load for the purpose of assessing capital  
3 needs are provided in Exhibit 2A, Tab 1, Schedule 1, DSP Appendix J, Load Forecast  
4 & System Adequacy Assessment Report. Please also see Alectra Utilities' response  
5 to 2.0-VECC-13.

6

7 b) In single phase residential areas, both in new construction and renewal, Alectra  
8 Utilities uses a transformer size that will allow residential customers to increase their  
9 services. If the customer peak and annual demand does not change, there will be no  
10 impact to the peak demand forecast.

11

12 c) Please see 3-SEC-69\_Attach 1\_Appendix 2-IB Load Forecast Analysis for customer  
13 / connection number and annual billed demand for each rate class from 2017 to 2031.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 4-ED-33**

4

5                   Reference: Exhibit 4 (DER facilitating costs) Question(s):

6

- 7                   a) Please provide a list of all forecast O&M costs that will facilitate the installation of DERs.  
8                   For each, please provide the amounts budgeted annually and over the rate term. Please  
9                   also include a column explaining how the line item will facilitate DERs.

10

11                   **RESPONSE:**

12

- 13                   a) Alectra Utilities has not forecast OM&A costs that are directly attributable to facilitating  
14                   the installation of DERs in the 2027-2031 rate term.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 8-ED-34**

4

5                   Reference: Exhibit 8 and Exhibit 7 (cost causality)

6

7                   Preamble: These questions relate to the issue of cost causality to provide examples of how  
8                   cost causality is not and cannot be 100% achieved with standard postage stamp rates.

9

10                  Question(s):

11

12                  a) Does Alectra charge customers a fee to remain with paper billing?

13

14                  b) How many and what percent of Alectra customers still maintain paper billing? Please  
15                  provide the response to residential customers and all customers.

16

17                  c) What is the cost of paper billing overall and on a per-customer basis? Please provide a  
18                  breakdown by rate class, or at least for residential customers versus other customers.

19

20                  **RESPONSE:**

21

22                  a) Alectra Utilities does not charge customers a fee to receive a paper bill.

23

24                  b) Table 1 provides the number and percentage of customers receiving a paper bill.  
25                  Approximately 49.7% of residential customers elect to receive a paper bill and 44.1% of  
26                  non-residential customers elect to receive a paper bill.

1 **Table 1 - Paper and Paperless Billing Rates by Customer Type**

	<b>Total bills Issued</b>	<b>Number of Customers on e-Bill</b>	<b>% Of Customers on e-Bill</b>	<b>Number of Paper Bill Customers</b>	<b>% Of Paper Bill Customers</b>
Residential	930,578	468,524	50.3%	462,054	49.7%
Non-Residential	101,280	56,662	55.9%	44,618	44.1%
Total Bills	1,031,858	525,186	50.9%	506,672	49.1%

2

- 3 c) The total cost of postage and printing in 2025 was \$11,328,238 in relation to 1,091,369  
 4 total customers,<sup>1</sup> resulting in an annual per-customer postage & printing cost of \$10.38.  
 5 Postage and printing costs are not tracked by rate class.

---

<sup>1</sup> Customer counts do not include sentinel lights, street lighting and USL counts.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-35**

4  
5                   Reference: Exhibit 8 and Exhibit 7 (cost causality)

6  
7                   Preamble: These questions relate to the issue of cost causality to provide examples of how  
8                   cost causality is not and cannot be 100% achieved with standard postage stamp rates.

9  
10                  a) Does Alectra propose to charge residential customers different rates depending on  
11                  whether they live in a rural versus an urban area (i.e. more or less population dense  
12                  area)?

13  
14                  b) Please provide a high-level comparison between the population density in the most and  
15                  least population dense portions of Alectra's service territory.

16  
17                  c) Please confirm, generally speaking, that less population dense areas require more poles  
18                  and wires to serve on a per customer basis?

19  
20                  d) Please provide a high-level, best-efforts, order-of-magnitude comparison between the  
21                  cost to serve a single residential customer in the highest population dense area within  
22                  Alectra territory versus a single residential customer in the lowest population dense area  
23                  within Alectra territory. Please provide a quantitative answer using an expedient  
24                  approach. Please account for capital costs and operational costs. If Alectra is unsure how  
25                  to calculate an answer, please contact us for suggestions.

26  
27                  **RESPONSE:**

28  
29                  a) Alectra Utilities does not propose charging residential customers different rates  
30                  depending on where they live. Alectra Utilities' rate harmonization proposal is detailed in  
31                  Exhibit 8, Tab 1, Schedule 1.

1 b) Please see Table 1 below.  
2

3 **Table 1 - Population Density by Rate Zone<sup>1</sup>**

Rate Zone	Municipality	Population	Area (sq. km)	Density (population per sq. km)
BRZ	Brampton	751,542	269.4	2,790
ERZ	Mississauga	792,340	289.5	2,737
GRZ	Guelph	157,500	94.0	1,676
HRZ	Hamilton, St. Catharines	760,993	448.6	1,696
PRZ	York Region, Simcoe County	1,374,697	810.3	1,696

4

5

6 c) This statement is oversimplified, as cost-to-serve depends on a combination of factors,  
7 such as system design (overhead/underground), topology, load and reliability  
8 requirements, as well as population density.

9

10 d) Alectra Utilities does not see the relevance of this analysis to its proposals in this  
11 proceeding. Alectra Utilities expects the costs to serve specific customers that are  
12 otherwise similar consumers would vary on the basis of geography, the age and health  
13 of assets required to serve them, the capacity constraints of assets to serve them, the  
14 customer's customer care needs and ability to make timely payment, and the customer's  
15 individual demand characteristics, among other factors. The purpose of postage stamp  
16 rates, such as those relied upon by OEB-regulated utilities, is to accept these variances  
17 while charging similar customers uniform rates. Alectra Utilities does not recommend or  
18 expect divergence from this longstanding practice.

---

<sup>1</sup> For this response, each rate zone population is assumed to be equal to the corresponding municipality's population as per Exhibit 2A, Tab 1, Schedule 1, Table 5.3.2-2

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-36**

4  
5                   Reference: Exhibit 8 and Exhibit 7 (cost causality) and Exhibit 4 (O&M)

6  
7                   Preamble: These questions relate to the issue of cost causality to provide examples of how  
8                   cost causality is not and cannot be 100% achieved with standard postage stamp rates.

9  
10                  a) Does Alectra charge customers to use the call centre for issues that can be dealt with  
11                  online?

12  
13                  b) Approximately what percentage of calls to the call centre are for issues that can be dealt  
14                  with online? Please provide a rough best-estimate based on the professional judgement  
15                  of those managing the call centre.

16  
17                  c) What is the annual cost of running the call centre, both as an overall total and per call  
18                  received?

19  
20                  d) Are customers with paper billing more likely than other customers to use the call centre  
21                  for issues that can be dealt with online?

22  
23                  e) How many calls does the call centre receive each year on average?

24  
25                  **RESPONSE:**

26  
27                  a) Alectra Utilities does not charge customers to utilize the contact centre for enquiries that  
28                  can be managed online. A full listing of Alectra's proposed harmonized Specific Service  
29                  Charges is provided at Exhibit 8, Tab 3, Schedule 2, Page 2.

30

- 1 b) Exhibit 4 Tab 2 Schedule 7, Table 4-2-45, provides a forecast of the number of customer  
2 interactions expected to shift from voice and email to digital.  
3
- 4 c) In 2025, Alectra estimates that the total cost to run the contact center is \$11.91 million.  
5 This is the Customer Care segment, removing the costs of outage communications and  
6 the Market Insights group, including the consulting cost associated with J.D. Power. In  
7 2025, the contact center managed 535,795 calls and 138,530 emails. Please note that  
8 this value does not include costs related to training and Quality Assurance practices,  
9 application maintenance (IVR, CIS, etc.) or burden. An estimated per email/call cost is  
10 \$17.66.  
11
- 12 d) Alectra's J.D. Power survey insights (2025) indicate that customers with paper billing  
13 show a marginal increase in propensity to use the call centre for certain inquiries and  
14 transactions that can be dealt with online.  
15
- 16 e) In 2025, There were approximately 674,000 annual call and email interactions requiring  
17 a CSR. See also Exhibit 4 Tab 2 Schedule 7, Table 4-2-44 for additional data on annual  
18 call and email interactions.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 8-ED-37**

4

5                   Reference: Exhibit 8, Tab 2, Schedule 2 (standby rates)

6

7                   Preamble: These questions explore potential alternatives on the current/proposed standby  
8                   rates with the aim of encouraging DERs that lower total system costs. An alternative could  
9                   be applied to all standby customers or just new customers with load displacement.

10

11                  Question(s):

12

13                  a) What alternatives has Alectra considered to charging standby rates?

14

15                  b) Please discuss the pros and cons of charging coincident demand charges to all  
16                  customers instead of the current/proposed standby charges (see EB-2015-0043, Staff  
17                  Discussion Paper, March 31, 2016 for details).

18

19                  c) Please discuss the pros and cons of charging a Capacity Reserve Charge as described  
20                  in Ontario Energy Board, Staff Report to the Board, *Rate Design for Commercial and*  
21                  *Industrial Electricity Customers*, EB-2015-0043 (February 21, 2019).

22

23                  d) Please discuss the pros and cons of a Capacity Allocation approach (i.e., Capacity  
24                  Contracted for capacity) where the load customer would pay the Capacity Allocation each  
25                  month and would pay a ratchet charge if they ever consume above that. The ratchet would  
26                  also increase the Capacity Allocation for some time period (e.g., 12/24/36 months) to  
27                  further incentivize the customer to not overconsume during peak demand periods.

28

29                  **RESPONSE:**

30

31                  a) Alectra Utilities considered its approach to standby rates within the context of rate

1 harmonization, and as such placed precedence on the existing standby charge  
2 approaches employed in its current rate zones for the purpose of identifying an  
3 appropriate harmonized structure. Within this context, 3 of Alectra Utilities' 5 rate zones  
4 currently charge the volumetric distribution rate for a customer's rate class as the standby  
5 rate, including the ERZ in which the standby rate was approved on a final basis.  
6

7 b) Alectra Utilities did not consider the implementation of coincident demand charges, as  
8 this approach was actively considered in the consultation referenced (EB-2015-0043),  
9 and was ultimately not recommended by OEB Staff or implemented via OEB policy. As  
10 a potential benefit, Alectra Utilities expects coincident demand charges to all customers  
11 would more closely align customer rates with the portions of utility costs driven by  
12 customer contributions to coincident peak demands. The primary detriments to such an  
13 approach would be significant rate instability, anticipated customer confusion and  
14 education requirements, and significant administrative burden and cost. Given the OEB's  
15 long-standing Cost Allocation Model accounts for coincident demand in the assignment  
16 of costs to customer classes, Alectra Utilities agrees with the existing OEB policy.  
17

18 c) Alectra Utilities, though familiar with the Capacity Reserve Charge (CRC) work  
19 referenced, did not actively consider adoption of a CRC approach to standby rates. It is  
20 unclear to Alectra Utilities what the incremental benefit of implementing the CRC would  
21 be relative to its proposal. The CRC sought to reserve capacity on the distribution system  
22 via a fixed monthly charge, where capacity reserve costs were determined based on the  
23 nameplate capacity of a customer's generator, with technology-specific adjustments, and  
24 application of a 'capacity factor'. To Alectra Utilities' knowledge, no distributor has since  
25 sought approval of or implemented a CRC, while the OEB has declined to adopt this  
26 policy in 2019 on issuance, or in its 2023-2024 standby rates consultation.  
27

28 d) The Capacity Allocation approach described is not clear, and therefore Alectra Utilities  
29 cannot comment on the approach.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-38**

4  
5                   Reference: Exhibit 8, Tab 2, Schedule 2 (standby rates)

6  
7                   Preamble: These questions explore potential variations on the current/proposed standby  
8                   rates with the aim of encouraging DERs that lower total system costs. A variation could be  
9                   applied to all standby customers or just new customers with load displacement.

10  
11                  Question(s):

12  
13                  a) Please discuss the feasibility and pros and cons of only charging standby rates to the  
14                  extent that a customer's demand exceeds their contracted demand at the time of the  
15                  coincident system peak. Please discuss how this could encourage customers to refrain  
16                  from conducting maintenance or other downtime at the time of the distribution system  
17                  peak.

18  
19                  b) Please analyze three customers subject to standby charges. Please select the one with  
20                  the largest DER, the smallest DER, and the mid-size DER.<sup>1</sup> For each, please indicate  
21                  how much they paid in standby charges annually for the past three years. For each,  
22                  please indicate the number of instances in which backup service was utilized (i) outside  
23                  of the time of distribution system peak and (ii) at the time of distribution system peak.

24  
25                  c) Please discuss other methods that could be used to encourage customers to refrain from  
26                  conducting maintenance or other downtime at the time of the distribution system peak.  
27                  Similarly, please discuss other adjustments to Alectra's standby rates proposals that  
28                  would ensure they are charged only where there is a contribution to the system peak.

---

<sup>1</sup> If necessary to assure anonymity, please randomly select examples from the top quartile, bottom quartile, and middle quartiles.

1 d) If Alectra were to wish to pilot alternative approaches to standby rates with a small  
2 number of new DER customers without rolling out those approaches across the full  
3 customer base, what regulatory approvals would be required in this proceeding to allow  
4 for the deviations from the standard rate structure required to said piloting? Please  
5 provide details.  
6

7 **RESPONSE:**  
8

9 a) Alectra Utilities has concerns with the feasibility and effectiveness of this approach for  
10 two reasons, among others. First, the underlying logic that avoidance of coincident  
11 system peak will definitively save distribution costs is expected not apply in many  
12 instances. Alectra Utilities has a large and dispersed distribution system, and a single  
13 customer avoiding system coincident peak may not have an impact on distribution  
14 investments, as it is that customer's impact on local assets that is equally or more relevant  
15 to system investment. Second, Alectra Utilities is concerned that the proposal made  
16 would not achieve the recovery of actual costs incurred to build and maintain a system  
17 capable of serving customers' entire, unreduced load. Conversely, Alectra Utilities'  
18 proposal is predicated on demand billing determinants and rates, which have been  
19 designed to achieve exactly this purpose, and have been included on a forecast basis in  
20 its proposed rates to the benefit of all customers.  
21

22 b) Alectra Utilities has analyzed a sample of three customers with varying-sized DER  
23 projects, subject to standby charges. Table 1 presents the 3-year historical standby  
24 charges and the number of days Alectra Utilities provided backup service to the customer  
25 (i.e., generator was offline) outside of the monthly Ontario-wide peak day and during the  
26 monthly Ontario-wide peak day.

1 **Table 1 - Standby Customer Analysis**

		Generator Size	2023	2024	2025
Standby Charges (\$)	Large DER		\$ 114,810	\$ 150,768	\$ 127,820
	Mid-size DER		\$ 1,625	\$ 1,556	\$ 1,684
	Small DER		\$ 16	\$ 145	\$ -
Instances Backup Service utilized outside of Ontario Peak (days)	Large DER		69	65	39
	Mid-size DER		43	7	78
	Small DER		338	338	333
Instances Backup Service utilized during Ontario Peak (days)	Large DER		0	0	2
	Mid-size DER		5	5	6
	Small DER		6	9	9

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- c) As noted in a) above, the reduction of demand at the time of coincident peak may not yield material or any savings, as the capacity and demand of localized assets bear an equal or greater relevance to cost savings. To the degree it is an objective to reduce localized or system-wide coincident peak demand, Alectra Utilities is of the view that non-wires programming would more appropriately accomplish this end.
- d) Alectra Utilities does not wish to pilot an alternative design to standby rates at this time. As noted in c) above, Alectra Utilities is of the view that the ends sought would more appropriately be accomplished via non-wires programming. The OEB has established guidelines and processes to review and approve non-wires expenditures.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 8-ED-39**

4

5                   Reference: Exhibit 8, Tab 2, Schedule 2 (standby rates)

6

7                   Question(s):

8

9                   a) Please provide a table for the past five years and forecast for the next five years showing  
 10                   the revenue generated from standby rates. For at least the historic figures, please provide  
 11                   a breakdown by the type of charge.

12

13                   b) How many customers will be subject to standby rates?

14

15                   c) Please provide a breakdown of the customers subject to the proposed new standby rates  
 16                   (both # and MW capacity) by generator type (e.g. solar, gas co-generation, battery, gas  
 17                   other, etc.).

18

19                   **RESPONSE:**

20

21                   a) Table 1 below provides a summary of standby revenue from 2021 to 2031. All standby  
 22                   charges are volumetric charges per kW.

23

24                   **Table 1 - Standby Revenue Summary (\$000s)**

Rate Class	2021	2022	2023	2024	2025	
	<i>Historical</i>	<i>Historical</i>	<i>Historical</i>	<i>Historical</i>	<i>Historical</i>	
GS > 50, Regular	\$1,243	\$1,176	\$1,190	\$1,110	\$1,054	
GS > 50, Intermediate	\$0	\$0	\$0	\$1	\$21	
Large Use	\$130	\$130	\$115	\$151	\$128	
LUDA	\$8	\$8	\$11	\$5	\$7	
<b>Total</b>	<b>\$1,381</b>	<b>\$1,314</b>	<b>\$1,317</b>	<b>\$1,267</b>	<b>\$1,209</b>	
	2026	2027	2028	2029	2030	2031
	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>
<b>Total</b>	<b>\$1,434</b>	<b>\$2,279</b>	<b>\$2,419</b>	<b>\$2,528</b>	<b>\$2,670</b>	<b>\$2,813</b>

25

- 1 b) Alectra Utilities estimates 62 existing customers<sup>1</sup> will be subject to proposed standby  
2 rates or gross load billing.  
3  
4 c) Table 2 presents the breakdown of customers subject to proposed standby rates or gross  
5 load billing by generator type.  
6

7 **Table 2 - Standby Customer Breakdown by Generator Type**

<b>Generator Type</b>	<b>Customers</b>	<b>Total Capacity (MW)</b>
Battery Storage	11	14.4
CHP	11	44.6
Co-generation	3	14.5
Natural Gas	21	150.7
Solar	6	4.3
Other	10	36.0
<b>Total</b>	<b>62</b>	<b>264.3</b>

8

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<sup>1</sup> While the total number of customers with standby requirements was 66 as of December 2025, under the proposed standby power rate structure, four (4) customers will be excluded because they fall outside of the application scope, specifically, customers with backup generators and generators rated below 50kW.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

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3                   **INTERROGATORY # 8-ED-40**

4  
5                   Reference: Exhibit 8, Tab 2, Schedule 2 (standby rates)

6  
7                   Question(s):

- 8
- 9                   a) Will all customers in the GS>50 kW rate class have a contracted demand amount, or only  
10                   those with generating units?
- 11
- 12                   b) Please confirm whether the contract demand amount in the standby rate proposal acts  
13                   as a floor below which demand charges cannot drop.
- 14
- 15                   c) If the answer to (a) is no, please explain why it is fair to require customers with generation  
16                   to be charged based on a contract demand amount but not other customers in the GS >  
17                   50 kW rate class?
- 18
- 19                   d) Please provide the estimated demand charges that would be levied on the following two  
20                   customers in the GS >50 kW rate class:
- 21                   i) A customer with a generator whose demand is 100 kW for 6 months and 75 kW for 6  
22                   months;
- 23                   ii) A customer without a generator whose demand is 100 kW for 6 months and 75 kW  
24                   for 6 months.
- 25
- 26                   e) Please provide the estimated demand charges that would be levied on the following two  
27                   customers in the GS >50 kW rate class:
- 28                   i) A customer with a generator whose demand is 100 kW for 11 months and 150 kW for  
29                   1 month;
- 30                   ii) A customer without a generator whose demand is 100 kW for 11 months and 150 kW  
31                   for 1 month.

1 **RESPONSE:**

2

3 a) Alectra Utilities confirms that only GS>50 kW customers with on-site generation or  
 4 energy storage and GS>50 kW customers that have redundancy requirements will have  
 5 a contracted demand amount.

6

7 b) Alectra Utilities confirms that the contract demand amount in the standby rate proposal  
 8 acts as a floor for distribution volumetric charges.

9

10 c) Standby customers require Alectra Utilities to maintain capacity in reserve to serve that  
 11 customer on demand. Alectra Utilities' proposed rate design was based on the general  
 12 understanding that there is no discernible difference in distribution capacity line  
 13 requirements for supplying firm and standby power.

14

15 d) Table 1 summarizes the estimated 2027 total demand charges for the requested  
 16 customer scenarios in parts d) and e). Alectra Utilities prepared estimated demand  
 17 charges using updated proposed 2027 rates, which reflect updates and changes through  
 18 interrogatory responses.

19

20 **Table 1 - Estimated 2027 Total Demand Charges**

Scenario		(d)	(e)
		<i>100 kW for 6 months 75 kW for 6 months</i>	<i>100 kW for 11 months 150 kW for 1 month</i>
Customer with Generator	(i)	\$15,100	\$17,048
Customer without Generator	(ii)	\$14,320	\$17,048

21

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23 e) See Table 1 in response to part d).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

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**INTERROGATORY # 8-ED-41**

Reference: Exhibit 8, Tab 2, Schedule 2 (standby rates)

Preamble: Exhibit 3, Tab 1, Schedule 5 states: "Given the long-standing and widespread implementation of Conservation and Demand Management (CDM) and Non-Wires Solutions (NWS) initiatives across Ontario, including within Alectra Utilities' service territory, the historical effects of these initiatives are inherently reflected in the historical load and customer data that form the basis of Itron's regression models and forecasting methodologies."

Question(s):

- a) Please discuss the degree to which distributed generation is accounted for in Itron's regression models and forecasting methodologies.
- b) Please discuss the degree to which distributed generation is accounted for in determining when infrastructure upgrades are required.

**RESPONSE:**

a) **Response prepared by Itron**

Distributed generation is not directly incorporated into the rate-class sales forecasts. In the residential rate, behind-the-meter customer-owned generation is reflected in the billed sales data - it reduces customers' billed sales, which are, in turn, used as an input into forecasting models. To the extent that there is a measurable downward trend in usage, it would be captured by the model end-use variables. There is no other adjustment for behind-the-meter customer-owned generation.

1       The commercial billed sales do not include the impact of customer-owned generation,  
2       as all commercial generators are set up as a separate account for billing purposes, and  
3       as such, their generation output does not affect historical billed sales. Therefore, it does  
4       not affect the commercial customer billed sales forecast.

5

6       b) Alectra Utilities considers existing and forecasted DER and their contribution for the  
7       peak demand forecast. Please refer to Exhibit 2A Tab 1 Schedule 1 Appendix J section  
8       3.5.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-42**

4  
5                   Reference: Exhibit 8, Tab 2, Schedule 2 (standby rates)

6  
7                   Question(s):

8  
9                   a) Please discuss the merits and feasibility of customers with generation being allowed to  
10                   calculate their contract demand amount for the purposes of standby rates based on a  
11                   coincident peak demand amount. The purpose of this adjustment to Alectra's proposal is  
12                   to encourage customers to avoid generation outages during coincident peak periods  
13                   (which would otherwise potentially trigger an increase in their contracted demand) and to  
14                   better reflect true cost causality.

15  
16                   **RESPONSE:**

17  
18                   a) As discussed in response to 8-ED-38, Alectra Utilities sees limited merit to this  
19                   approach, as a customer's reduced consumption during system coincident peak may  
20                   not translate into actual benefits for the system or customers due to the status of  
21                   localized capacity and demand. To yield such benefits would require discrete and  
22                   localized data on system capacity, demand, load profiles, and asset costs, and, as a  
23                   result, is not feasible at this time. To the degree reductions in customer demand or  
24                   localized coincident demand are sought, Alectra Utilities believes a non-wires solution  
25                   could more appropriately achieve this end.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

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3                   **INTERROGATORY # 8-ED-43**

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5                   Reference: Exhibit 8, Tab 2, Schedule 2 (standby rates)

6  
7                   Question(s):

8  
9                   a) For GS > 50 (or something equivalent), please provide the average deviation (kW)  
10                   between the month with the highest demand and the month with the lowest demand, on  
11                   average. We are trying to get a sense of the average variation in demand for customers  
12                   with more than 50 kW of demand. If the exact information we are seeking is not available,  
13                   please provide something as close as possible. If necessary to expedite and answer,  
14                   random sampling can be used.

15  
16                   b) For GS > 50 (or something equivalent), please provide the average deviation (kW)  
17                   between the month with the highest **coincident peak** demand and the month with the  
18                   lowest **coincident peak** demand, on average. We are trying to get a sense of the average  
19                   variation in coincident demand for customers with more than 50 kW of demand. If the  
20                   exact information we are seeking is not available, please provide something as close as  
21                   possible. If necessary to expedite and answer, random sampling can be used.

22  
23                   c) Please provide the same information as in (a) and (b) but for the subset of customers  
24                   with generators.

25  
26                   **RESPONSE:**

27  
28                   a) Table 1 presents the average demand deviation between the highest and lowest  
29                   demand months for the GS>50 kW class, and the average deviation per customer.

1 **Table 1 - GS>50 kW class Demand Deviation**

<b>GS&gt;50 kW</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Average</b>
Highest kW	3,155,610	3,031,670	3,053,990	3,129,820	3,092,773
Lowest kW	2,600,290	2,507,370	2,554,720	2,667,000	2,582,345
<b>Deviation kW</b>	<b>555,320</b>	<b>524,300</b>	<b>499,270</b>	<b>462,820</b>	<b>510,428</b>
# Customers	12,939	12,594	12,469	12,595	12,649
<b>Deviation kW per Customer</b>	<b>43</b>	<b>42</b>	<b>40</b>	<b>37</b>	<b>40</b>

2  
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4 b) Table 2 presents the average demand deviation between the highest and lowest  
 5 Ontario peak demand months for the GS>50 kW class, and the average deviation  
 6 per customer.

7

8 **Table 2 - GS>50 class Demand Deviation during Ontario Peak Demand Months**

<b>GS&gt;50 kW</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Average</b>
<i>IESO Peak Month</i>	<i>July</i>	<i>September</i>	<i>June</i>	<i>June</i>	
<i>IESO Lowest Month</i>	<i>April</i>	<i>April</i>	<i>April</i>	<i>May</i>	
Highest Ontario Peak kW	3,155,610	2,883,270	2,960,250	3,129,820	3,032,238
Lowest Ontario Peak kW	2,600,290	2,653,530	2,623,480	2,741,270	2,654,643
<b>Deviation kW</b>	<b>555,320</b>	<b>229,740</b>	<b>336,770</b>	<b>388,550</b>	<b>377,595</b>
# Customers	12,939	12,594	12,469	12,595	12,649
<b>kW Deviation per Customer</b>	<b>43</b>	<b>18</b>	<b>27</b>	<b>31</b>	<b>30</b>

9  
10

11 c) Table 3 presents the average deviation between the highest and lowest demand  
 12 months for customers with generators in the GS>50 kW class, and the average  
 13 deviation per generator customer. Table 4 presents the average deviation between  
 14 the highest and lowest Ontario peak demand months for customers with generators  
 15 in the GS>50 kW class, and the average deviation per generator customer.

1 **Table 3 - GS>50 kW Standby Customer Demand Deviation**

<b>GS&gt;50 kW Standby Customers</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Average</b>
Highest kW	153,702	161,164	168,467	171,953	163,821
Lowest kW	131,601	140,656	145,727	155,257	143,310
<b>Deviation kW</b>	<b>22,101</b>	<b>20,508</b>	<b>22,740</b>	<b>16,696</b>	<b>20,511</b>
# Customers	45	47	62	66	55
<b>Deviation kW per Customer</b>	<b>491</b>	<b>436</b>	<b>367</b>	<b>253</b>	<b>387</b>

2

3

4 **Table 4 - GS>50 Standby Customer Demand Deviation during Ontario Peak Demand Month**

5

<b>GS&gt;50 kW Standby Customers</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Average</b>
<i>IESO Peak Month</i>	<i>July</i>	<i>September</i>	<i>June</i>	<i>June</i>	
<i>IESO Lowest Month</i>	<i>April</i>	<i>April</i>	<i>April</i>	<i>May</i>	
Highest Ontario Peak kW	150,771	160,340	168,467	171,723	162,825
Lowest Ontario Peak kW	134,780	147,496	147,284	157,532	146,773
<b>Deviation kW</b>	<b>15,991</b>	<b>12,844</b>	<b>21,183</b>	<b>14,191</b>	<b>16,052</b>
# Customers	45	47	62	66	55
<b>kW Deviation per Customer</b>	<b>355</b>	<b>273</b>	<b>342</b>	<b>215</b>	<b>296</b>

6

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

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3                   **INTERROGATORY # 8-ED-44**

4  
5                   Reference: Exhibit 8 (fixed/variable split)

6  
7                   Question(s):

8  
9                   a) Please provide a table showing the proposed fixed monthly service charges and the  
10                   ceiling (Minimum System with PLCC Adjustment) by rate class (excluding the residential  
11                   rate class) for each year in the rate term. Please also provide the same information for  
12                   the past five years (actuals).

13  
14                   b) For any where the proposal is above the ceiling, please justify the proposal.

15  
16                   c) For each year in the rate period, and as a 5-year total, for each proposed fixed charge  
17                   above the ceiling, please provide the (i) the revenue that would be generated from fixed  
18                   charges set at the ceiling, (ii) the revenue that would be generated from fixed charges  
19                   as proposed, and (iii) the difference between them

20  
21                   d) Please provide all underlying calculations and studies justifying the fixed and variable  
22                   rates for standby power.

23  
24                   **RESPONSE:**

25  
26                   a) Table 1 below sets out Alectra Utilities' proposed 2027-2031 fixed monthly service  
27                   charges and the ceiling by rate class, excluding the residential rate class. In response  
28                   to 1-Staff-1, Alectra Utilities has updated its models to reflect its interrogatory  
29                   responses. As such, the table below aligns with those updates.

30  
31                   Please see 8-SEC-100 for historical fixed monthly service charges.

1 **Table 1 - 2027-2031 Proposed Fixed Monthly Service Charges and Ceiling**

Rate Class	Ceiling	Fixed Monthly Service Charges				
	2027	2027	2028	2029	2030	2031
GS<50 kW	\$35.66	47.08	49.98	52.22	55.16	58.11
GS>50 kW	\$111.21	294.98	313.15	327.2	345.61	364.07
Large Use	\$766.97	\$15,733.81	\$16,702.90	\$17,452.36	\$18,434.30	\$19,419.03
LUDA	\$946.90	\$7,090.86	\$7,527.61	\$7,865.38	\$8,307.92	\$8,751.72
Street Lighting	\$1.39	\$1.37	\$1.45	\$1.52	\$1.61	\$1.70
Sentinel Lighting	\$17.39	\$6.51	\$6.91	\$7.22	\$7.63	\$8.04
USL	\$12.33	\$10.22	\$10.85	\$11.34	\$11.98	\$12.62

2

3

4 b) Please see 8-SEC-103.

5

6 c) Table 2 below sets out i) the revenue that would be generated from the fixed charges  
 7 in part a of this question set at the ceiling, (ii) the revenue that would be generated from  
 8 fixed charges as proposed, and (iii) the difference between them<sup>1</sup>, i.e., proposed (ii)  
 9 less ceiling (i), for years 2027 to 2031. As described in Exhibit 1, Tab 11, Schedule 2,  
 10 a Custom Price Cap is proposed to be applied in years two through five (2028-2031).  
 11 Therefore, for the purposes of completing the table, the 2027 ceiling values have been  
 12 applied in order to calculate part (i) in the table below.

---

<sup>1</sup> Alectra Utilities notes that distribution rates in Ontario for all rate classes, except Residential, are structured as a two-part tariff, consisting of a fixed charge and a volumetric charge (per kWh or kW). If the fixed charge is set above the ceiling, the volumetric charge is lowered so that the total class revenue remains unchanged.

1 **Table 2 - Proposed vs 2027 Ceiling Revenue (\$MM)**

Rate Class	2027			2028			2029			2030			2031			2027-2031		
	(i)	(ii)	(iii)	(i)	(ii)	(iii)												
GS<50 kW	\$38.7	\$51.1	<b>\$12.4</b>	\$39.0	\$54.6	<b>\$15.6</b>	\$39.3	\$57.5	<b>\$18.2</b>	\$39.6	\$61.2	<b>\$21.6</b>	\$39.9	\$64.9	<b>\$25.1</b>	\$196.4	\$289.4	<b>\$93.0</b>
GS>50 kW	\$16.2	\$43.0	<b>\$26.8</b>	\$15.9	\$44.9	<b>\$29.0</b>	\$15.7	\$46.3	<b>\$30.5</b>	\$15.5	\$48.3	<b>\$32.7</b>	\$15.4	\$50.3	<b>\$34.9</b>	\$78.8	\$232.7	<b>\$153.9</b>
Large Use	\$0.3	\$6.0	<b>\$5.7</b>	\$0.3	\$6.4	<b>\$6.1</b>	\$0.3	\$7.1	<b>\$6.8</b>	\$0.3	\$7.7	<b>\$7.4</b>	\$0.3	\$8.4	<b>\$8.1</b>	\$1.6	\$35.7	<b>\$34.2</b>
LUDA	\$0.1	\$0.5	<b>\$0.4</b>	\$0.1	\$0.5	<b>\$0.5</b>	\$0.1	\$0.6	<b>\$0.5</b>	\$0.1	\$0.6	<b>\$0.5</b>	\$0.1	\$0.6	<b>\$0.6</b>	\$0.3	\$2.8	<b>\$2.5</b>

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d) Alectra Utilities proposes to charge the standby customer for standby power based on the proposed volumetric distribution rate corresponding to the customer's prevailing rate class applicable to firm load requirements. There is no separate fixed rate for standby power. Please see 8-SEC-105 (c).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

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3                   **INTERROGATORY # 8-ED-45**

4  
5                   Reference: Exhibit 8 (RTSRs etc.)

6  
7                   Question(s):

8  
9                   a) Please provide the total transmission charges (i.e. UTRs) paid by Alectra over the past  
10                   five years and a forecast over the next five years. Please also provide a table showing, if  
11                   those charges were levied on a net load basis (instead of a gross load basis) how much  
12                   less would they be (approximately, \$ and %)?

13  
14                   b) Please list the transmission system upgrades made to serve The Alectra service area  
15                   over the past 10 years and forecast over the next 10 years. For each, please indicate the  
16                   in-service date and the portion of Alectra's system that is served by the upgrade.

17  
18                   c) To the extent that Alectra's service territory is growing quickly, how can it be said that  
19                   gross load billing is justified for the UTRs is pays? For example, how can it be said that  
20                   that distributed generation in Alectra territory is causing stranded assets (i.e. assets built  
21                   for Alectra customers that are unused due to load displacement).

22  
23                   d) Please provide excerpts from OEB document justifying gross load billing for UTRs.

24  
25                   e) The OEB has said that Hydro One can seek case-by-case exemptions for gross load  
26                   billing. Will Alectra consider seeking such an exemption in order to lower the UTRs that  
27                   it is required to pay to Hydro One?

28  
29                   **RESPONSE:**

30                   a) Table 1 below provides the total transmission charges (i.e., UTRs) paid by Alectra over  
31                   the past five years, along with a forecast for the next five years. It also presents the

1 transmission charges if these charges were levied on a net load basis and shows, for  
2 each year, the resulting dollar and percentage differences relative to the gross load basis.

3

4 **Table 1 - UTRs 2021-2031 Gross Load and Net Load in \$MM**

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
UTRs (Gross load)	382.5	440.6	459.3	486.2	534.8	541.6	552.5	563.5	574.8	586.3	598.0
UTRs (Net load)	381.9	440.1	458.6	485.4	533.9	540.8	551.6	562.6	573.9	585.3	597.0
Difference \$	0.6	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	1.0
Difference %	0.2%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%

5

6 b) Please see Exhibit 2A, Tab 1, Schedule 1, Section 5.2.2.9 for HONI completed and  
7 planned transmission upgrade.

8

9 c) Alectra Utilities is required to pay gross load billing to Hydro One for UTRs – Line and  
10 Transformation Connection Service charges with respect to Demand Billed Load  
11 Customers with Load Displacement Generation (“LDG”) capacity exceeding 1 MW for  
12 non-renewable (2 MW for renewable). Gross load billing for UTRs is a pass-through item  
13 for Alectra Utilities. Alectra Utilities applies gross load billing to RTSRs - Line and  
14 Transformation Connection Service charges to Demand Billed Load Customers with LDG  
15 capacity exceeding 1 MW for non-renewable (2 MW for renewable) to eliminate cross-  
16 subsidization by other customers.

17

18 d) Please refer to the OEB Decision and Rate Order, EB-2025-0232, 2026 Uniform  
19 Transmission Rates, dated January 15, 2026, Notes 3 on page 16, which provides the  
20 justification for gross load billing for UTRs.

21

22 e) Please see response to 8-ED-46 b).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-46**

4  
5                   Reference: Exhibit 8 (RTSRs etc.)

6  
7                   Question(s):

8  
9                   a) Please confirm whether Alectra proposes to charge RTSRs to its customers on a gross  
10                   load basis (versus a net load basis)? Please explain why or why not.

11  
12                   b) If yes, please provide the following:

13  
14                   i) The breakdown of customers subject to gross load billing for RTSRs by generator  
15                   type (i.e. solar, gas, etc.) for both the amount and capacity (# & MW).

16                   ii) The amount that Alectra collected annually for each of the past five years, and  
17                   forecasts to collect over the next five years, that is attributable to gross load billing  
18                   of RTSRs (i.e. gross load amounts minus net load amounts).

19                   iii) Will Alectra consider exemptions from gross load billing on a case-by-case basis?  
20                   If yes, what criteria will it apply?

21  
22                   **RESPONSE:**

23  
24                   a) Please see 8-Staff-239.

25  
26                   b)

27                   i) Table 1 provides the breakdown of customers subject to gross load billing for RTSRs  
28                   by generator type, and capacity.

1 **Table 1 - RTSRs GLB customers**

Generator Type	MW
Combined Heat and Power	18
Energy Storage	4
Gas	1
Total	24

2

3 ii) Table 2 provides the amounts that Alectra collected annually for each of the past five  
 4 years, and forecasts to collect over the next five years, that is attributable to gross  
 5 load billing of RTSRs.

6

7 **Table 2 - Alectra collected annual RTSRs 2021-2030 in \$MM**

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Amount	0.09	0.13	0.14	0.30	0.40	0.43	0.65	0.65	0.65	0.64	0.65

8

9 iii) Alectra Utilities will consider exemptions from gross load billing on a case-by-case  
 10 basis where the customer's forecast capacity needs exceed the maximum capacity  
 11 that can be supplied by the system and Alectra Utilities cannot expend the system to  
 12 meet to customers' forecast capacity needs at the time the customers facility goes  
 13 into services.

14

15 Please refer to the OEB's Decision and Order on 2026 Uniform Transmission Rates,  
 16 issued January 15, 2025 (EB-2025-0232). Pages 2-3 of the Decision and Order,  
 17 states that "On November 27, 2025, a new paragraph (N) was added to the Terms  
 18 and Conditions in the 2025 UTR Schedules. That paragraph provides for a gross load  
 19 billing exemption in cases where a customer's capacity needs exceed the available  
 20 capacity on the transmission system. This exemption will ensure that gross load  
 21 billing applies only to the maximum available capacity. It will be conditional on a  
 22 technical assessment by the Transmitter and the IESO, where applicable, confirming

1           the presence of system constraints. The provision went into effect on that date, and  
2           now forms part of the UTR Schedule Terms and Conditions.”

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-47**

4  
5                   Reference: Exhibit 8, Tab 2, Schedule 1 (RTSRs etc.)

6  
7                   Question(s):

8  
9                   a) Please confirm whether Alectra proposes to charge rates aside from RTSRs to its  
10                   customers on a gross load basis (versus a net load basis)? Please explain why or why  
11                   not.

12  
13                   b) Please provide the total transmission charges paid by Alectra over the past five years  
14                   and a forecast over the next five years. If those charges were levied on a net load basis  
15                   (instead of a gross load basis) how much less would they be (approximately, \$ and %).

16  
17                   **RESPONSE:**

18  
19                   a) As part of this proceeding, Alectra Utilities is not proposing to charge any rates to  
20                   customers on a gross load basis, other than RTSRs. However, Alectra Utilities has  
21                   proposed that customers with existing gross load billing enabled metering infrastructure  
22                   may elect to remain on gross load billing for the purpose of Standby charge.

23  
24                   b) Please refer to the response to 8-ED-45, a).

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-48**

4  
5                   Reference: Exhibit 8 (service charges) & Exhibit 2 (NWS)

6  
7                   Question(s):

- 8
- 9                   a) Please provide a list of all existing and proposed service charges that are related to or  
10                   triggered by DER connections.
- 11
- 12                   b) Please provide a list of all charges that Alectra levies on customers connecting distributed  
13                   energy resources (i.e. BTM generation). Please divide the charges by DER category (i.e.  
14                   micro, small, medium, etc.) and include a breakdown by type of charge (application fees,  
15                   meter replacement, connection impact assessments, commissioning, etc.). For each  
16                   category, please indicate whether it is a fixed fee or a variable fee (i.e. payment for work  
17                   at cost). For variable fees, please provide the average amount charged over a convenient  
18                   period of applications (e.g. the past five years).
- 19
- 20                   c) Please provide the total amounts charged to generation connection customers in the  
21                   small facility category for each year in the past five years, the kW of generation  
22                   connected, and the \$/kW on average each year
- 23
- 24                   d) Please provide copies of the regulatory documents authorizing the various fees  
25                   referenced in (a) and (b) and indicate the relevant section.

1 e) Please provide a copy of the Alectra interconnection procedures applicable to distributed  
2 energy resources. Please prepare a table comparing those procedures with the Interstate  
3 Renewable Energy Council's Model Interconnection Procedures (2023).<sup>1</sup>  
4

5 f) Does Alectra anticipate changing the fees it charges for DER connections (e.g. CIA fees)  
6 within the rate term?  
7

8 **RESPONSE:**  
9

10 a) Alectra Utilities understands part a) to be requesting identification of the ongoing service  
11 charges that apply to, or are triggered by, distributed generators. Alectra Utilities confirms  
12 that there are no existing or proposed specific service charges pertaining to DERs  
13 included on Alectra Utilities' Tariff of Rates and Charges.  
14

15 b) A list of charges levied on customers connecting DERs, by DER category, is provided in  
16 the Tables below. The tables identify the type of charge, whether the charge is fixed or  
17 variable, the range of charges for fixed fees, and the five-year average charges for  
18 variable fees.  
19

20 Separate tables are provided for (i) Micro DER connection charges; (ii) Various classes  
21 of Small DER Connection charges; and (iii) Medium and Large DER connections.  
22

23 Alectra Utilities notes that it has not connected any Large DERs in the past five years.  
24 Accordingly, the utility is unable to provide an average for Direct Transfer Trip charges  
25 for this category.

---

<sup>1</sup> <https://irecusa.org/wp-content/uploads/2023/08/IREC-Model-Interconnection-Procedures-2023-FINAL-8.23.23.pdf>



1 **Table 3 - Medium/Large DER connection charges**

Criteria	Medium - 1 MW to 10 MW	Large - > 10 MW
<b>CIA Cost (Fixed)</b>	\$6,000.00	\$8,000.00
<b>Project supervision (Fixed)</b>	\$5,000.00	\$5,000.00
<b>SCADA Commissioning (Fixed)</b>	\$3,000.00	\$3,000.00
<b>Bi-directional metering (Fixed)</b>	\$1,553.46	\$1,553.46
<b>Gross Load Billing (Fixed)</b>	\$9,839.95	\$9,839.95
<b>Transfer Trip (Variable)</b>	\$43,177.63	N/A

2

3 c) The Table below shows the total amounts charged to generation connection customers  
 4 in the small facility category for each year in the past five years, the kW of generation  
 5 connected, and the \$/kW average each year.

6

7 **Table 4 – Amount Charged to Generation Connection Customers – Small Facility**

	2021	2022	2023	2024	2025	Total
<b>Total Connected Small Embedded Generation Facilities - kW</b>	6,438.70	3,887.90	2,507.00	14,675.90	10,923.60	38,433.10
<b>Total Amount Charged to Small Embedded Generation Facilities - \$</b>	\$328,641.00	\$180,053.80	\$90,558.40	\$979,279.28	\$467,552.91	\$2,046,085.39
<b>\$/kW</b>	\$51.04	\$46.31	\$36.12	\$66.73	\$42.80	\$53.24

8

9

10 d) The authority to charge DER-related fees and charges is established through the  
 11 Distribution System Code (DSC), the Distributed Energy Resources Connections  
 12 Procedures (DERCP), and Alectra Utilities' Conditions of Service.

13

14 Sections 6.2.9 to 6.2.21 of the DSC, together with the DERCP (pages 13 through 50),  
 15 set out the requirements for connecting generation facilities and permits distributors to  
 16 recover the reasonable costs associated with connection. These costs include the

1 preparation of a Connection Impact Assessment (CIA), and other work required to  
2 facilitate connection, such as costs for any necessary new or modified metering, and  
3 costs to manage the connection of a DER.

4  
5 Further, Section 3.4.4 of Alectra Utilities' Conditions of Service provides that Alectra  
6 Utilities conducts engineering studies for larger generation projects and advises  
7 customers of the costs associated with any required impact assessments. Gross Load  
8 Billing requirements are described in Section 3.4.7 of the Conditions of Service, and the  
9 requirement for a customer to install a bi-directional meter at the customer's cost to  
10 enable net metering is described in Section 3.4.6.

11  
12 These provisions collectively enable Alectra Utilities to recover the study, engineering,  
13 metering and protections costs described in table 8-ED-48(b).

14  
15 e) Alectra Utilities' DER interconnection procedures are provided on Alectra Utilities'  
16 website (<https://alectrautilities.com/connecting-generation>) and are aligned with the OEB  
17 Distributed Energy Resource Connection Procedures (DERCP). The Interstate  
18 Renewable Energy Council's Model Interconnection Procedures (2023) are US-based  
19 and not applicable to Ontario's regulatory framework. Accordingly, Alectra Utilities is not  
20 in a position to prepare the requested comparison table on the basis that it is not relevant  
21 and does not have probative value in this proceeding.

22  
23 f) Alectra Utilities does not anticipate changing the fees it charges for DER connections,  
24 such as CIA fees, within the rate term.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 8-ED-49**

4

5                   Reference: Exhibit 8 (service charges) & Exhibit 2 (NWS)

6

7                   Question(s):

8

9                   a) What changes to its connections procedures, costs, and thresholds is Alectra  
10                   implementing (or considering to implement) in order to meet the province's DER goals  
11                   and DER strategy as set out in its Integrated Energy Plan?

12

13                   b) Please confirm that Alectra is able to treat DERs with a nameplate capacity of above  
14                   10kW as a micro-generation connection. Please provide the relevant DSC section.

15

16                   c) Is Alectra willing to implement (or consider implementing) a policy to treat all DERs with  
17                   a nameplate capacity of up to 20 kW as a micro-generation connection? Please explain,  
18                   including a discussion of whether this would be directionally consistent with IREC  
19                   recommendations<sup>1</sup>, consistent with the system impacts of smaller DERs, and improving  
20                   the ratio of connection costs to total project costs for small DERs.

21

22                   d) If not, is Alectra willing to consider otherwise raising the threshold/criteria for micro-  
23                   generation connections?

24

25                   **RESPONSE:**

26

27                   a) Alectra Utilities notes that DER connection procedures, timelines, cost responsibilities,  
28                   and applicable thresholds are established by the Ontario Energy Board through the

---

<sup>1</sup> <https://irecusa.org/wp-content/uploads/2023/08/IREC-Model-Interconnection-Procedures-2023-FINAL-8.23.23.pdf>

1 Distribution System Code (DSC) and the Distributed Energy Resources Connection  
2 Procedures (DERCP). Alectra Utilities will implement the OEB's final amendments to the  
3 DSC and the corresponding DRECP, effective May 1, 2026. These changes include,  
4 among other items: increasing the maximum nameplate capacity for a micro-embedded  
5 generation facility from 10 kW to 12 kW, revising certain connection agreement insurance  
6 requirements, updating timelines for completion of certain connection impact  
7 assessments where a host distributor assessment is required, and enhanced  
8 transparency requirements and processes related to hosting capacity and connection  
9 cost guidance.

10

11 b) Confirmed. On December 18, 2025 the OEB issued the final Notice of Amendment to the  
12 Distribution System Code (EB-2019-0207) that will define a micro DER as an embedded  
13 generation facility with a nameplate capacity of up to 12kW or less (Section 1.2  
14 Definitions, "micro-embedded generation facility"). As stated in part a) Alectra Utilities will  
15 implement the OEB's final amendments to the DSC and the corresponding DRECP,  
16 effective May 1, 2026.

17

18 c) Alectra Utilities does not establish micro-embedded generation threshold limits  
19 unilaterally. Such thresholds are set by the OEB through the DSC and implemented  
20 through the DERCP. If the OEB considers future changes to micro-generation threshold  
21 limits, then Alectra Utilities would participate in the OEB's consultation process and  
22 comply with any resulting OEB directives. Alectra Utilities declines to comment on IREC  
23 recommendations, which are not applicable to Ontario.

24

25 d) Alectra Utilities would consider changes to micro-embedded generation threshold limits  
26 only an OEB-directed amendment process to maintain Ontario-wide consistency in DER  
27 connection requirements.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-50**

4  
5                   Reference: Exhibit 8 (fees for residential service upgrades needed for electrification)

6  
7                   Question(s):

- 8
- 9                   a) Please provide the typical fees/charges that Alectra would charge for a residential service  
10                   upgrade, with a full breakdown of the costs. Please include examples with and without a  
11                   conductor replacement.
- 12
- 13                   b) Alectra proposes a fee of \$295 for “Disconnect/reconnect at meter - during regular hours”  
14                   (Ex. 8-3-2, p. 2). Please confirm whether this involves one fee of \$295 for disconnection  
15                   and a second fee \$295 for reconnection where a service upgrade is required?
- 16
- 17                   c) Please provide a breakdown of the reasons/drivers for charging customers for  
18                   disconnect/reconnect in the most recent year with data. We are particularly interested in  
19                   assessing the percent of the total that is due to service upgrades.
- 20
- 21                   d) Please provide a table showing the service fees for connection/disconnect for Alectra,  
22                   Toronto Hydro, Hydro Ottawa, and Hydro One. If Alectra's are higher, please justify the  
23                   higher fees.
- 24
- 25                   e) What options can Alectra offer to customers seeking to upgrade a service panel due to  
26                   electrification (or another reason) to avoid or reduce the disconnect/reconnect fee.
- 27
- 28                   f) Alectra calculates the fee based on 1.8 hours of personnel and truck time. Does this  
29                   assume the average time for a technician to travel to and from the customer premises?  
30                   Could the costs be reduced by stringing calls together, and thus reducing overall travel  
31                   time?

- 1 g) Can AMI 2.0 meter be remotely switched off to allow for disconnect/reconnect without the  
2 need for a visit from an Alectra employee when a customer panel is being swapped out?  
3
- 4 h) In what instances is a connection/reconnection required at the pole/transformer versus  
5 the meter for a service upgrade?  
6

7 **RESPONSE:**  
8

9 a) The average cost of a residential service upgrade that requires a conductor replacement  
10 and design layout is \$4,473.88. Costs are shared between the customer and Alectra  
11 Utilities in accordance with the Distribution System Code and Alectra's Conditions of  
12 Service. There are currently no costs incurred by the customer from Alectra for service  
13 upgrades that do not require a conductor replacement.  
14

15 b) Alectra confirms that the proposed \$295 charge for "Disconnect/reconnect at meter –  
16 during regular hours" represents a single, all-inclusive fee covering both the  
17 disconnection and reconnection activities associated with a service upgrade.  
18

19 c) In the absence of an approved specific service charge for disconnect/reconnect services  
20 requested by customers or required by Alectra for reasons outside of non-payment of  
21 account, disconnect/reconnect services are performed at no additional cost to the  
22 requesting customer. In turn, Alectra's costs for performing such services are borne by  
23 all rate payers through distribution rates. The proposal to implement  
24 disconnect/reconnect specific service charges has been made to ensure costs are  
25 attributed through causation. Costs for a specific service which is offered for the benefit  
26 of a small portion of Alectra's customer base should be attributed to and paid for by the  
27 group of customers who request or require the service rather than the broader rate base.

28 Residential and commercial upgrades comprise most disconnect/reconnect requests. In  
29 2025, Alectra performed a disconnect/reconnect for more than 5,600 customers seeking  
30 to upgrade an existing service. Approximately 50 disconnect/reconnect requests were

1 performed for other purposes (i.e., to address tampered meters as required by Alectra,  
2 or per a customer-driven request). The percentage of total requests attributable to  
3 service upgrades was 99% in 2025.

4  
5 d) As outlined in Chapter 11 of the 2006 Electricity Distribution Rate Handbook, distributors  
6 may apply for a specific service charge with a distinct set of characteristics at a level of  
7 charge determined by the distributor. Alectra does not have insight into the development  
8 of charges at other utilities and is unable to compare its proposal against other utilities'  
9 approved specific service charges. Alectra's proposed charges were established through  
10 a cost-recovery methodology designed to reflect the current direct and allocated costs  
11 required to perform the service.

12  
13 e) Upgrades are completed in accordance with the process outlined in Alectra's Conditions  
14 of Service at section 2.2 Disconnection/Reconnection Processes and Charges. To  
15 ensure the safe execution of service panel upgrades and compliance with Alectra's  
16 technical standards, on-site attendance by qualified Alectra staff or an approved  
17 contractor working on Alectra's behalf is required. Accordingly, the presence of utility  
18 representatives is necessary to validate safe isolation and restoration of service.

19  
20 f) Proposed disconnect/reconnect charges were developed based on an assessment of the  
21 direct labour and vehicle time required to perform disconnect/reconnect services. The  
22 average time for a technician to travel to and from the customers premises is included in  
23 the assessment. The scheduling practices of the Operations department already  
24 incorporate the grouping of work orders to optimize travel efficiency and increase  
25 appointment availability; therefore, any opportunity to further reduce costs through call  
26 grouping is built into Alectra's proposed charges.

27 g) Remote disconnection via AMI 2.0 meters is not deemed operationally or electrically safe  
28 for service upgrade activities. Panel upgrades typically require physical access to the  
29 meter base – including replacement of the load wire between the meter base and the

1 panel – which necessitates an on-site disconnection performed by qualified personnel  
2 and is not possible via AMI 2.0 meter remote disconnection.

3

4 h) Alectra requires disconnection and subsequent re-energization at the pole or transformer  
5 in instances where the customer's service upgrades involves modification or replacement  
6 of the load wire. This includes, but is not limited to, service upgrades, panel relocations,  
7 and meter-base relocations. In these situations, upstream isolation is necessary to  
8 ensure worker and public safety, as well as compliance with Alectra's construction and  
9 operating standards.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-51**

4  
5                   Reference: Exhibit 8 (loss factors)

6  
7                   Question(s):

8  
9                   a) Please provide tables showing the (i) total distribution system losses (MWh) in Alectra's  
10                   network for the past five years, forecast over the next five years, and total over the 10  
11                   years; (ii) losses at the co-incident peak (MW) for the same periods; (iii) the losses as a  
12                   percent of throughput for each year and as a 10-year average; and (iv) the cost of those  
13                   losses to Alectra customers in each year, and total. Please include the calculations,  
14                   including how the monetary cost has been calculated.

15  
16                   b) Please list the steps taken by Alectra to cost-effectively reduce losses, including in  
17                   relation to capital planning and operational measures (e.g. load balancing).

18  
19                   c) Does Alectra have a guideline to help planners decide whether it would be cost-effective  
20                   to upsize a conductor to reduce losses when adding or replacing lines? If yes, please file  
21                   it. If not, please explain in detail the practices used (if any).

22  
23                   d) Does Alectra have a guideline on how to assess trade-offs between cost and efficiency  
24                   (i.e. less losses) when procuring transformers? If yes, please file it. If not, please explain  
25                   in detail the practices used (if any).

26  
27                   e) Has Alectra conducted any studies or prepared any assessments or report on steps to  
28                   take to cost-effectively reduce losses over the past 15 years? If yes, please file those.

1 **RESPONSE:**

2

3 a) Please refer to the response to 8-ED-54, part a.

4

5 b) Alectra Utilities undertakes a range of cost effective measures to reduce distribution  
6 system losses. These include:

7

- 8 • Optimizing feeder routing to minimize circuit length.
- 9 • Standardizing the use of larger 556 MCM overhead conductors and 1000 MCM  
10 underground cables for main primary feeders.
- 11 • Operating station source voltages toward the upper end of the allowable range to  
12 reduce current.
- 13 • Balancing loads between stations, feeders, and phases through system  
14 reconfiguration using existing distribution equipment such as tie points and  
15 sectionalizing switches.
- 16 • Adding parallel feeders.
- 17 • Installing capacitors to improve load power factor where required.
- 18 • Installing low loss transformers in accordance with Alectra's standards
- 19 • Considering distribution system voltage conversion to 27.6 kV or 13.8 kV as part  
20 of asset renewal for legacy 8.32 kV and 4.16 kV systems

21

22 c) Alectra does not maintain a standalone guideline dedicated exclusively to conductor  
23 upsizing. The decision-making principles that would be contained in such a document  
24 are embedded in Alectra's established distribution design standards and the loss  
25 mitigation practices outlined in the response to Part (b). These standards direct planners  
26 to minimize losses on three-phase feeders by using appropriately sized conductors,  
27 optimal feeder loading and load sharing, phase balancing, and, where appropriate, shunt  
28 capacitors.

29

30 Alectra Utilities' planning process applies these standards consistently across new  
31 installations and feeder replacement projects. Planners evaluate conductor sizing

1 alongside present and forecast loading, voltage performance, route optimization, and the  
2 capability to provide and receive backup from adjacent feeders. Conductor sizes have  
3 been standardized to reflect a cost-effective balance of system performance, operational  
4 flexibility, and loss reduction. These standardized selections are reviewed within the  
5 normal planning process to ensure they remain appropriate as system conditions and  
6 design practices evolve. In this context, a separate written guideline is not necessary  
7 because all relevant steps and considerations are already captured and applied through  
8 Alectra Utilities' standards and procedures.

9  
10 Consistent with this approach, Alectra Utilities applies 1/0 Aluminum for primary  
11 residential loops and 1000 MCM Copper for industrial/commercial underground main  
12 feeders; overhead feeders are standardized to 1/0 ACSR and 556 MCM ASC. A review  
13 completed by Alectra indicates that while upsizing conductors reduces losses, the  
14 incremental capital cost of upsizing exceeds the monetary value of avoided losses with  
15 current flows at planned feeder limit. Accordingly, the current standardized sizes remain  
16 the most cost-effective selections, and additional upsizing is not justified on a lifecycle  
17 cost basis.

18  
19 d) Alectra Utilities guideline is to purchase transformers in accordance with the efficiency  
20 requirements outlined in Canadian Standards Association C227.3:25. Alectra practice is  
21 to review each transformer for losses and confirm that they comply with the efficiency  
22 requirement before they are installed on the distribution system.

23  
24 e) Alectra has not undertaken a standalone system-wide loss-reduction study. Instead, loss  
25 considerations are addressed through Alectra Utilities' established planning process,  
26 under which each feeder project is evaluated for the most cost-effective configuration,  
27 including conductor sizing, loading, voltage performance, and system configuration.

28  
29 The drivers of distribution losses are well understood, and the practices set out in Part  
30 (b) - optimized routing, standardized conductor sizing, load balancing, capacitor  
31 installation, voltage conversion, and use of low loss transformers per Alectra standards-

1 adequately address these issues in routine planning. Alectra does not expect a separate  
2 systemwide study to yield materially new or actionable measures beyond those already  
3 integrated into its current standards and processes.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-52**

4  
5                   Reference: Exhibit 8 (loss factors & DER)

6  
7                   Question(s):

8  
9                   a) Please provide a table with the power injected into Alectra’s system (MWh) from DERs  
10                   in each of the past five year, in each of the next five years (forecast), and total over that  
11                   10-year period. Please add a row with an estimate of the reduction in distribution and  
12                   transmission losses due to said power originating adjacent to customer load. Please add  
13                   a row estimating the dollar value of those loss reductions.

14  
15                   b) Who does the value in (a) accrue to (e.g. all Alectra customers)?

16  
17                   **RESPONSE:**

18  
19                   a) For each of the past five years, the kWh supplied to Alectra Utilities by microFIT and  
20                   other Embedded Generation facilities are provided in Appendix 2-R Loss Factor as Value  
21                   C (“microFIT kWh supplied to distributor”) and Value D (“Total Embedded Generation”).  
22                   Please refer to the response to 8- VECC-81 Table 1 for the Appendix 2-R.

23  
24                   Alectra Utilities does not forecast distribution or transmission loss impacts attributable to  
25                   DER injections. Accordingly, Alectra Utilities is unable to provide specific information  
26                   regarding any loss reductions associated with DER generation.

27  
28                   b) Alectra Utilities does not calculate the impact on customers resulting from reductions in  
29                   distribution or transmission losses due to DER injections. Therefore, Alectra Utilities is  
30                   unable to provide specifics regarding any resulting values that may accrue to customers.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-53**

4  
5                   Reference: Exhibit 8 (loss factors)

6  
7                   Question(s):

8  
9                   a) Please estimate on a best-efforts basis the reduction in losses (kWh and annual peak  
10                   kW) and the savings to customers (\$) arising from Alectra's actions taken as a direct  
11                   result of any work done over the previous rate term to cost-effectively reduce system  
12                   losses. Please include the underlying analysis and a description of any work undertaken.

13  
14                   b) What other incremental steps is Alectra planning with respect to losses over the  
15                   upcoming rate term?

16  
17                   **RESPONSE:**

18  
19                   a) Alectra Utilities does not estimate the reduction in losses (kWh and annual peak kW) and  
20                   the savings to customers (\$) arising from Alectra's actions taken as a direct result of any  
21                   work done over the previous rate term to cost-effectively reduce system losses. As a  
22                   result, Alectra Utilities is unable to provide the specifics related to the reduction in losses  
23                   at this point.

24  
25                   b) Please see responses to 8-ED-51 b, c and d.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3           **INTERROGATORY # 8-ED-54**

4

5           Reference: Exhibit 8 (loss factors)

6

7           Question(s):

8

9           a) Please provide the forecast losses (kWh), losses at peak (kW), and cost of losses to  
 10           customers for each year in the rate term and total over the full term. Please also provide  
 11           the same information for the past five years (actuals). Please include the underlying  
 12           calculations, inputs, and assumptions.

13

14           **RESPONSE:**

15

16           a) Alectra Utilities does not forecast losses, losses at peak and cost of losses to customers.  
 17           Additionally, Alectra Utilities does not calculate losses at peak (kW). As a result, Alectra  
 18           Utilities is unable to provide specific forecasts calculations for losses at peak.

19

20           Table 1 provides the historical losses (kWh) and cost at losses to customer from 2020-  
 21           2024.

22

23           **Table 1 - Historical and Forecast Losses in \$MM**

		2020	2021	2022	2023	2024	Total
Losses in GWh	A	752	748	734	719	733	
Energy costs \$/ kWh	B	0.14	0.13	0.13	0.12	0.13	
\$Cost of losses at kWh	AXB	109	95	94	90	99	487
Losses as a %		3.69%	3.64%	3.51%	3.49%	3.49%	

24

25           The underlying assumptions and inputs used in the calculations are summarized below:

- 1       • Historical energy losses in kWh are derived as the difference between Net Wholesale
- 2       kWh delivered to the distributor and Net Retail kWh delivered by the distributor, as
- 3       reported in Appendix 2-R.
- 4       • The energy cost in \$/kWh is calculated using Alectra Utilities' annual cost of power
- 5       divided by Net Wholesale kWh delivered to the distributor, as reported in Appendix
- 6       2-R.
- 7       • Losses at a % are derived from Total Loss Factor, as reported in Appendix 2-R.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-55**

4  
5                   Reference: Exhibit 8 (rates)

6  
7                   Question(s):

8  
9                   a) Please provide a table showing the load factor for the past five years and the forecast  
10                   load factor for the next five years.

11  
12                   b) Does Alectra agree that the higher the load factor, the more efficiently its system is being  
13                   used, and the lower the cost of the distribution and transmission system on a \$/MWh  
14                   basis? Please explain the answer.

15  
16                   c) Please discuss how increased off-peak electricity demand could potentially assist in  
17                   lowering volumetric distribution charges (i.e. charges based on \$/kWh).

18  
19                   d) What additional steps could Alectra take to increase the load factor, such as encouraging  
20                   increased off-peak electricity demand (i.e. electrification of transportation, etc.)?

21  
22                   **RESPONSE:**

23  
24                   a) Refer to Table 1 below pertaining to the load factor for 2020-2025. Alectra Utilities do  
25                   not forecast future load factors.

26  
27                   **Table 1 – Actual Load Factor**

<b>Year</b>	<b>Load Factor (%)</b>
2020	74
2021	79
2022	78.5

Year	Load Factor (%)
2023	82
2024	79
2025	75.4

1

2 b) Alectra Utilities agrees that an improved load factor enhances system utilization.  
3 However, Alectra Utilities cannot confirm a \$/MWh decrease is associated with an  
4 increased load factor. The reasons are as follows:

- 5 1. Increased asset utilization does not negate capital spending in system renewal.  
6 2. Capital plans to meet system demand need to be implemented irrespective of  
7 asset utilization.

8 Alectra Utilities cannot comment on \$/MWh for transmission system.

9

10 c) Alectra Utilities notes that the question references a reduction in peak demand (kW) while  
11 requesting the impact on a \$/kWh basis. These are two different variable billing methods  
12 and have different customer impacts.

13 A proper assessment of the impact would require a comprehensive capacity analysis. To  
14 the extent that increased off-peak demand contributes to the deferral of asset  
15 investments, it is possible that there would be a reduction in the total revenue  
16 requirement. However, a full analysis would be required to assess any such impacts.

17 d) Load factor is influenced by customer behaviour, provincial rate structures, and  
18 electrification trends, which together largely determine hourly load patterns. Alectra  
19 Utilities' ability to influence these factors is limited. Where possible, Alectra Utilities  
20 provides education and technical guidance to large customers on opportunities to shift  
21 flexible consumption to off-peak periods.

22

23 Alectra Utilities is investing in enhancing the overall grid resiliency and intelligence  
24 through investments in technology that are outlined in the DSP, Appendix B14. The  
25 investment in Advanced Distribution Management System (ADMS), DER integration and  
26 AMI 2.0 will provide Alectra with enhanced capabilities to management system loads

1 during on and off-peak hours. The use of these advanced load monitoring and  
2 management tools will help Alectra Utilities to optimize distribution system loading  
3 independent of customer electricity usage behaviour.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2

3                   **INTERROGATORY # 8-ED-56**

4

5                   Reference: Exhibit 8 (rate design)

6

7                   Question(s):

8

9                   a) Please discuss the benefits of co-incident peak demand charges in encouraging  
10                   behaviour that lowers system costs, such as peak shaving and peak shifting.

11

12                   b) Please provide a table listing the demand charges for each customer class and whether  
13                   they are co-incident peak demand charges.

14

15                   c) Would Alectra consider increasing the proportion of the rates that it charges through co-  
16                   incident peak demand charges in order to encourage more efficient use of the electricity  
17                   system?

18

19                   **RESPONSE:**

20

21                   a) Please see 8-ED-37 (b).

22

23                   b) None of Alectra Utilities' proposed demand charges are billed on the basis of  
24                   coincident peak demand, consistent with OEB rate design guidance and policy.

25

26                   c) Alectra Utilities' approach is aligned with the OEB's rate design guidance and policy.  
27                   To the degree coincident peak demand charges are to be implemented, Alectra  
28                   Utilities believes such a substantial change should be implemented via generic OEB  
29                   policy. Alectra Utilities notes this proposal was made in EB-2015-0043, and was  
30                   dismissed.

1                   **RESPONSES TO ENVIRONMENTAL DEFENCE INTERROGATORIES**

2  
3                   **INTERROGATORY # 8-ED-57**

4  
5                   Reference: Exhibit 8 (rate design)

6  
7                   Question(s):

8  
9                   a) Does Alectra agree with the following conclusion of the following report: EB-2016-0004,  
10                   report by Dr. Stanley Reitsma, P. Eng.,<sup>1</sup> :

11                   “Though geothermal relies on electricity as an input (to power the pump),  
12                   geothermal system actually reduces electricity demand in the summer, and increases  
13                   it in the winter, relative to traditional methods of heating and cooling (heating with  
14                   fossil fuels and cooling with traditional AC systems). For Ontario, a summer peaking  
15                   jurisdiction, a greater reliance on geothermal would reduce peaking power needs and  
16                   also reduce surplus baseload generation. Coincidentally, t the load profile of a geo  
17                   system is similar to the production profiles of Ontario wind energy facilities.”<sup>2</sup>

18  
19                   “For the cooling of buildings, Geo HP’s use about half the electricity to  
20                   operate compared to air source heat pumps and AC systems, and, geo’s  
21                   electrical demand doesn’t spike as it gets hot outside, since the ground loop  
22                   temperature remains relatively unchanged. They can reduce the “heat wave”  
23                   electricity system demand spikes by up to 75%.”<sup>3</sup>

24  
25                   b) Does Alectra agree that the expansion of geothermal systems would reduce peak  
26                   demand on Alectra’s system, on which distribution system capacity is based?

---

<sup>1</sup> Dr. Stanley Reitsma, P. Eng., *Ontario’s Low Carbon Future: Geothermal Heat Pumps*, March 21, 2016  
(<http://www.rds.oeb.ca/HPECMWebDrawer/Record/521626/File/document>).

<sup>2</sup> *Ibid.* p. 5.

<sup>3</sup> *Ibid.* p. 6.

- 1 c) Does Alectra agree that geothermal systems have the capacity to provide important  
2 benefits to the electricity distribution system, especially in comparison to traditional  
3 baseboard heating?  
4
- 5 d) Does Alectra agree that the benefits of geothermal systems are not reflected in the  
6 distribution costs paid by residential consumers because those charges do not vary  
7 based on coincident peak demand?  
8
- 9 e) Does Alectra agree that increases in heat pumps would assist the City in achieving its  
10 GHG reduction targets?  
11
- 12 f) Would Alectra agree to study the possibility of offering customers with geothermal  
13 systems a reduction in their distribution charges that would approximately reflect the  
14 benefits those customers provide to the distribution system? Assume the overall rate  
15 structure would continue to make Alectra whole for its revenue requirement.  
16
- 17 g) Please provide Alectra's best information on the number and proportion of its customers  
18 with (i) electrical, (ii) natural gas, (iii) propane, (iv) oil, (v) wood, and (vi) other kind of  
19 space heating.  
20

21 **RESPONSE:**  
22

- 23 a) Alectra Utilities is not in a position to comment on the conclusions of the Report by Dr.  
24 Stanley Reitsma, P.Eng. Alectra Utilities did not reference or utilize the report in the  
25 development of the DSP.  
26
- 27 b) Please see response to a).  
28
- 29 c) Please see response to a).

- 1 d) Alectra Utilities confirms that the rate structure for the Residential Rate Class is fully fixed  
2 and has no variable component that fluctuates with system peak.  
3
- 4 e) Alectra Utilities outlined the assumptions related to decarbonization impacts related to  
5 existing and new buildings in Section 3.8.3 of Appendix J of Exhibit 2A, Tab1, Schedule  
6 1. Alectra Utilities' decarbonization assumptions are based on Municipal Energy Plans  
7 and Climate Action Plans consistent with the OEB's Load Forecasting Guidelines for  
8 Ontario (October 13, 2022). In the municipal plans that form the assumptions in Alectra  
9 Utilities' system peak demand forecasts impacts for decarbonization, municipalities  
10 referenced heat pumps as one method of achieving their GHG targets.  
11
- 12 f) Alectra Utilities does not agree to study the possibility of offering customer with  
13 geothermal system a reduction in their distribution charges.  
14
- 15 g) Alectra Utilities cannot provide this information as it does not collect the information on  
16 the number and proportion of Alectra customers with (i) electrical, (ii) natural gas, (iii)  
17 propane, (iv) oil, (v) wood, and (vi) other kind of space heating.