EB-2022-0024

IN THE MATTER OF the Ontario Energy Board Act, 1998, Schedule B to the Energy Competition Act, 1998, S.O. 1998, c.15;

AND IN THE MATTER OF an Application by Elexicon Energy Inc under Section 78 of the Act for an order approving just and reasonable rates and other charges for electricity distribution to be effective January 1, 2023, and January 1, 2025.

Submissions of the Power Workers' Union

1. The following are the Power Workers' Union's ("PWU") submissions on Elexicon Energy Inc.'s ("Elexicon") 2023 IRM application with respect to Phase 2 of the application as bifurcated in Procedural Order No. 2. Phase 2 of the application deals with three ICM requests:

   a. Incremental Capital Module ("ICM") funding in 2025 of $36.739 million for the Whitby Smart Grid Project, including a proportionate share of Advanced Distribution Management System and Supervisory Control and Data Acquisition costs, in the Whitby Rate Zone ("WRZ");

   b. ICM funding in 2025 of $6.432 million for a proportionate share of the ADMS and SCADA costs of the WSG, in the Veridian Rate Zone ("VRZ"); and

   c. ICM funding in 2025 of $26.657 million for the Sustainable Brooklin Project in the WRZ together with an exemption for the Brooklin Line from Section 3.2 of the Distribution System Code ("DSC").

2. The PWU submits that Elexicon has not reasonably justified ICM relief for either the Whitby Smart Grid Project or the Sustainable Brooklin Project and therefore neither ICM should be approved by the Board. Further, had Elexicon's evidence supported the need and prudence of the Sustainable Brooklin Project – which the PWU denies – its

application does not support the exceptional request a Distribution System Code exemption.

Whitby Smart Grid

3. Elexicon's business case for the Whitby Smart Grid does not adequately support the investment for Elexicon ratepayers. The capital cost of $43.2 million[1] and ongoing operations costs of $324 thousand[2] are justified only with the most optimistic assumptions and outdated assumptions of reliability benefits.

4. Elexicon's evidence cites research studies that have projected cost of power savings of 1.5-3% from Volt-Var Optimization.[3] Despite this range, each of Elexicon's calculations of customer benefits use the higher bookend of 3%. The latest overall annual benefits are provided in the following table.[4]

Updated Table 1 – Annual Net Benefit of WSG to WRZ Customers

Table 1 – Annual Net Benefit of WSG to WRZ Customers

Customer Annual Benefit Summary		
(All Dollars Listed in Thousands CAD)		
2022 Cost of Power (WRZ)	$	112,198
Projected % Energy Savings from WSG		3.00%
Total Purchased Power Savings from WSG (A)	$	3,366
ICM Additional Revenue (B)	$	4,477
Additional OM&A Expenses (C)	$	324
Operating Efficiencies from WSG (D)	$	48
Sub-Total of Savings (E = A-B-C+D)	$	(1,387)
Projected VoLL Benefit from Reliability (F)	$	1,820
Annual Net Benefit to WSG Customers (G = E+F)	$	433

[1] Appendix B-1 – Whitby Smart Grid Business Case, page 12 of 67
[2] JT1.22, Additional OM&A Expense, page 2 of 3
[3] Appendix B-1 – Whitby Smart Grid Business Case, page 33 of 67
[4] JT1.22, page 2 of 3

5. Essentially, even on the most optimistic assumption for energy savings of 3%, the annual net benefit is only $433,000. This leaves very little margin for variance: at the bottom end of the savings range, 1.5%, the annual net benefit is *negative* $1,250,000. At the midpoint of 2.25%, the annual net benefit is *negative* $689,000.

6. The following table summarizes these figures, which demonstrates that the most likely scenario is that this project will provide a negative net benefit to Whitby ratepayers (all dollars listed are in thousands of CAD).

Cost of Power %	**3.00%**	**1.50%**	**2.25%**
Cost of Power Savings (+)	$3,366	$1,683	$2,244
ICM Revenue (-)	$4,477	$4,477	$4,477
Additional OM&A (-)	$324	$324	$324
Operating Efficiencies (+)	$48	$48	$48
Value of Lost Load (+)	$1,820	$1,820	$1,820
Annual Net Benefit	$433	-$1,250	-$689

7. The other major benefit described by Elexicon is the increase in the Value of Lost Load, or VoLL. The VoLL is calculated based on a 2015 Lawrence Berkley National Laboratory study[5] which attributes a dollar value to each hour of an outage for different types of customers. A summary of the VoLL benefit is provided in the table below.[6]

	Cost/Customer per 1hr outage	**GDP-IPI Escalation: Q1 2016 to Q1 2022**	**SAIDI Reductions**	**Cost/Customer per 0.58 hr outage**	**Customers**	**Reliability Benefit**
Residential	$ 6.5	$ 7.3	0.58	$ 4.2	43,441	$ 183,970.0
GS <1 MW	$ 826.0	$ 927.9	0.58	$ 538.2	2,737	$ 1,472,951.9
GS >1MW	$ 22,737.0	$ 25,541.1	0.58	$ 14,813.8	11	$ 162,952.0
					Total Benefit	**$ 1,819,874**

8. Though the PWU supports efforts to quantify the value of outages to customers, this study is out of date and does not reflect Ontario ratepayers' experiences.

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[5] VECC-2, page 2 of 3

[6] Ibid

9. In its Argument in Chief, Elexicon provided a 27-year NPV Benefit Summary table which shows a higher level of benefits for the project in relation to VoLL.[7]

Customer 27yr NPV Benefit Summary (5% Discount)		
(All Dollars Listed in Thousands CAD)		
Total Purchased Power Savings from WSG	$	58,910
ICM Additional Revenue	$	46,937
Additional OM&A Expenses	$	5,857
Operating Efficiencies from WSG	$	741
Sub-Total of Savings	$	6,857
Projected VoLL Benefit from Reliability	$	32,928
NPV of Net Benefits (27 years) to WSG Customers	$	39,785

10. This table does not provide an accurate picture of customer benefits over the lifetime of this project because it uses outdated cost of capital parameters. Elexicon declined to update those parameters in subsequent versions of this table, on the basis of direction in the OEB's ICM policy to use the most recently approved cost of capital parameters.[8] Elexicon's reliance on the ICM policy in this context was unjustified. That policy concerns the cost of capital parameters used within the ICM Model. It does not preclude the use of current cost of capital parameters to be used in NPV calculations in the cost-benefit analysis. Ultimately, the VoLL benefits forecasted by Elexicon in the above table are unreliable and should be discounted.

Sustainable Brooklyn

a. The proposal is not an appropriate use of the Board's discretion

11. Fundamentally, the Sustainable Brooklin project is an attempt by Elexicon and/or the Brooklin Landowners Group to accomplish indirectly what they cannot accomplish directly under the existing regulatory and policy framework.

[7] AIC, page 4 (reproduced from JT1.5)
[8] JT1.22, page 1 of 3

12. Specifically, the use of public funds to subsidize the construction of rough-ins in new homes is not something that is contemplated by the DSC or any other source of regulatory policy.

13. If there were a valid public policy imperative in favour of the construction of DER rough-ins in the province, it would find expression either in a specific governmental subsidy or in a specific policy in the DSC. No such program or policy exists.

14. In this context, the Sustainable Brooklin project is essentially an effort to achieve policymaking through *ad hoc* discretion in the absence of any actual policy or program in favour of the rough-ins in question.

15. This is not an appropriate manner in which to pursue the proposed subsidies.

b. Sustainable Brooklin is not in the interest of ratepayers

16. The current Methodology and Assumptions for An Economic Evaluation (Appendix B) has been in place since October 21, 2009. This methodology was established to evaluate whether future revenues from new customers are sufficient to pay for the capital cost and on-going maintenance costs of the expansion project. The economic evaluation is necessary to ensure new customers do not cause undue rate increases to existing ratepayers.

17. This methodology does not include factors unrelated to project costs or revenues. The hypothetical savings of retrofits on houses that have not yet been built are not, and should not, be a consideration. Even if Elexicon had made a reasonable attempt to quantify the benefits of this project – which the PWU denies – it would still be inappropriate for Elexicon to take those benefits into account in its evaluation.

18. The benefits Elexicon describes in its evidence are potential avoided costs that are not certain to materialize. The IESO's Ontario DER Potential Study describes the limited system benefit of residential behind-the-meter ("BTM") solar generation, stating "deployed BTM solar capacity is only expected to contribute 50 to 246 MW towards capacity needs due to low - and declining - coincidence with system peak for new solar

additions."[9] The study goes on to say there is a "lack of a solid business case" for behind-the-meter storage.[10]

19. Notably, the modest level of costs that could be avoided if future ratepayers install DERs are costs that are not included in the project costs within the economic evaluation. Elexicon's position appears to be that this project will cause costs for existing ratepayers, and existing ratepayers should pay now to mitigate those future costs.

20. It is clear that Elexicon did not adequately consider the impact of this project on its existing ratepayers. Elexicon did not conduct any customer consultation on this project, or specifically for the ICM funding that would impact customer bills.

21. As part of the Sustainable Brooklin business case, Elexicon provided an evaluation of the project alternatives.[11] One alternative was to proceed with the project without ICM funding. The project cost was listed as $26.6 million for each of the scenarios with ICM funding and without ICM funding.[12] This evaluation of the alternatives ignored the fact that the project with ICM funding would require $26.6 million to be recovered from Whitby ratepayers while the project without ICM funding would not. It is clear from Elexicon's reasons for rejecting the "without ICM" option that it did not consider revenue requirement or bill impacts at all:[13]

> **"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 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, 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."**

22. This is circular reasoning. The developers have acknowledged that the only reason they proposed the rough-ins in the first place was in an effort to avoid the capital

[9] PWU Compendium, page 34 (excerpt from *Ontario's Distributed Energy Resources (DER) Potential Study - Volume I: Results & Recommendation*s, September 28, 2022)
[10] Ibid
[11] Appendix B-1 – Whitby Smart Grid Business Case, pages 18 to 37 of 37
[12] The project without funding was in fact assigned a cost of $35.5 million, which was corrected to $26.6 million in Staff-32.
[13] Appendix B Page 42 of 56

contribution requirement. It is illogical to argue that the exemption is required purely in order to ensure the construction of the rough-ins. That reasoning assumes the conclusion to the core question in issue: as a matter of overall policy tradeoffs, does the construction of rough-ins justify the capital exemption?

23. In any event, it is not clear why ratepayers should be expected to pay anything for the Sustainable Brooklin line, let alone 100 cents on the dollar. Elexicon did not provide any analysis that the benefit to ratepayers would be aligned with the ICM costs. Hypothetically, an ICM request for an amount in proportion to the proposed benefits could be justifiable. However, Elexicon did not consider this option and made no effort to negotiate a better deal for its ratepayers, as confirmed in the following exchange during the oral hearing.[14]

> **MR. ROSENBLUTH: … so we know that the expected cost of installing the rough-ins was specifically forecasted to be about $23 million, right?**
>
> **MR. VETSIS: And it varies based on the units, but I think it was a range of 23 to 30.**
>
> **MR. ROSENBLUTH: Sure, and the amount of the capital exemption being sought is about 26 million?**
>
> **MR. VETSIS: 26.6, correct.**
>
> **MR. ROSENBLUTH: So if we just take the 23 as the cost as an illustrative number, even in terms of the spread there, between the cost to the landowners and the value of the exemption, like that 3 million differential, there wasn't -- you can't say to what extent Elexicon pushed the landowners to shoulder that portion of the cost; that didn't happen?**
>
> **MR. VETSIS: I'm not aware. I'm not aware.**
>
> **MR. ROSENBLUTH: Mr. Mandyam, I take it you're not aware either?**
>
> **MR. MANDYAM: Yeah, no.**
>
> **MR. ROSENBLUTH: So as far as you know, that did not happen?**
>
> **MR. MANDYAM: I don't know either way.**
>
> **MR. ROSENBLUTH: Okay. So you don't have any knowledge of that happening; I think that's what you're telling me.**
>
> **MR. MANDYAM: Yeah. That's correct; I don't have any knowledge.**

[14] Oral Hearing Transcript Vol. 2 - April 3, 2023, pages 95 to 97 of 188

MR. ROSENBLUTH: And I take it there is no one else on this panel who does?

MR. VETSIS: That is correct.

MR. ROSENBLUTH: Okay. So there is really no effort made by Elexicon to seek any increase or any agreement on the landowners' part to shoulder any portion of that $26 million exemption?

MR. VETSIS: Again, what we have here, Mr. Rosenbluth, is sort of a quid pro quo proposal which manages many different challenges.

We spoke to the challenge of the specific circumstances of this development, and we also spoke to the benefit of the system of having a DER-enabled community. A specific parameter, to my knowledge, was not to equate the two dollar values, though they do happen to be relatively in the same ballpark.

MR. ROSENBLUTH: And that's fine, and there may have been reasons for it, et cetera.

I'm just asking a factual question, which is -- and I think I hear what the answer is, but I want to be clear. I think that what you're saying is there was no effort made to seek any contribution by the landowners towards the cost of that capital exemption. May have had reasons for doing that, but that is what Elexicon did. It chose not to do that, right?

MR. MANDYAM: I think that my understanding is the discussion started with 100 percent capital contribution and they morphed into the quid pro quo or the innovative solution that we have here. The developers know that -- the Brooklin Landowners Group know that, if the board does not approve this application, they will be paying $26.6 million.

24. Fundamentally, Elexicon's decision to seek such a large exemption for the developer group – rather than relief more appropriately tailored to the actual benefits of the proposed rough-ins, which are tenuous – remains unexplained and unjustified.

25. Further, the benefit of supporting DER and EV ready homes is set out in METSCO's load forecast.[15] The financial benefit to Elexicon and the customers in its Whitby rate zone is a potential deferral of a new transmission station that would cost approximately $40 million in present dollars. Notably, the quantified benefit is not mentioned in Elexicon's evaluation of project alternatives or anywhere else in its own written evidence. METSCO states the "benefit of deferring the new TS ranges from $0.39

[15] Appendix B-4, METSCO Elexicon Energy 2022-2041 Peak Load Forecast, page 29 of 35

million to $9.94 million depending on the deferral period (one to five years) and discount rate (3% to 8%)."

26. The low level of project benefits relative to the cost was explored further in the following exchange with Board Staff:[16]

> **MR. MARTIN-STURMEY: Yes. So, to clarify, as stated, the one-year deferral is 2038 to 2039, the three-year deferral is 2038 to 2041, and the five-year deferral is 2038 to 2043.**
>
> **MS. DJURDJEVIC: So if you are starting at 2038 and looking at one-year deferral back, so you are talking about a $390,000 avoided cost 25 years from now.**
>
> **Again -- and I don't know if -- I'm sure you don't have an answer off the top of your head. I certainly don't.**
>
> **But isn't that a relatively trivial amount of savings, you know, compared to $26 million in 2024 or 2025?**
>
> **MR. MARTIN-STURMEY: Apologies, what do you mean by "relatively trivial"?**
>
> **MS. DJURDJEVIC: Well, your response is that the value -- the net present value of a one-year deferral -- so, you know, you won't need to put that transmission station in 2038. It is deferred by a year. And the value of that is $390,000, if I'm understanding this correctly.**
>
> **My question is, you know, how that compares to a $26 million expenditure on the Brooklin line in today's dollars? It just, it doesn't seem like a lot of money.**
>
> **That's why I'm asking, like, how is that -- what's your understanding -- your rationale? Why does this make sense?**
>
> **MR. VETSIS: Sorry, I'm misunderstanding, Ms. Djurdjevic. This is about deferring a transmission station which costs $40 million. That 300,000 is just the discounting the value of that tremendous investment back a significant number of years.**
>
> **MS. DJURDJEVIC: When -- okay. You know, I'm going to leave this at this point. I think the evidence on the record is what it is, and I'll move on.**

27. Evaluated against a $26.6 million cost to Elexicon and its ratepayers, it is clear that costs outweigh the benefits. However, this comparison is distorted by the timeframe used to calculate the NPV of benefits. The calculation of the range in benefits is described in

[16] Oral Hearing Transcript Vol. 2 - April 3, 2023, pages 157 to 159 of 188

response to a Board Staff interrogatory[17] and further clarified in the oral hearing in the following exchange with Board Commissioner Duff:[18]

> **MR. MARTIN-STURMEY: … So, when we talk about a 1-, 3-, 5-year deferral, it's in relation to that capacity for those numbers of houses built in 2038. That's when the system is projected to exceed the capacity.**
>
> **MS. DUFF: So 2038 is, like, times zero, then, for that? That's the year that I that I would be deferring --**
>
> **MR. MARTIN-STURMEY: So, in the context of doing a calculation of benefits of deferring capital, the year zero would be 2038.**

28. Using a year zero of 2038 means the \$0.39 million to \$9.94 million benefit is not discounted to the current time frame whereas the cost, \$26.6 million, is being incurred now. The discount rate is greater than the rate of inflation, so the NPV of the benefits in current dollars would be less than \$0.39 million to \$9.94 million. Though at first glance costs appear to exceed benefits by \$16.66 million to \$26.21 million, an apples-to-apples NPV calculation would show an even larger difference between costs and benefits.

29. The PWU submits that the ICM request for the Sustainable Brooklin project should not be approved. A project with “trivial” benefits relative to the costs is not justifiable. This ICM quid pro quo that would result in Whitby ratepayers covering Sustainable Brooklin’s expansion costs cannot result in just and reasonable rates.

All of which is respectfully submitted.

[17] Staff-19, part c)

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