



Filed: February 16, 2024

Application

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c.15, 3 Schedule B, as amended (the "OEB Act");
AND IN THE MATTER OF an Application by Essex Powerlines Corporation under Section 78 of the OEB Act to the Ontario Energy Board for an Order or Orders approving or fixing just and reasonable rates and other service charges for the distribution of electricity.

Essex Powerlines Corporation
(the "Applicant" or "EPLC").

APPLICATION FOR NEW DEFERRAL ACCOUNT

Filed: February 16, 2024

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1 The purpose of this Application is to request permission from the Ontario Energy Board (“OEB”) for Essex
2 Powerlines Corporation (“EPLC”) to establish a new deferral account, and sub-accounts pursuant to
3 Section 78 of the *Ontario Energy Board Act, 1998* (the “OEB Act”). EPLC seeks a Delegated Authority
4 decision on this matter as described under Item 1 of the *Delegated Powers and Duties*¹, described as, “to
5 issue accounting orders for deferral and variance accounts (DVAs) approved by the OEB where no
6 accounting orders were issued at the time of approval of the DVAs” and specifically as described as “a DVA
7 established by the OEB for a specific regulated entity”.

8 This account shall be used to accrue commodity costs that exceed the cost of power for any kWh procured
9 by EPLC through the Distributor’s *Powershare* Project and disposition will be sought based on the guidance
10 provided in the Conservation and Demand Management Guidelines for Electricity Distributors.²

11 12 Background

13 EPLC was a successful applicant in response to the Independent Electricity System Operator (IESO)/Ontario
14 Energy Board (OEB) Joint Targeted Call (JTC) for innovative projects focused on deriving value from
15 distributed energy resources (DER). On March 7, 2022 EPLC was advised that its proposed project, “Essex
16 Powerlines DSO Pilot Project” (Powershare), was successful in qualifying for funding through the IESO’s
17 Grid Innovation Fund and support from the OEB Innovation Sandbox.

18 Further regulatory guidance was provided by the OEB to EPLC by way of letter dated May 31, 2022; more
19 specifically, that the “activities proposed in connection with Pilot project can be considered distribution
20 activities within the meaning of s. 71(1) of the *Ontario Energy Board Act, 1998*.”³

21 The “Essex Powerlines DSO Pilot Project” is aimed primarily at alleviating known constraints on the
22 distribution system as they currently exist in the Leamington service Area, which has a high concentration
23 of greenhouses that represent a significant load.

24 Included in the scope of the pilot project and associated funding are proposed payments to local DER
25 owners for power procured to address local constraints. The pilot project budget estimated that EPLC
26 would pay up to \$300.00/MW for up to 5,000 MW of electricity over the course of 2 project phases
27 spanning approximately 24 months. Alternatively, through project activities, and with a similar aim, EPLC
28 may pay large users of power to curtail load to also alleviate constraints. Additionally, the project budget
29 recognizes that amounts paid for procuring power (or to achieve curtailment) will be 50% offset through
30 project funding.

31 EPLC is requesting a start date of February 19, 2024 and an end date of March 31, 2026 for the new
32 variance account. This request is not being made as part of EPLC’s upcoming Cost of Service Application
33 as the project is currently underway and will be running before that rebasing application is submitted
34 and effective.

¹ OEB, Delegated Powers and Duties – Rates, [DELEGATED POWERS AND DUTIES - RATES \(oeb.ca\)](https://www.oeb.ca/delegated-powers-and-duties-rates).

² Conservation and Demand Management Guidelines for Electricity Distributors, EB-2021-0106, [Conservation and Demand Management Guidelines for Electricity Distributors \(Dec 20, 2021\) \(oeb.ca\)](https://www.oeb.ca/conservation-and-demand-management-guidelines-for-electricity-distributors-dec-20-2021)

³ OEB Letter May 31, 2022, attached herein as Appendix A.

1 Eligibility Criteria

2 The OEB's Chapter 2 Filing Requirements for electricity distributors include requirements where a new
3 variance account is requested.⁴ Where an applicant seeks an accounting order to establish a new
4 variance account, the request must be accompanied by evidence demonstrating how the following
5 eligibility criteria will be met:

6 *Causation:* Amounts should be directly related to the activity. The amount must be clearly outside of the
7 base upon which rates were derived.

8 Costs that will be incurred, that are greater than the cost of power will be directly the result of EPLC's
9 engagement in the pilot project; and only amounts that are paid to project participants to procure
10 capacity and electricity, that exceed the price at which electricity could be purchased from the IESO
11 (HOEP) and net of the 50% project funding will be considered for recovery and inclusion in this deferral
12 account. These costs have not been contemplated in the established rates of EPLC.

13 *Materiality:* The amounts must exceed the Board-defined materiality threshold and have a significant
14 influence on the operation of the distributor; otherwise they should be expensed in the normal course
15 and addressed through organizational productivity improvements.

16 The materiality threshold applicable to EPLC is 0.5% of distribution revenue requirement, which is the
17 threshold applicable to distributors with a revenue requirement greater than \$10M and less than or
18 equal to \$200M. As such, EPLC's materiality threshold is \$62,126; equal to 0.5% of its distribution
19 revenue requirement of \$12,425,160.

20 EPLC's proposal is that materiality of this account be assessed once over entire 24-month pilot project.

21 Included in the pilot project budget and anticipated activities is operation of a local energy market and
22 through that market, the procurement of up to 5,000 MW of electricity. The cost of that electricity, that
23 exceeds HOEP and net of project funding is estimated to be up to \$554,525; which exceeds EPLC's
24 materiality threshold.

25 The pilot project intends to test the concept of non-wires alternatives (NWA) incentive concepts and
26 evaluate how these may affect market outcomes, including participation levels and price discovery. To
27 achieve these outcomes the project is planned to make payments to DER owners in 2 ways, for capacity
28 and for energy.

29 During the pilot project, EPLC intends to contract up to 7,500 MWh of capacity, and that capacity will be
30 secured at approximately 14% of the maximum \$300/MWh. These payments will be offset 50% by
31 funding through the project.

32 When that capacity is activated, project participants will be paid for energy at a rate that is contracted in
33 the market platform based on signals of location, quantity and price. Energy will be purchased at rates
34 budgeted not to exceed the remaining 86% of the maximum \$300/MWh. These payments will also be
35 offset 50% by project funding, and any balance after the 50% funding that exceeds HOEP shall be
36 considered for recovery.

⁴ Filing Requirements for Electricity Distribution Applications, section 2.9.2, page 66.

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		Quantity	
	\$/MWh	MWh	Total
Estimated Local Capacity Cost (\$/MWh)	\$ 39.90	7,500	\$ 299,250.00
Estimated 50% IESO Funding (\$/MWh)	-\$ 19.95	7,500	\$ 149,625.00
Estimated Local Capacity LDC Portion (\$/MWh)	\$ 19.95	7,500	\$ 149,625.00
Estimated Local Energy Cost (\$/MWh)	\$ 239.40	5,000	\$ 1,197,000.00
Estimated 50% IESO Funding (\$/MWh)	-\$ 119.70	5,000	-\$ 598,500.00
Estimated Local Energy LDC Portion (\$/MWh)	\$ 119.70	5,000	\$ 598,500.00
Estimated Average HOEP (\$/MWh)	-\$ 38.72	5,000	\$ 193,600.00
Estimated Local Energy Difference (\$/MWh)	\$ 80.98	5,000	\$ 404,900.00
Maximum Capacity & Energy Costs			\$ 1,496,250.00
Maximum 50% IESO Funding			-\$ 748,125.00
Estimated Avg. HOEP for Max Capacity & Energy			-\$ 193,600.00
Estimated Max Costs, Less funding and HOEP			\$ 554,525.00

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4 The pilot project will operate in 2 phases over a period of approximately 21 months of active market
5 operations. Estimates in the project include activations daily as needed to meet actual constraints.

6 EPLC requests one sub-account to track local capacity cost (net of funding) and a separate sub-account
7 to track local energy cost (net of funding and HOEP).

8 *Prudence:* The amount must have been prudently incurred. This means that the distributor's decision to
9 incur the amount must represent the most cost-effective option (not necessarily least initial cost) for
10 ratepayers.

11 These costs will be incurred prudently in support of both near- and long-term goals. The near-term
12 intention is to demonstrate the reliability, availability, and fitness of locally-sourced energy to address
13 known distribution/transmission-level constraints. In the mid- and long-term, this project will contribute
14 to the exploration of mitigating the constraints that are expected to materialize in diverse regions and
15 across Ontario. Learnings from PowerShare will also further the understanding of local energy markets
16 and their application in capital deferral, which is expected to continue to be a major element of the
17 benefit-cost analyses of non-wire alternatives.

18 Trading in the market for either capacity or energy will be managed in a software platform through which
19 EPLC can present bids to signal a capacity requirement or to activate that energy offer. In either
20 instance, a contract will be achieved based on parameters of location, price and quantity (in that order).
21 Location is respected by hierarchical orderbooks or 'zones' in the platform which house DERs respecting
22 their physical location on the distribution grid, ensuring that bids are not matched with offers that
23 cannot physically deliver for the need. Price is determined 'as-bid' and matched beginning at the lowest

1 price offer, up to the maximum set by EPLC in a bid. Quantity is flexible, as bids and offers may be
2 partially filled.

3 The pilot project will incur costs for payments to local DER owners with the goals of first operating a local
4 energy market, second addressing feeder constraints' threat to reliability as they currently exist, and
5 third to interpret price signals from the wholesale market as demand signals with the goal of imitating
6 wholesale market integration. All of these activities are geared at permitting EPLC to gain a deep
7 understanding of how local resources can be leveraged as one part of the evolution of the distribution
8 system and ultimately aim to improve reliability and alleviate concerns over the availability of adequate
9 resources in the future.

10

11 Disposition

12 In consideration of the planned learnings from this pilot project, the inherent development of
13 capabilities at the distribution level, plus engagement with DER owners to demonstrate the feasibility
14 and capability of a local energy market to address constraints, EPLC believes that there is no adverse
15 effect to market outcomes overall and that costs incurred for procurement of capacity and energy should
16 be recoverable. Ultimately, this work is foundational to testing the concept of NWA incentive payments
17 as one method of unlocking local supply options and will provide a future benefit to customers as the
18 market evolves. That benefit could be realized through increased reliability and a deferral of
19 infrastructure investments to support increased demand.

20 EPLC plans to accrue amounts in this account for later prudence assessment and disposition.

21 EPLC additionally requests permission to submit a reconciling adjustment to the DVA balance should the
22 proposed 50% recovery through pilot funding not be precise and there be some residual balance at the
23 time of disposition.

24 Subsequent post-project activity related to recovery of NWA incentive payments made to DER owners,
25 recording and recovery of those payments is not addressed herein to permit the IESO's long term
26 planning processes and the policy landscape to contemplate system needs and the potential benefits
27 and implications of leveraging DERs. Assessment of the ongoing need for a deferral account will be
28 conducted by EPLC nearer to the conclusion of the pilot project and, if required by EPLC, continued
29 approved use of the deferral account and appropriate and available incentive mechanisms post-project
30 will be requested in order to formalize project activities into the day-to-day distribution activities of
31 EPLC.

32 It is proposed that interest amounts shall be calculated and recorded in a separate approved sub-
33 account of this account, at the rate prescribed by the Board.

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2 Accounting Treatment

3 EPLC proposes the following accounting:

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5 Local Capacity Payments

6 Example: A DER owner commits to make 2MWh/day of flexibility available to EPLC for a period of 5 days.

7 The contracted price is \$39.90/MWh.

8 The total payment to the DER owner for that commitment period is $\$39.90 \times 2 \text{ MWh/day} \times 5 \text{ days} =$

9 \$399.00.

10 Accounting Entries

11	1.	DR 4705 – Expense Account	\$399.00	
12		CR 2200 – Accounts Payable		\$399.00
13		~to record payment to DER owner		
14				
15	2.	DR 1100 – Accounts Receivable	\$199.50	
16		CR – 4705 – Expense Account		\$199.50
17		~to record recovery of 50% through project funding		
18				
19	3.	DR 150X – new DVA	\$199.50	
20		CR – 4705 – Expense Account		\$199.50
21		~to move balance to DVA account		

22

23 Local Energy Payments24 Example: A DER owner who has contracted capacity into the local energy market is activated to supply
25 energy. EPLC activates the DER owner to deliver 4 MWh of energy. The contracted price is

26 \$239.40/MWh.

27 The total payment to the DER owner for that energy is $\$239.40 \times 4 \text{ MWh} = \957.60 . HOEP in each of
28 those 4 hours was \$38.72/MWh. Therefore if that same energy were purchased through the IESO
29 wholesale market it would have cost $\$38.72 \times 4 = \154.88 .30 Accounting Entries

31	1.	DR 4705 – Cost of Power	\$957.60	
32		CR 2200 – Accounts Payable		\$957.60
33		~to record payment to DER owner		
34				
35	2.	DR 1100 – Accounts Receivable	\$478.80	
36		CR – 4705 – Cost of Power		\$478.80

~to record recovery of 50% through project funding

3.	DR 150X – new DVA	\$323.92	
	CR – 4705 – Cost of Power		\$323.92

~to recognize HOEP on local energy purchase and move balance to DVA account

Local Curtailment Payments

Example: A participant who has contracted curtailment in the local energy market is activated to reduce load. EPLC activates the participant to reduce their load by 2 MW/h over a 2-hour period. The contracted price is \$239.40/MWh.

The total payment to the participant for that curtailment is $\$239.40 \times 2 \text{ MWh} \times 2 \text{ hours} = \957.60 .

Accounting Entries

1.	DR 4705 – Cost of Power	\$957.60	
	CR 2200 – Accounts Payable		\$957.60

~to record payment to participant

2.	DR 1100 – Accounts Receivable	\$478.80	
	CR – 4705 – Cost of Power		\$478.80

~to record recovery of 50% through project funding

3.	DR 150X – new DVA	\$478.80	
	CR – 4705 – Cost of Power		\$478.80

~ to move balance to DVA account

All local energy purchases will also have to be reported to the IESO (in total embedded generation) as part of the monthly portal filing process so that the correct amount of Class B Global Adjustment can be allocated and charged to EPLC on a monthly basis.

EPLC requests that the OEB approve this request as filed. All of which is respectfully submitted.