

January 12, 2023

via RESS

Ms. Nancy Marconi
 Registrar
 Ontario Energy Board
 2300 Yonge Street
 P.O. Box 2319
 Suite 2700
 Toronto, ON M4P 1E4
 Email: Boardsec@oeb.ca

Dear Ms. Marconi:

Re : EB-2022-0024 – Elexicon Energy Inc. (“Elexicon”) Phase 2 IRM and ICM Application (the “Application”) Errata and Updates to Interrogatories

Elexicon is filing the following update to the record in its EB-2022-0024 proceeding for the following 15 items listed in Table 1 below. Elexicon identified that the record would benefit from these corrections. Elexicon will speak to any errata records requiring additional context at the beginning of the Technical Conference.

Table 1: List of Updated or Corrected Items

| Item | Evidence Reference | Description of Update or Correction |
|------|----------------------------------|---|
| 1 | Appendix B-1, page 55, 56 and 57 | <ol style="list-style-type: none"> 1. Correction of Table 24, and Table 25 on Page 55, to reflect total cost of Option 2 at \$50,046 and corresponding NPV calculation at 3%, 5% and 8% discount rates. Also on page 56, updated line 16 to reflect \$50.046 total cost. 2. Correction to narrative in Lines 4 to 7 on page 56 of 67: Original reference is: "Table 25 shows the current forecasted capital allocation by OEB category for 2023- 2028. Table 26 shows the percentage of spend that the Whitby Smart Grid would account for in each OEB category, as well as the percentage against the overall capital allocation." 3. Correction of 25% to reflect corrected 22% at line 10 of page 56. 22% is revised value in corrected Table 27 on page 57. 4. Corrected Table 27 on page 57 Whitby Smart Grid Percentage of Current Forecast Capital Expenditure by OEB Category |

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|----|------------------|--|
| 2 | CCC-18 | Did not include Elexicon's interrogatory response in original filing. |
| 3 | CCMBC-22 part b) | Corrected last sentence to say 2.5 FTEs rather than 1.5 FTE. This is referenced in response to VECC 02 a). |
| 4 | CCMBC-6 part c) | Corrected reference section to 5.2 of the Whitby Town Council minutes from the original reference to section 3.2. |
| 5 | CCMBC-9 part c) | Corrected "Option 3" to "Option 2" in sentence #3 and last sentence |
| 6 | CCMBC-9 part f) | Corrected "these options will not deliver" to "Option 2 will not deliver" |
| 7 | SEC-13 part a) | Corrected reference to DSP being filed in 2021 rather than 2026 |
| 8 | SEC-7 part a) | Corrected reference to CCMBC-6 rather than CCMBC-11 |
| 9 | Staff 10 | Corrected Table 1 WRZ and VRZ labels. Original labelling had incorrectly assigned WRZ to VRZ table and vice-versa for VRZ to WRZ table |
| 10 | Staff 23 part b) | Corrected to reference OEB Staff-30 part b rather than reference to [OEB Staff #] |
| 11 | Staff 24 part d) | Corrected part d response to reflect Option 1 was chosen versus the originally incorrect Option 2 |
| 12 | Staff 50 | Corrected specific narrative to clarify Accounting Order. Both clean and track changes version have been filed to show corrections. |
| 13 | Staff-5 | 2022 capital in-service addition amounts in Tables 1 and 2 in response part a) were corrected. The original interrogatory response had planned in-service additions associated with the Seaton TS project included in the incorrect rate zone table. |
| 14 | Staff-7 part f) | Correction of Option 2 project cost on page 4 of 4 to \$50,045,989 from original \$47,212,000 |
| 15 | VECC-15 | Update of Table 27 to reflect update to Appendix B-1 page 57, and corrected Table 27 recast from percentages to dollars to reflect the updated Table 27. |

Elexicon's update has been filed through the OEB's web portal ("RESS")

Yours Truly

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke, likely representing Cynthia Chan.

Cynthia Chan, CPA, CA
Chief Financial Officer
Elexicon Energy Inc.

cc: John Vellone



UPDATED

1 Table 24 shows the annual cash profile for Option 2, adjusted for Consumer Price Index
 2 (CPI) of 7.2%¹⁵. An NPV has been performed using three different discount rates: 3%,
 3 5%, and 8%. Elexicon’s current discount rate is 3.2%. The results of the NPV are shown
 4 in Table 25.

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 6 *Table 24: Option 2 Capital Cash Profile*

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| Elexicon Cash Profile (\$000) | | | | | | | |
|-------------------------------|-------|-------|-------|-------|-------|-------|--------|
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
| CPI Adjusted | 7,869 | 8,105 | 8,267 | 8,432 | 8,601 | 8,773 | 50,046 |

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10 *Table 25: Option 2 NPV (\$'000)*

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| Cash Flow Profile | Total Cost | NPV at 3% | NPV at 5% | NPV at 8% |
|-------------------|------------|-----------|-----------|-----------|
| CPI Adjusted | 50,046 | 45,689 | 43,973 | 41,594 |

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Completing the project by the end of 2028 would cause Elexicon to forfeit the NRCan
 Funding, since a 2028 in-service date for the Smart Grid Project exceeds the required
 completion date of March 31, 2025 under the NRCan Funding. Absent of the NRCan
 Funding, the ratepayer will be liable to cover the full cost of \$50.05 MM (CPI adjusted) to
 implement the Whitby Smart Grid project. Table 24 provides the NPV, calculated for
 different discount rates (3%, 5%, and 8%). For a 3% and 5% discount rate, the NPV
 exceeds \$43.1 MM which is the net Whitby Smart Grid project cost after deducting NRCan
 Funding. Whilst the NPV at a discount rate of 8% does not exceed the net cost, this
 scenario is an unlikely one to unfold. For example, the current discount rate Elexicon used
 is 3.2%. At this rate (3.2%) the NPV would exceed the net Whitby Smart Grid project
 costs.

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¹⁵ Statcan.gc.ca – Consumer Price Index May 2022



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In addition, Option 2 requires Elexicon to use its existing capital funding allocation. In order to deliver the Whitby Smart Grid Project this would have an impact on other project spending. Table 26 shows the current forecasted capital allocation by OEB category for 2023- 2028. Table 27 shows the percentage of spend that the Whitby Smart Grid would account for in each OEB category, as well as the percentage against the overall capital allocation. As can be seen this would have a significant impact on the amount of spending and therefore projects that Elexicon would have to defer or cancel in order to deliver the Whitby Smart Grid under Option 2. On average, Elexicon would need to defer or cancel 22% of its current capital spending to accommodate the Whitby Smart Grid project under current capital allowances.

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1 *Table 26: Current Forecast Capital Expenditure 2022-2028 by OEB Category*

| OEB Category | \$'000 | | | | | |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
| GENERAL PLANT | 8,662 | 4,365 | 3,747 | 4,546 | 8,000 | 6,000 |
| SYSTEM ACCESS | 9,370 | 8,683 | 10,198 | 11,138 | 13,000 | 13,000 |
| SYSTEM RENEWAL | 14,727 | 13,821 | 18,195 | 16,474 | 16,000 | 18,000 |
| SYSTEM SERVICE | 7,808 | 9,156 | 5,033 | 3,103 | 3,000 | 2,000 |
| Total | 40,568 | 36,025 | 37,173 | 35,262 | 39,000 | 39,000 |

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 3 *Table 27: Whitby Smart Grid Percentage of Current Forecast Capital Expenditure by*
 4 *OEB Category*

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| OEB Category | Percentage of current approved capital spend | | | | | | |
|----------------|--|------------|------------|------------|------------|------------|------------|
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Average |
| CPI Adjusted | | | | | | | |
| GENERAL PLANT | 91% | 186% | 221% | 185% | 108% | 146% | 156% |
| SYSTEM ACCESS | 84% | 93% | 81% | 76% | 66% | 67% | 78% |
| SYSTEM RENEWAL | 53% | 59% | 45% | 51% | 54% | 49% | 52% |
| SYSTEM SERVICE | 101% | 89% | 164% | 272% | 287% | 439% | 225% |
| Total | 19% | 22% | 22% | 24% | 22% | 22% | 22% |

6 **4.2. Rationale for Preferred Alternative & Consequences of Inaction**

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 8 *Table 28: Rationale for Preferred Alternative*

| Preferred Alternative: Deployment of Whitby Smart Grid by 2025, with funding through this ICM application. | | |
|---|---|---|
| Benefits | Rationale | Consequences of Inaction |
| <i>Customer Benefits</i> | The rapid deployment of the Whitby Smart Grid ensures that the customers bearing the costs of investment will also reap the benefits at approximately the same time. Customers will see direct savings in their bills due to | If the Smart Grid project is not carried out, this will affect the delivery of the Sustainable Brooklin project and as such reduce the likelihood of an uptake in DER and EV's, and therefore |

Elexicon Energy Inc.

Answer to Interrogatory from

Consumers Council of Canada

Interrogatory CCC-18:

Appendix B, p. 47

“Absent the DSC exemption, the Developers would otherwise be required to pay a capital contribution for construction of the Brooklin Line and the Developers would no longer be willing to commit to invest in building DER and EV ready homes across all of North Brooklin.”

- a) Please provide evidence to support this claim;
- b) Why would the Developers not be willing to pay a portion of the capital contribution?
- c) Did Elexicon pursue a sharing arrangement – whereby the Developers paid a portion of the capital contribution? If not, why not? Why is “all or nothing” necessarily appropriate?

Response:

- a) Please see response to CCMBC-20 part b.
- b) Please see response to CCMBC-20 part b.
- c) Elexicon did not pursue a sharing arrangement. Elexicon determined that the Whitby Smart Grid and Sustainable Brooklin projects would benefit its Whitby Rate Zone customers by significantly advancing the OEB, Ontario and Federal Government mandates to enable proliferation of DER and EVs and modernize the electricity grid, while also delivering tangible benefits for customers (i.e. energy savings and reliability improvements).. Elexicon also notes the comparable cost of the Brooklin Line vs. the construction of the number of DER-and-EV-ready homes contemplated. Elexicon sees little opportunity for construction of homes which are ‘partially’ DER-and-EV-ready.

Elexicon Energy Inc.

Answer to Interrogatory from

Coalition of Concerned Manufacturers and Business of Canada

Interrogatory CCMBC-22:

Reference: Appendix B-4, METSCO Report, page 28

Preamble: “While DER can be used to offset peak demand and defer investments into new stations and feeders, high DER penetration creates numerous challenges for operating the distribution system. Methods such as VVM, DA, AMI must be used to facilitate the DER.”

- a) Is it possible that the costs of addressing numerous challenges of high DER penetration could be greater than the benefits? Please discuss.
- b) Do electricity distributors with high DER penetration need specialized technical staff to deal with the challenges?

Response: (UPDATED)

- a) Elexicon is not in a position to address the hypothetical ‘numerous challenges’ question posed, which appears to be a question of policy not specific to this application. However, Elexicon notes that high DER penetration creates the opportunity to defer future distributor investments¹, which will help to offset the costs of implementing technologies in the future that are intended to address challenges stemming from high DER penetration. Further, the specific technologies included within the Whitby Smart Grid, in addition to being proven, provide immediate benefits to customers via energy savings and improved reliability; beyond their assistance in integrating higher levels of DERs into the distribution grid.
- b) Electricity distributors need specialized technical staff to deal with many challenges of managing a complex system, of which high DER penetration is one potential challenge. With specific respect to the Whitby Smart Grid, Elexicon has assumed incremental OM&A expenses associated with 2.5 additional FTE’s within the Additional OM&A Expense listed in Appendix B, page 11, Table 1.

¹ Appendix B-1 - Whitby Smart Grid Business Case, Page 23 of 67

Elexicon Energy Inc.

Answer to Interrogatory from

Coalition of Concerned Manufacturers and Business of Canada

Interrogatory CCMBC-6:

Preference: Appendix B, page 9

Preamble: “Finally, the ICM Projects respond to the desire of local communities to have a say in the kinds of investments in electricity infrastructure that are made in their service area, to serve their needs. In this regard it is noteworthy that on July 11, 2022, the Whitby Town Council unanimously endorsed the WSG and Sustainable Brooklin Projects.”

- a) Did Elexicon make a presentation to the Whitby Town Council? If the answer is yes, please file copies of all presentation materials. If the answer is no, please explain why not.
- b) Was the Whitby Town Council informed that electricity customers in Whitby would have to pay \$43.171 million for the Whitby Smart Grid Project and \$26.657 million for the Sustainable Brooklin Project? If the answer is yes, please file the minutes of the Council Meeting proving that they were informed. If the answer is no, please explain why not.
- c) Please file a copy of the resolution of the Whitby Town Council endorsing the WSG and the Sustainable Brooklin Project.

Response: **(UPDATED)**

- a) Yes, Elexicon Energy Inc. did make a presentation to the Whitby Town Council on July 11, 2022. Please see Elexicon Energy’s response as provided in Exhibit I.SEC-11 Attachment 2.
- b) Yes. Please see Exhibit I.SEC-11 Attachment 1. Please see slide 5 of 7, which includes cost estimates as of June 15, 2022. Please also see Attachment 1 to this interrogatory response which provides the minutes of the Whitby Town Council meeting, unanimously endorsing both the Whitby Smart Grid and Sustainable Brooklin ICM projects. Additionally, the following URL is a link to the minutes published on the Council’s website:

<https://whitby.civicweb.net/document/189869/?printPdf=true>

- c) Please see Section 5.2 of the minutes provided in Attachment 1 of this interrogatory response.

Elexicon Energy Inc.

Answer to Interrogatory from

Coalition of Concerned Manufacturers and Business of Canada

Interrogatory CCMB-9:

Reference: Appendix B, Page 38

Preamble: "In order to satisfy the prudence test, a distributor must demonstrate that its decision to incur the incremental capital represents the most cost-effective option for its customers (though, not necessarily the least initial cost option)."

a) Please confirm that WSG consists of numerous electrical components that will be installed at various locations.

b) Please confirm that installation of electrical components at various locations is a typical annual program of an electricity distributor.

c) Is the option selected for WSG the least cost option from the perspective of Elexicon ratepayers? Please explain your answer.

d) Please confirm that Sustainable Brooklin Project is a feeder extension project.

e) Please confirm that feeder extension project is a typical annual program of an electricity distributor.

f) Is the Sustainable Brooklin Project the least cost option from the perspective of Elexicon ratepayers? Please explain your answer.

Response: **(UPDATED)**

a) Like any project, the Whitby Smart Grid ("WSG") consists of numerous electrical components, installed at the required locations within Elexicon's distribution system.

b) While typical annual programs may involve the installation of electrical components at various locations, the WSG is a discrete project, incremental to the projects contemplated in the Distribution System Plan and not a part of a typical annual capital program for Elexicon Energy ("Elexicon"). Elexicon intends to deploy a set of distinct assets for the WSG, over a concentrated 2.5 year period due to the logistics of purchasing and installing such technologies. It also intends to limit intra rate zone cross subsidy by initiating cost-recovery of the WSG at a time when all Whitby Rate Zone customers receive the benefits of the Project (i.e., upon the in-service date of the entire project).

Elexicon observes that in approving PUC Distribution Inc.'s Sault Smart Grid ("SSG") Incremental Capital Module ("ICM") application, the OEB found the SSG to be a discrete project, noting it "*is a novel project and therefore not part of an ongoing capital program.*"¹ Elexicon's WSG shares many similarities with the SSG - it is similarly a novel, discrete and incremental project not part of any typical annual capital program.

- c) As explained in Appendix B-1 in Table 22, Elexicon considered 3 options for the WSG project. The chosen option represents the least cost option between Options 1 and 2. It will deliver benefits to customers sooner than option 2 or 3. Option 2 will require Elexicon to reprioritize a significant amount of its Whitby Rate Zone Distribution System Plan capital spend to accommodate the costs of the Whitby Smart Grid, and potentially add costs to Elexicon's overall operations. The project deferrals as required in Option 2, can add costs by negatively impacting the reliability of assets, and customer service. /U
- d) The Sustainable Brooklin Project is a feeder expansion project to deliver incremental capacity to an area of the WRZ where insufficient capacity currently exists. /U
- e) Not confirmed. Elexicon does not pursue feeder expansion projects without an underlying reason. Some feeder expansions may be to loop the system to improve reliability. Other feeder expansions may be to deliver incremental capacity to new customers. As noted in the Application, absent the requested DSC Exemption, and ICM funding, the feeder expansion would otherwise be treated in accordance with the requirements of the DSC and it is Elexicon's understanding that the Brooklin Developers will not be able to provide DER or EV ready homes.
- f) As explained in Appendix B-2 in section 4.1, Elexicon considered four options. The chosen option (option 1) represents the least cost option. Whilst the cost for options 1 and 2 are similar, option 2 will not deliver on the objective of building DER-ready homes that can be integrated into Elexicon's system. As noted in the Application, Elexicon's innovative Sustainable Brooklin proposal will further the adoption of DER and EVs, and support the Governments action plan on Climate Change. /U

¹ EB-2020-0249, Decision and Order, page 20

Elexicon Energy Inc.

Answer to Interrogatory from

School Energy Coalition

Interrogatory SEC-13:

The 2025 Capital Forecast for the WRZ is shown as \$48,582k in Table 6 and for the VRZ as \$37,330k in Table 7. Elexicon filed a DSP for 2022-2026 as part of its 2022 Rate Application EB-2021-0015 which included Forecasted Capital in Table 5.4-11. Table 26 in Appendix B-1 provides Current Forecast Capital Expenditure 2022-2028 by OEB Category.

- a) Has Elexicon updated its capital forecast for 2023-2026? If, so please provide an update to Table 5.4.11.
- b) If the updated forecast is materially different, please provide an explanation of the changes in capital plans for each year.
- c) Forecasted gross capital expenditures for 2025 in Table 5.4-11 are \$38,148k. How does this number relate to the forecasts for WRZ and VRZ provided in Tables 6 & 7?
- d) Is Table 26 of Appendix B-1 capital expenditures for Elexicon or only the WRZ?
- e) Please reconcile the numbers in Table 26 to the DSP forecast and to those used in the materiality threshold calculation.

Response: (UPDATED)

- a) Yes, as shown in Table 6 and Table 7 cited in this interrogatory response, Elexicon has updated its capital forecast for 2023-2026 since it filed its DSP in 2021.

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Table 1 below is a correction to the pre-filed application Table 26¹. Elexicon inadvertently inserted a previous version of the capital forecast. The material differences between the pre-filed application Table 26 and the correct capital forecast are found in the System Renewal and System Service asset categories for years 2024, 2025 and 2026. In Table 1 below, the differences in years 2024, 2025 and 2026 reflect capital projects relating to the building of Uxbridge North Substation, the relocation of Fairport Station, the rebuild of Uxbridge East Substation, and building Foster Station.

¹ Appendix B-1 - Whitby Smart Grid Business Case, Page 57 of 67

Table 1 – Elexicon Service Area Capital Forecast 2023 to 2026

| OEB Category | \$'000 | | | |
|----------------|-----------------|-----------------|-----------------|-----------------|
| | 2023 | 2024 | 2025 | 2026 |
| GENERAL PLANT | \$8,662 | \$4,365 | \$3,747 | \$4,546 |
| SYSTEM ACCESS | \$9,370 | \$8,683 | \$10,198 | \$11,138 |
| SYSTEM RENEWAL | \$14,727 | \$16,821 | \$30,195 | \$19,474 |
| SYSTEM SERVICE | \$7,808 | \$9,156 | \$5,033 | \$10,723 |
| Total | \$40,568 | \$39,025 | \$49,173 | \$45,882 |

b) Elexicon provides the following listing of the major drivers of changes in each year’s capital plan when compared to the 2021 DSP:

2023

- The Whitby TS DESN 1 True-up, Asset Management Enhancement Solution APM/AIP and several IT projects.
- Adjustments to Road Relocation projects & Connection of New Services.
- Movement of the Water Substation project to System Access (Substation Expansion Feeder enhancement project to Mid-Block Aterial Rd, Des Newman Station upgrade).
- Movement of the remaining components of the Fairport Station Project, Voltage Conversion to a future project.
- Updates to the cost and in-service dates of the Feeder Enhancement projects (i.e. Montgomery Park, Peter Matthews) and SCADA System Upgrade.

2024

- Updated estimates to several IT projects driven by material cost increases attributed by Elexicon to supply chain and COVID-19 pressures.
- Increase to Residential development project estimates driven by new forecasted connections.
- Decrease in system renewal projects to accommodate system service projects and overall budget envelope.
- Increased the investment in FCI and other reliability driven projects based on new reliability forecasted numbers.
- Updated general service forecast based on recent analysis of the number of connections.
- Moved the Belleville voltage conversion to accommodate for cost increase to address condition-based asset replacement projects.
- Moved Port Hope voltage conversion project to 2024.
- Added a reliability-driven project James F1 GRAV-Feeder Enhancement project.

2025

- Increase to Residential development project estimates driven by new forecasted connections.
- Increased investment in system renewal projects driven by the Asset Condition Assessment and address the backlog of assets to be replaced during 2020 and 2021 COVID-19 period.
- Increased investment in system Service projects driven by reliability report and address the backlog of system improvement projects.
- Moved the communication project to the 2023 ICM (Whitby Smart Grid/ADMS).
- Moved Uxbridge Station project to a future year.

2026

- Updates to General Service requests and Residential development projects.
- Increased investment in system renewal projects driven by the Asset Condition Assessment and address the backlog of assets to be replaced.
- Moved the communication project to the 2023 ICM (Whitby Smart Grid/ADMS) and updated IT projects (Ex: Cyber security, End User HW & SW Replacement & Additions).
- Moved the voltage conversion projects to a future year.
- Increased investment in system Service projects driven by reliability report and address the backlog of system improvement projects.

c) Table 6 and 7 in Elexicon's ICM application provide the total capital forecasts for each of the Whitby and Veridian Rate Zone's inclusive of their respective portions of the Whitby Smart Grid and Sustainable Brooklin ICM projects. These capital forecast amounts reflect the changes described in part b of this response to the 2022 Electricity Distribution Rate Application (EB-2021-0015) which included Forecasted Capital in Table 5.4-11.

d) Table 26 is for Elexicon's WRZ and VRZ.

e) Please see response to part b above for the listing of major drivers of differences between Elexicon's current forecast provided in Table 1, and Table 5.4.11 of the 2021 DSP.

With respect to the requested reconciliation of Table 26 in the ICM Application and the amounts used in the materiality threshold, please see Table 2 below.

Table 2 – Variance between 2021 DSP and Updated Capital Forecast, and Reconciliation Between Updated Capital Forecast and Capital Forecast Used in Materiality Threshold Calculation

| (\$'000) | 2023 | 2024 | 2025 | 2026 |
|--|----------|----------|----------|----------|
| Elexicon Service Area DSP Forecast | \$35,831 | \$36,025 | \$32,673 | \$35,261 |
| Elexicon Service Area Updated Forecast | \$40,568 | \$39,025 | \$49,173 | \$45,882 |
| Variance | \$4,737 | \$3,000 | \$16,500 | \$10,621 |
| | | | | |
| Whitby Rate Zone Updated Forecast (Note 1) | \$13,056 | \$8,325 | \$11,843 | \$8,430 |
| Veridian Rate Zone Updated Forecast (Note 1) | \$27,512 | \$30,700 | \$37,330 | \$37,452 |
| Elexicon Service Area Updated Forecast | \$40,568 | \$39,025 | \$49,173 | \$45,882 |
| | | | | |
| Whitby Rate Zone ICMs | \$26,657 | | \$36,739 | |
| Veridian Rate Zone ICMs | | | | |
| Updated Whitby Rate Zone Forecast (incl. ICMs) (Note 2) | \$39,712 | \$8,325 | \$48,582 | \$8,430 |
| Updated Veridian Rate Zone Forecast (incl. ICMs) (Note 2) | \$27,512 | \$30,700 | \$37,330 | \$37,452 |

Note 1: Evidence correction of Whitby and Veridian Rate Zone Forecast

Note 2: For purpose of maximum eligible capital calculation

In Table 2 above, Elexicon has provided the underlying amounts that reconcile the updated capital forecast for both Whitby Rate Zone and Veridian Rate Zone shown in Table 1 above, with the amounts used in Tables 5, 6 and 7 of the pre-filed application².

² Appendix B – Incremental Capital Module Whitby Smart Grid & Sustainable Brooklin, Page 35 of 56

Elexicon Energy Inc.

Answer to Interrogatory from

School Energy Coalition

Interrogatory SEC-07:

Elexicon refers to the OEB's April 28, 2022 letter and the OEB's intent to provide a bulletin informing communities that they have a choice to opt for a premium solution (DERs) and the related cost responsibility.

a) How has Elexicon taken this into consideration in preparing its application, i.e. how has Elexicon ensured that the specific community that opts for DERs made possible by the WSG will bear the cost responsibility?

b) What percentage of the Whitby customers will benefit from the expanded ability to install DERs once the WSG project is complete?

c) Specifically which areas of Whitby will benefit from the expanded ability to install DERs?

Response: (UPDATED)

a) As is detailed in the Application, Elexicon is not proposing a premium solution, but is rather seeking to facilitate the most cost effective solution to meet the long-term needs of customers in the Town of Whitby. Both the Whitby Smart Grid ("WSG") and Sustainable Brooklin ("SB") projects (collectively, the "Projects") directly impact customers in the Town of Whitby. The Projects are forecasted to improve system reliability, conserve energy (thereby reducing total bill impacts), reduce losses, while also facilitating increased DER penetration in an effort to avoid a future costly capacity upgrade. In this context, Elexicon ensured that the community of Whitby's considerations were taken into account by presenting its proposals including the cost responsibility to the Whitby Town Council and seeking a vote of approval. Please see Elexicon's response to SEC-11 for the presentation it delivered at the Whitby Town Council meeting, and its response to CCMBC-6 part c for the minutes of the Town Council meeting where the Council unanimously approved both ICM projects.

b) Once the WSG project is placed in-service in 2025, all Whitby rate zone customers will receive the benefit of a distribution system equipped to accommodate significantly higher levels of DERs.

c) See b) above.

Elexicon Energy Inc.

Answer to Interrogatory from

OEB Staff

Interrogatory STAFF-10:

Whitby Smart Grid – Cost Allocation

Ref 1: Appendix B – Incremental Capital Module Whitby Smart Grid, p. 36

Ref 2: EB-2021-0015 – Distribution System Plan – Overview of Assets Managed

For the Whitby Smart Grid, \$36.7 million was allocated to Whitby Rate Zone, and \$6.43

million was allocated to Veridian Rate Zone. The Whitby Smart Grid involves the installation of a suite of proven smart grid technologies on Elexicon Energy's distribution system in the Whitby Rate Zone and Veridian Rate Zone. In reference 2, it shows that the Whitby Rate Zone has about one-third the number of customers as compared to the Veridian Rate Zone.

- a) Please provide the allocation method of costs and calculations for the AMDS and SCADA between the Whitby Rate Zone and the Veridian Rate Zone.
- b) Please confirm if the same smart grid technologies are installed in the Whitby and Veridian Rate Zones and whether both rate zones will have the same functionality. If so, please explain why the Whitby Rate Zone bears most of the costs.
- c) If only the Whitby Rate Zone will see certain smart grid benefits as compared to the Veridian Rate Zone, please provide a list of differences.
- d) Please provide a list of benefits the Veridian Rate Zone can expect from AMDS and SCADA.

Response:

- a) The tables below show the allocation of costs between Veridian Rate Zone (VRZ) and the Whitby Rate Zone (WRZ). The costs were allocated based on a proration of customer counts between Elexicon's VRZ and WRZ:

Table 1 – Allocation of Costs between Veridian and Whitby Rate Zone

WRZ

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| WSG - SCADA | \$1,281,502 |
| WSG - ADMS - Computer Software | \$579,138 |
| WSG - ADMS - Computer Equipment | \$89,562 |
| WSG - ADMS - Communications Equipment | \$419,231 |
| Total | \$2,369,433 |

VRZ

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| | |
|--|--------------------|
| VSG - SCADA | \$3,478,498 |
| VSG - ADMS - Computer Software | \$1,572,007 |
| VSG - ADMS - Computer Equipment | \$243,106 |
| VSG - ADMS - Communications Equipment | \$1,137,957 |
| Total | \$6,431,567 |

- b) No. The ADMS includes modules that are required to operate VVO and FLISR systems. These ADMS modules will only benefit customers in the Whitby Rate Zone, since the VVO and FLISR field hardware will only be installed in the Whitby Rate Zone. Therefore, the allocation of costs of the ADMS is greater to the Whitby Rate Zone.
- c) The Veridian Rate Zone will only receive the ADMS benefits stated in Table 1 of Appendix B-1. The Whitby Rate Zone will see all the benefits stated in Table 1 of Appendix B-1.
- d) Table 1 in Appendix B-1 states the benefits associated with ADMS implementation. Below is an extract of that Table listing only the ADMS benefits, which are what the Veridian Rate zone can expect as well as the Whitby Rate Zone.

Table 2 – Extract of ADMS Benefits

| System | Expected Benefit |
|---------------|---|
| ADMS | <ul style="list-style-type: none"> Leverage the existing metering, Infrastructure Technology, other system software, and communication systems to effectively regulate voltage, mitigate outages, and Distributed Energy Resources (DER). Increased safety and operational situational awareness for field crews. |



| System | Expected Benefit |
|--------|---|
| | <ul style="list-style-type: none"><li data-bbox="337 384 732 411">• Reduction of restoration time.<li data-bbox="337 447 1101 474">• Increased efficiency through the reduction of overhead costs.<li data-bbox="337 510 1084 537">• Advanced real-time load flow calculations and load transfer.<li data-bbox="337 573 889 600">• Streamlining of switch order and execution.<li data-bbox="337 636 1393 699">• Improved asset management of devices through the inherent switch operation logging ability of the ADMS system. |

Elexicon Energy Inc.

Answer to Interrogatory from

OEB Staff

Interrogatory STAFF-23:

Customer-Specific Benefits

Ref. 1: Appendix B Incremental Capital Module: Whitby Smart Grid & Sustainable Brooklin, p. 10 of 56

Elexicon Energy states that “greater access to DERs and EVs will create customer-specific benefits including opportunities for rate arbitrage, reduced electricity consumption at the meter, provision of back-up power and a buffer against the volatility of gasoline prices;... .”

- a) To clarify, will the customer-specific benefits mentioned above accrue to individuals who purchase a DER and EV-ready home built by the Brooklin Developers only if they invest in solar/batteries and an EV?
- b) What percentage of Sustainable Brooklin homebuyers does Elexicon expect to invest in solar/batteries and an EV?

Also on page 10, Elexicon Energy lists the following as one of the benefits of the WSG and Sustainable Brooklin projects:

“GHG Reductions: Reduced electricity consumption will decrease the use of natural gas-fired generation for marginal electricity generation, resulting in GHG reductions of approximately [202,977] T CO₂e over the next twenty years.”

The footnote to this statement refers to p. 9 of Appendix B-1, which is entitled ‘Whitby Smart Grid Business Case’.

- c) Are the GHG reductions claimed on p. 10 of Appendix B those referred to in the entry on ‘Table 1 – Expected Benefits’ at the location mentioned in the footnote, which are ascribed to the VVO/CVR component of the WSG project? Staff notes that the number of T CO₂e referenced on p. 10 is derived on Table 16 of Appendix B-1 (p. 34).

Response: **(UPDATED)**

- a) Not confirmed. Some of these benefits would also accrue if they chose to invest in one or more of solar (PV), batteries, or an EV. Elexicon further notes that major automotive manufacturers, including GM, have announced plans to electrify their entire fleet by 2030.

b) As explained in response to OEB Staff #30 part b, one of the key benefits of the Sustainable Brooklin project is that it will create a baseline of quantifiable evidence on DER/EV uptake in North Brooklin vs. in the rest of the Town of Whitby. Elexicon's hope is that this quantitative evidence, together with demonstrable system benefits may in-turn inform future regulatory changes at the OEB as well as future building code amendments to make DER ready homes a standard feature for all new construction in Ontario. /U

As described on page 24 of Appendix B-4, Table 15, there is a wide range of potential DER uptake, both in type and quantity, which could facilitate the deferral of a material infrastructure investment, such as a new Transformer Station. On the lowest end, 12% penetration of rooftop solar with battery energy storage could defer capacity needs by 1 year, with 53% penetration of the same technology combination creating a 5-year deferral opportunity. Elexicon is hopeful to reach the ranges modelled as necessary to defer traditional infrastructure investment. Elexicon plans to provide a forecast of potential DER and EV uptake by customers in Whitby Rate Zone as part of its DER Enabling Program application, which all else equal stands to increase customer uptake of the technologies required to defer traditional investments.

c) Confirmed.

Elexicon Energy Inc.

Answer to Interrogatory from

OEB Staff

Interrogatory STAFF-24:

Customer-Specific Benefits

Ref. 1: Appendix B, s, 4.1.2. Sustainable Brooklin, pp. 41-50 of 56

“Elexicon Energy identified 4 alternatives with respect to the Sustainable Brooklin Project:

1. Extend feeders from Whitby TS DESN 1 to serve the North Brooklin area, with funding through this ICM, and with the WSG enabling DER integration capability (preferred);
2. Proceed with system enhancement by extending the feeders from Whitby TS DESN 1 to serve the North Brooklin area with developers paying a capital contribution as per the DSC, with the extension of the duration of capital contribution period from 5 years to 15 years....”
 - a) Please confirm that the phrase “capital contribution period” used in the above sentence refers to the “customer connection horizon” parameter described on p. 4 of Appendix B of the DSC. If otherwise, please explain by reference to one of the parameters described in the DSC, Appendix B.

“Option 1 is the preferred option for Sustainable Brooklin. Participation by the Developers in the design of Elexicon Energy’s distribution system to facilitate the development of a DER-and-EV-Ready community is a highly innovative and unique opportunity. Electing this option would result in over 10,000 concentrated residential units which could have been future-proofed for DERs and EVs, being constructed status quo; meaning future uptake of these technologies would require costly retrofits paid for by customers.” (p. 41 of 56)

b) Please confirm that “this option” in the sentence that begins “Electing this option...” refers to Option 2 and not Option 1.

c) Regarding the “costly retrofits” mentioned above, please confirm that this refers to the estimated \$20K - \$30K retrofit cost per home referenced on p. 10 of Appendix B-2, and explain what is included in a typical retrofit and the particulars of the previous experience on which this estimate is based, according to the footnote provided.

On page 42, Elexicon Energy states that “Option 2 was rejected as suboptimal for two reasons. First, absent the DSC section 3.2 exemption, the Developers would otherwise be required to pay a capital contribution for the construction of the Brooklin Line and the developers would no longer be willing to commit to invest in building DER and EV-ready homes across all of North Brooklin. This will likely result in lower DER and EV penetration rates and may be a lost

opportunity for Elexicon Energy, the OEB and other LDCs to observe and gather information about the ICM Projects to defer or avoid future material capital expenditures through greater uptake of DERs.”

d) Please confirm that, as presented above, Option 2 was rejected for only one reason, that is: “...the developers would...be required to pay a capital contribution for the construction of the Brooklin Line and developers would no longer be willing to commit to invest in building DER and EV-ready homes across all of North Brooklin.

e) Please confirm that under Option 2, the developer will build homes identical in design and construction in every way to those built under Option 1, save those elements described in the application as making the homes “DER and EV-ready”.

f) Given the “parameters of DER and EV-ready homes” described on p. 46 of Appendix B, and Elexicon Energy’s statement on p. 47 of the same document that “Absent the DSC Exemption, ... the Developers would no longer be willing to commit to invest in building DER and EV ready homes across all of North Brooklin”, please provide the basis of the statement and confirm Staff’s understanding that this means the Developers will build homes in North Brooklin that will NOT include:

- “two spare breaker slots” that could be used for a DER
- “sufficient space on the wall next to the circuit panel” to install solar controls and an inverter”
- “room on the wall for the [EV] charger”, and
- “appropriate room in the circuit panel for a breaker” that could be used for an EV charger

On page 46, Elexicon Energy states that where “the roof size and orientation is suitable, developers will offer customers the option to purchase and install solar panels and related inverter and controls.”

g) Please confirm Elexicon Energy’s understanding that not all of the homes the Developers will build in North Brooklin will be suitable for solar panels.

h) Please provide any information that Elexicon Energy has as to the percentage of the 10,000 to 11,200 homes in North Brooklin that will not be suitable for solar panels.

i) Please confirm that where a home is not suitable for solar panels, the home will not be made ‘DER-ready’ by the Brooklin Developers and whether those homeowners will receive a discount for their home not being made ‘DER-ready’?

On page 47, Elexicon Energy states that absent “the DSC Exemption, the Developers would otherwise be required to pay a capital contribution for the construction of the Brooklin Line and the Developers would no longer be willing to commit to invest in building DER and EV-ready

homes across all of North Brooklin. This would be a lost opportunity for WRZ customers to save on electricity costs, for Elexicon Energy’s operations and engineering teams to learn from the mass deployment of innovative technologies, and for Ontario’s electricity sector to gain from the learnings achieved by the Sustainable Brooklin Project.”

j) OEB Staff understands from the above that, absent the DSC exemption sought, Whitby Rate Zone customers will lose an opportunity “to save on electricity costs”. Please explain the nature and quantum of electricity cost savings that would otherwise accrue if the exemption is approved, and if not evident from that explanation, why none of these savings would be available if the exemption is not approved.

k) Please explain how approving the exemption will ensure the “mass deployment of innovative technologies” mentioned above, and whom Elexicon Energy expects will be deploying those technologies.

On page 50, Elexicon Energy states that the “size and upstream nature of the Brooklin Line creates further issues of basic fairness. The Developers, being a first mover, will pay all the costs of the Brooklin Line and unforecasted customers connected after 5 years can avoid any contributions due to the limitations found in Section 3.2.27 of the DSC.”

l) Please confirm that the phrase “all the costs of the Brooklin Line” in the above statement refers to the capital contribution calculated by Elexicon Energy according to Appendix B of the DSC. If the phrase refers to some other costs, please explain.

Response: (UPDATED)

a) Yes.

b) Yes, we can confirm that “this option” in the sentence that begins “Electing this option...” refers to Option 2 and not Option 1.

c) Yes, the statement in the question is correct. The following items would be involved in a retrofit:

- Conduit would need be run from the roof to the electrical panel. Normally this would be down the outside of the house and into the basement.
- The electrical panel would require modification, including an external breaker box and additional wiring to connect it to the existing panel.
- If the DER includes battery storage, space will need to be created to mount this.
- The installation of solar panels and battery storage would also be required.

d) Elexicon’s selection of Option 1 was primarily driven by the two reasons noted in the question. Elexicon notes that there are additional benefits to Option 1 which include potential

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opportunities to defer infrastructure investments as highlighted in section 5.2 Opportunities to Defer Infrastructure Investments of the application, and to facilitate Greenhouse Gas reductions highlighted in section 5.4. Facilitating GHG Emission Reductions.

e) It is Elexicon's understanding that the developers would build homes that would not be DER and EV-ready if Option 1 is not approved by the OEB.

f) Elexicon is not privy to the exact assets that would not be installed. It is Elexicon's understanding that if a DSC exemption is not allowed, the Developers would not install the DER and EV rough-ins.

g) Elexicon's understanding is that some homes may not have roof orientation which would logically facilitate solar panel installation.

h) See response part g.

i) The Developers have indicated that all homes will be DER and EV-ready. This may in some circumstances not include solar rough-ins, however battery and EV rough-ins would continue to be included. Elexicon is not involved in the sale price of homes, whether they include some or all of the specific rough-ins contemplated.

j) With respect to quantum of outcomes, Elexicon does not have a specific forecast for individual customer savings resulting from solar PV, battery storage, EV's, or a combination thereof. Elexicon is confident energy savings and back-up power benefits can be achieved through these technologies for individual customers, but has not conducted analyses to quantify the various scenarios which an individual customer may face in accruing such benefits. With respect to probability of these outcomes, customers can currently elect to install these technologies in their homes. However, the incremental cost and disruption of installing such technologies in a home that is not roughed-in for them will act as a disincentive for most customers. Elexicon is confident that uptake of DERs and EVs will be higher in a community where homes have been constructed for lower cost and less disruptive installation.

k) A DSC exemption will facilitate innovation, specifically the creation of a DER and EV ready community in Brooklin, ON (on both the customer and utility sides of the connection point) and a DER and EV ready grid in the balance of the WRZ as more fully outlined in section 5.1 of Appendix B. Combined with the proposed WSG, Elexicon expects the DSC Exemption will facilitate an accelerated penetration of DER's and EVs in North Brooklin by removing barriers to entry on both the customer and Elexicon side of the connection point. Beyond North Brooklin, Elexicon will gain the experience required to facilitate broader deployment of DERs and EVs across its service area and optimize the operation of its distribution system long-term.

l) Yes, this is statement is correct.

DRAFT ACCOUNTING ORDER
ELEXICON ENERGY
EB-2022-0024
JANUARY 12, 2023

Elexicon shall establish three (3) new sub-accounts to record amounts associated with capital contributions received for the Project. These three (3) new accounts will capture capital contributions, associated carrying charges and amortization, as described below.

1) Account 1508 Other Regulatory Assets, Sub-account Deferred Revenue – Contributed Capital

This sub-account shall be used to record amounts received in contributed capital for the Project.

2) Account 1508 Other Regulatory Assets, Sub-account Deferred Revenue Carrying Charges

This sub-account shall be used to record carrying charges on *Account 1508 Other Regulatory Assets, Sub-account Deferred Revenue – Contributed Capital*. Carrying charges shall be calculated using simple interest applied to the opening balances in the account. The interest rate shall be the rate prescribed by the Board.

3) Account 1508 Other Regulatory Assets, Sub-account Deferred Revenue Amortization

This sub-account shall be used to record the amortization associated with the capital contribution amounts recorded *Account 1508 Other Regulatory Assets, Sub-account Deferred Revenue – Contributed Capital*.

The following outlines the accounting entries during the course of the Project as funding is received/receivable:

~~The following outlines the accounting entries in the year the Project assets are placed into service:~~

OEB # Description

Dr: 1110 Account Receivable/Cash
 Cr: 1508 Other Regulatory – Sub-account “Deferred Revenue – Contributed Capital”
To record the amount receivable/received in contributed capital for the Project.

Dr: 1525 Misc. Deferred Debits/Credits
 Cr: 1508 Other Regulatory - Sub-account "Deferred Revenue -Carrying Charges"
To record carrying charges on the contributed capital received for the Project.

The following outlines the accounting entries in the year the Project assets are placed into service and going forwards:

OEB # Description

Dr: 1508 Other Regulatory – Sub-account “Deferred Revenue – Contributed Capital”
 Cr: 1508 Other Regulatory - Sub-account "Deferred Revenue Amortization"
To record the amortization associated with contributed capital for the Project.

The following outlines the entries upon approval of the ICM included with Elexicon’s next Cost of Service rebasing application planned for 20293:

OEB # Description

Dr: 1508 Other Regulatory - Sub-account "Deferred Revenue -Carrying Charges"
 Cr: 1525 Misc. Deferred Debits/Credits
To reverse carrying charges, which would be included in a revenue requirement true-up, as approved.

Dr: 1508 Other Regulatory – Sub-account “Deferred Revenue – Contributed Capital”
 Cr: 2440 Deferred Revenue Liability
To transfer contributed capital for the Project to deferred revenue.

Dr: 1508 Other Regulatory - Sub-account "Deferred Revenue Amortization"
 Cr: 4245 Government and Other Assistance Directly Credited to Income
To transfer the amortization of deferred revenue to income.



Elexicon Energy Inc.

Answer to Interrogatory from

OEB Staff

Interrogatory STAFF-5:

2023 Capital Budget

Ref 1: Appendix B-1, Whitby Smart Grid Business Case, p. 57

- a) Please provide five years of historical capital expenditures by capital projects under the categories of General Plant, System Access, System Renewal, and System Service, including forecasted capital expenditures for 2022.
- b) Please provide an additional column showing the year-to-date capital expenditures for 2022 capital projects.
- c) Please provide a list of Elexicon Energy’s capital projects for 2023 and their associated costs.

Response: (UPDATED)

a)

Table 1 – Veridian Rate Zone 2018 to 2021 Plan and Actual Capital Spend and September 30, 2021 and September 30, 2022 Actuals

| Category | 2018 | | 2019 | | 2020 | | 2021 | | Sept 2021 YTD | 2022 | | Sept 2022 YTD |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|---------|--------|---------------|
| | Plan | Actual | Plan | Actual | Plan | Actual | Plan | Actual | Actual | Plan | Actual | |
| | VRZ | VRZ | VRZ | VRZ | VRZ | VRZ | VRZ | VRZ | VRZ | VRZ | VRZ | |
| System Access | 34,018 | 13,223 | 28,891 | 11,586 | 11,860 | 13,595 | 33,301 | 17,156 | 1,623 | 46,364 | 2,303 | |
| System Renewal | 10,117 | 10,846 | 9,885 | 17,810 | 8,298 | 9,917 | 11,404 | 14,912 | 1,523 | 12,218 | 1,689 | |
| System Service | 0 | 21 | 354 | 63 | 536 | 2,972 | 1,191 | 5,383 | 225 | 41,312 | 1,043 | |
| General Plant | 2,650 | 4,857 | 3,051 | 5,611 | 4,315 | 4,221 | 10,467 | 4,830 | 839 | 10,752 | 733 | |
| Total (Gross) | 46,785 | 28,948 | 42,182 | 35,070 | 25,009 | 30,705 | 56,363 | 42,281 | 4,210 | 110,646 | 5,768 | |
| Contributed Capital | 4,053 | 6,345 | 13,657 | 5,369 | 9,451 | 12,855 | 25,059 | 10,616 | 1,039 | 33,241 | 1,550 | |
| Total (Net) | 42,732 | 22,603 | 28,525 | 28,525 | 15,557 | 17,850 | 31,304 | 31,665 | 3,171 | 77,405 | 4,218 | |

Table 2 – Whitby Rate Zone 2018 to 2021 Plan and Actual Capital Spend and September 30, 2021 and September 30, 2022 Actuals

| Category | 2018 | 2018 | 2019 | 2019 | 2020 | 2020 | 2021 | 2021 | Sept 2021 YTD | 2022 | Sept 2022 YTD |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|--------|---------------|
| Plan | Plan | Actual | Plan | Actual | Plan | Actual | Plan | Actual | Actual | Plan | Actual |
| | WRZ | WRZ | WRZ | WRZ | WRZ | WRZ | WRZ | WRZ | WRZ | WRZ | WRZ |
| System Access | 6,930 | 2,132 | 14,276 | 14,794 | 10,087 | 10,694 | 11,380 | 8,857 | 617 | 13,929 | 735 |
| System Renewal | 7,347 | 7,032 | 3,275 | 9,189 | 4,865 | 3,249 | 8,264 | 5,669 | 1,343 | 2,998 | 483 |
| System Service | 2,840 | 476 | 152 | 1,035 | 784 | 199 | 227 | 3,740 | 0 | 3,916 | 611 |
| General Plant | 3,124 | 1,309 | 1,309 | 205 | 1,849 | 1,809 | 1,597 | 1,844 | 359 | 2,379 | 215 |
| Total (Gross) | 20,241 | 10,948 | 19,012 | 25,223 | 17,585 | 15,951 | 21,467 | 20,109 | 2,319 | 23,222 | 2,044 |
| Contributed Capital | 3,671 | 1,786 | 5,853 | 11,438 | 4,051 | 3,486 | 7,417 | 5,049 | 578 | 13,265 | 648 |
| Total (Net) | 16,570 | 9,162 | 13,159 | 13,159 | 13,535 | 12,465 | 14,051 | 15,060 | 1,741 | 9,957 | 1,395 |

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b) See response to part a, 2022 YTD.

c) Please see table below for listing of capital expenditures by sub-categories:

Table 3 – Capital Expenditure Listing for 2023

| Category & Programs | \$'000 |
|-------------------------------|-----------------|
| GENERAL PLANT | \$8,662 |
| P1-Facilities | \$650 |
| P2-Fleet | \$1,870 |
| P3-Information Technology | \$5,027 |
| P4-Tools & Equipment | \$115 |
| P5-Intangibles | \$1,000 |
| SYSTEM ACCESS | \$9,370 |
| A1-Road Relocation | \$2,701 |
| A2-Connection of New Services | \$5,305 |
| A3-Feeder Expansion | \$0 |
| A4-Metering | \$1,273 |
| A5-Customer Requested Work | \$91 |
| SYSTEM RENEWAL | \$14,727 |
| R1-Substation Renewal | \$7,460 |
| R2-Renewal Programs-Rebuilds | \$1,375 |



| Category & Programs | \$'000 |
|--|-----------------|
| R3-Renewal Programs-Poles | \$1,685 |
| R4-Renewal Programs-Distribution Transformers | \$885 |
| R5-Renewal Programs-Switches & Switchgears | \$678 |
| R6-Renewal Programs-Others | \$831 |
| R7-Renewal Programs-Reactive | \$1,813 |
| SYSTEM SERVICE | \$7,808 |
| S2-Substation Upgrades | \$30 |
| S3-Standard Equipment Reliability & Compliance | \$450 |
| S4-Feeder Enhancement | \$265 |
| S5-System Reliability Improvement | \$6,063 |
| A6-Substation Expansion | \$1,000 |
| S6-Voltage Conversion | \$0 |
| Grand Total | \$40,568 |

Elexicon Energy Inc.

Answer to Interrogatory from

OEB Staff

Interrogatory STAFF-7:

METSCO Feasibility Study – Volt/Var Optimization

Ref 1: Appendix B-1 – Whitby Smart Grid Business Case, pp. 12 and 45

Ref 2: Appendix B-5 – METSCO Feasibility Study Whitby SmartGrid VVO and DA

Elexicon Energy proposed \$39.1 million in VVO/CVR and FLISR/DA field hardware. This is intended to reduce losses and improve reliability. Elexicon Energy provided two alternatives, one was to complete the project in 2025 and the other was to complete the project in 2028.

- a) Please provide how much of the \$39.1 million is related to Volt/Var Optimization.
- b) One of the benefits of Volt/Var Optimization is energy savings. In reference 1 table 17, Elexicon Energy showed the maximum energy savings for 4 potential feeders. Please provide the expected yearly cost savings for the feeders included in the Whitby Smart Grid project over the next 20 years and provide the net present value.
- c) Compare the net present value in part b) with the Volt/Var Optimization project costs. If the net savings is below the project cost, please explain why Elexicon Energy has continued to pursue Volt/Var Optimization.
- d) The benefits of Volt/Var Optimization and equipment needed are per feeder. Please explain why the implementation of Volt/Var Optimization cannot be better paced over a longer timeline if the benefits can be realized one feeder at a time.
- e) Does Elexicon Energy intend to track and report on the reduction of losses and improvements to its reliability metrics? If yes, please provide the metric Elexicon Energy proposes to track. If not, why not.
- f) Please provide the NPV calculations Elexicon Energy used to justify that option 2 (2028 completion date) would be greater than option 1 (2025 completion date). Please omit the NRCan funding on both options and provide the assumptions used.

Response: (UPDATED)

a) \$12.7 million of the \$39.1 million is related to Volt/Var Optimization (excluding project management, engineering, and IT support costs).

b) The table below shows forecast energy cost savings from 2025 through 2044 assuming a 2% annual increase to the Cost of Power for the Whitby Rate Zone (WRZ). No assumptions have been incorporated to account for customer and load growth served by the existing WRZ system (which would be expected to increase the quantum of benefit) or load reductions due to conservation (which would be expected to decrease the quantum of benefit). The net present value of these energy savings over 20 years based on this analysis is \$57.7MM utilizing a 3% discount rate.

Table 1 – Forecasted Energy Cost Savings 2025 to 2044

| Year | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|
| Forecast Energy Savings (\$MM) | 3.26 | 3.32 | 3.39 | 3.46 | 3.52 | 3.59 | 3.67 | 3.74 | 3.81 | 3.89 |

| Year | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|
| Forecast Energy Savings (\$MM) | 3.97 | 4.05 | 4.13 | 4.21 | 4.30 | 4.38 | 4.47 | 4.56 | 4.65 | 4.74 |

c) While the \$12.7 million cost of the Whitby Smart Grid does not include project management, engineering and IT support costs, the \$57.7MM in 20-year net present value energy savings well exceeds the capital cost.

d) See response to Staff 8 part e) and f).

e) Reliability is tracked in the OEB Scorecard on an annual basis, and improvements to reliability metrics will demonstrate themselves in this reporting. Elexicon expects efforts to accurately assigned metric improvements to the Whitby Smart Grid may be challenged to achieve precision, as differentials must inherently be established in comparison to a baseline that did not happen (i.e. a scenario in which the Whitby Smart Grid was not undertaken). Elexicon will be responsive to the OEB’s Decision and Order should it include guidance or conditions with respect to reporting on these matters.

f) The NRCan funding has been omitted from both options and the following assumptions have been used:

- Average yearly inflation factor of 2% was used from 2025 onwards as Bank of Canada predicts the average yearly inflation to decline back to 2% from 2025. Similarly, the inflation is predicted to reach around 3% by the end of 2023. As such, 3% factor was used to calculate the inflation for 2024.

- Discount Rate of 3% and 5% assumed to reflect likely project cost scenarios for Option 2.
 Elexicon's 2019 Discount Rate of 3.2% was also considered when deciding on three different discount rate scenarios (3%, 5%, 8%)

Option 1 (2025 completion date)

The capital project costs (\$'000) were estimated as follows:

Table 2 – Capital Project Costs for Option 1

| | |
|--------------------------------------|------------------|
| Smart Grid Field Hardware Costs | \$ 39,130 |
| ADMS Costs | \$ 8,082 |
| Total Capital Cost of Project | \$ 47,212 |

With the above stated assumptions, the following NPV was calculated.

To calculate the cash profile, the total project cost of \$47,212,000 was divided by three years and then adjusted for inflation.

Table 3 – Cash Flow Profile for Option 1

| Cash Profile | 2023 | 2024 | 2025 | Total |
|--------------|----------|----------|----------|---------------|
| | (\$'000) | (\$'000) | (\$'000) | (\$'000) |
| CPI Adjusted | 15,737 | 16,209 | 16,534 | 48,480 |

Project NPV

Three discount rate scenarios were explored – at 3%, 5% and 8%.

Table 4 – NPV for Various Discount Rates for Option 1

| Cash Flow Profile | Total Cost | NPV at 3% | NPV at 5% | NPV at 8% |
|-------------------|---------------|---------------|---------------|---------------|
| | (\$'000) | (\$'000) | (\$'000) | (\$'000) |
| CPI Adjusted | 48,480 | 45,689 | 43,973 | 41,594 |

Option 2 (2028 completion date)

To calculate the cash profile, the total project cost of \$ 50,045,989.73 was divided by six years and then adjusted for inflation. 7U

Table 5 – Cash Flow Profile for Option 2

| Cash Profile | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | <i>(\$'000)</i> | <i>(\$'000)</i> | <i>(\$'000)</i> | <i>(\$'000)</i> | <i>(\$'000)</i> | <i>(\$'000)</i> | <i>(\$'000)</i> |
| CPI Adjustment | 7,869 | 8,105 | 8,267 | 8,432 | 8,601 | 8,773 | 50,046 |

Project NPV

Three discount rate scenarios were explored – at 3%, 5% and 8%.

Table 6 – NPV for Various Discount Rates for Option 2

| Cash Flow Profile | Total Cost | NPV at 3% | NPV at 5% | NPV at 8% |
|--------------------------|-------------------|------------------|------------------|------------------|
| CPI Adjusted | 50,046 | 45,689 | 43,973 | 41,594 |

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Elexicon Energy Inc.

Answer to Interrogatory from
Vulnerable Energy Consumers Coalition

Interrogatory VECC-15:

Ref: Appendix B-1 - Whitby Smart Grid Business Case P57 Table 27 provides the Whitby Smart Grid Percentage of Current Forecast Capital Expenditure by OEB Category. Please recast the table to reflect dollar amounts.

Response: **UPDATED**

UPDATED Table 27: Whitby Smart Grid Percentage of Current Forecast Capital Expenditure by OEB Category

| OEB Category | Percentage of current approved capital spend | | | | | | |
|----------------|--|------|------|------|------|------|---------|
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Average |
| CPI Adjusted | | | | | | | |
| GENERAL PLANT | 91% | 186% | 221% | 185% | 108% | 146% | 156% |
| SYSTEM ACCESS | 84% | 93% | 81% | 76% | 66% | 67% | 78% |
| SYSTEM RENEWAL | 53% | 59% | 45% | 51% | 54% | 49% | 52% |
| SYSTEM SERVICE | 101% | 89% | 164% | 272% | 287% | 439% | 225% |
| Total | 19% | 22% | 22% | 24% | 22% | 22% | 22% |

Table 27 Recast: Whitby Smart Grid Percentage of Current Forecast Capital Expenditure by OEB Category Recast to Reflect Dollar Amounts

| OEB Category | \$'000 | | | | | | |
|----------------|--------|-------|-------|-------|-------|-------|---------|
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Average |
| CPI Adjusted | | | | | | | |
| GENERAL PLANT | 7,882 | 8,119 | 8,281 | 8,410 | 8,640 | 8,760 | 8,349 |
| SYSTEM ACCESS | 7,871 | 8,076 | 8,261 | 8,465 | 8,580 | 8,710 | 8,327 |
| SYSTEM RENEWAL | 7,805 | 8,154 | 8,188 | 8,402 | 8,640 | 8,820 | 8,335 |
| SYSTEM SERVICE | 7,886 | 8,149 | 8,254 | 8,440 | 8,610 | 8,780 | 8,353 |
| Total | 7,708 | 7,926 | 8,178 | 8,463 | 8,580 | 8,580 | 8,239 |