



PUBLIC INTEREST ADVOCACY CENTRE
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**Essex Powerlines Corporation (ELPC)
PowerShare Deferral and Variance Account**

EB-2024-0022/0096

Submission of the
Vulnerable Energy Consumers Coalition
(VECC)

JULY 25, 2024

Vulnerable Energy Consumers Coalition

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Submissions

Pilot Project Overview

1. The proposed “PowerShare” DVA would capture the costs of a pilot project that are not already compensated by the IESO. The purpose of the pilot project is to test the concept of what has been called a “Distribution System Operator” or DSO. A DSO is defined as “*an organization which can monitor, plan, and manage their system in near-real time*”.¹ EPLC’s evidence is that the DSO Pilot Project is aimed primarily at alleviating known constraints on the distribution system as they currently exist in the Leamington service Area, which has a high concentration of greenhouses². At the technical conference Ms. Sweeney of ELPC confirmed this stating:

The local energy market would engage distribution connected customer to inject energy into the distribution system or curtail load to alleviate local capacity constraints, and this is particularly pertinent in the Leamington area of Essex Powerlines service territory, which has a high concentration of greenhouses that represent a significant load. Feeders in that area are frequently loaded at greater than 50 per cent, and so any loss of supply at one feeder results in outages that cannot be addressed via other feeder. One of the activities in the local energy market is paying local DER owners for that flexibility, and those payments could be made at prices higher than HOEP.

2. PowerShare has two products: near-real time delivery contracts (ShortFlex) and capacity availability contracts (LongFlex). Delivery offers and bids are matched on the parameters of price, location, and quantity, creating a transaction contract between the buyer (the DSO) and the seller (the flexibility service provider) for the delivery period. Periods are each a 30-minute interval beginning on the hour (08:00) and half-hour (08:30). The pilot project will operate in 2 phases over a period of approximately 21 months of active market operations. Estimates in the project include activations daily as needed to meet actual constraints.³
3. EPLC has a number of partners in this pilot program including Utilismart and Essex Energy Corp. the latter which is an affiliate of ELPC. Essex Energy is providing engineering support and Utilismart is providing the meter data management system.⁴ A company called NODES will act as an intermediary between EPLC and DER owners in the local market, meaning that EPLC will not directly procure services from local DER owners. Rather, NODES will provide all market settlement functions between DER owners and EPLC, meaning NODES is responsible for paying DER participants using GIF funds. In addition, EPLC will not be acting as an aggregator of customer DERs for participation with those resources in IESO-administered markets. The link between IESO markets and the local DER owners will

¹ Exhibit 1, page 75, DVA Application Feb 16, 2024, PDF page 2 (* EPLC’s application of February 16, 2024 has no page or section numbering)

² Ibid, page 74

³ DVA Application, PDF page 4

⁴ TC page 27

instead be handled by NODES, with NODES acting as the aggregator and the IESO market participant.

Cost of the Pilot Project

4. The pilot project anticipates procurement of up to 5,000 MW of electricity. The cost of that electricity that exceeds HOEP and is net of IESO project funding is estimated to be up to \$554,525 as shown in the table reproduced below⁵:

		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

5. Partial funding is provided through the IESO’s Grid Innovation Fund. The Grid Innovation Fund (GIF) advances innovative opportunities to achieve electricity bill savings for Ontario ratepayers by funding projects that either enable customers to better manage their energy consumption or that reduce the costs associated with maintaining reliable operation of the province’s grid.⁶ Below is the IESO’s GIF project details posted for this project:

⁵ EB-2024-0096 DVA Application February 16, 2024 PDF page 4

⁶ <https://ieso.ca/Get-Involved/Innovation/Grid-Innovation-Fund/Overview>
<https://ieso.ca/Get-Involved/Innovation/Grid-Innovation-Fund/Projects-Funded>

Grid Innovation Fund Project Details

Lead Proponent: Essex Powerlines Corporation

Strategic Area(s): Enabling Non-Wires Alternatives, Wholesale Market Integration

Project Total Cost: \$8,088,778.20

Year Contracted: 2022

Status: Active

Location: Municipality of Leamington Economic

Development: 6 jobs estimated

Project Objectives

The project intends to demonstrate the operation of a local market run by a Distribution System Operator (DSO) using local resources to meet local needs in a region that is constrained from a local and bulk system perspective.

Approximately 60% of Ontario's greenhouses can be found in the Leamington Area. The high concentration of greenhouses in Leamington account for a significant amount of required load.

To mitigate local constraints on the grid and to create flexibility within the distribution system, Essex Powerlines will implement and run a local energy market where DER owners in the Municipality of Leamington will be able to sell their excess or stored generation, or to curtail, in response to local grid needs.

6. EPLC entered into a contribution agreement with the IESO. Under the Agreement 50% of the project costs are funded by the IESO. There is a cap on that funding of 5000 megawatts of procured capacity (not energy). The energy estimates in the application are based on Essex's own forecast of need and program operations for the duration that the pilot. That is the actual amounts booked into the proposed DVA could be more or less than that shown

above.⁷ However, EPLC has also undertaken to limit its exposure to the delivery of 7,500 MWh of capacity.⁸

7. The project also includes other costs, not included in this deferral account but which are being proposed for recovery as part of the cost of service application. This includes \$53,000 for software development to integrate the NODES trading platform with required data stream to facilitate local market operation during the pilot.⁹ While not entirely clear to us at this time (as the cost of service application is ongoing), the additional amounts related to this project but not to be included in the DVA account are estimated to be in the amount of \$371,000. The 2025 spending is estimated at \$150,304¹⁰ As far as we can ascertain none of these “non capacity” costs are eligible for IESO recovery funding.
8. The IESO’s estimate of the financial commitments of the parties to this pilot project are shown below¹¹:

Company Name	Approximate total contribution (over full project duration)			
	Cash (\$)	Cash (% of total Project)	In-kind (\$)	In-kind (% of total project)
Essex Powerlines Corporation	\$1,134,209.70	14.02%	\$14,388.40	0.18%
NODES AS	\$0	0%	\$656,484	8.12%
Essex Energy Corporation	\$2,238,407	27.67%	\$137,900	1.7%
Utilismart Corporation	\$0	0%	\$25,000	0.31%
<i>Subtotal (non-IESO contribution)</i>	<i>\$3,372,616.70</i>	<i>41.7%</i>	<i>\$833,772.40</i>	<i>10.31%</i>
IESO Contribution	\$3,882,389.10	48%	\$0	0%
Total	\$7,255,005.80	89.69%	\$833,772.40	10.31%

9. EPLC’s shareholder is not contributing any amount to the project.¹²

⁷ Transcript, EB-2024-0022/0096, June 24, 2024, page 15

⁸ Undertaking JT1.1

⁹ EB-2024-0022, Exhibit 2, page 29

¹⁰ Ibid, page 37, 43

¹¹ Undertaking JT1.9, Appendix B, GIF Contribution Agreement, page 13 of 26

¹² Transcript, EB-2024-0022/0096, June 24, 2024, page 28

Recoveries of the amounts in a DVA

10. EPLC did not include in its original application a proposal for recovery of any amounts booked into the proposed account. However, in response to requests to do so at the technical conference the Utility produced the following table¹³:

Rate Class	Units	Estimated Monthly Bill Impact	Estimated Monthly Distribution Charge Impact	Estimated Distribution Charge % Increase	Estimated Monthly Total Bill Impact	Estimated Monthly Total Bill % Increase
RESIDENTIAL	# of Customers	0.4405	0.44	1.42%	0.41	0.33%
GS<50	kWh	0.0006			1.12	0.32%
GS>50	kW	0.1616			18.26	0.30%
EMBEDDED DISTRIBUTOR	kW	0.2149			12.14	0.05%
STREETLIGHT	kW	0.1882			130.53	0.25%
SENTINEL LIGHT	kW	0.2089			14.16	0.29%
USL	kWh	0.0006			77.00	0.30%

11. The recovery is proposed to take place over a 24 month period.

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12. VECC does not take a position on the merit of the pilot project. Clearly the IESO holds that the pilot might allow learnings on the matter of DER dispatch at the distribution level. It might equally be said that the merits to the IESO are not so great as entice it to compensate EPLC for the entirety of their costs of participating in the project. We also know that EPLC proposes ratepayers contribute substantial amounts of monies toward this project both as part of the pilot and in the form of future capital spending and as set out in its cost of service application.

13. There are a number of difficulties coming to a conclusion as to the reasonableness of establishing the proposed DVA. One is that IESO’s assessment as to the project’s merits is based on both its potential distribution and transmission benefits. Mitigation of future transmission costs is a matter beyond the scope of EPLC. Furthermore, the IESO’s interests are provincial wide and not limited to this single distributor. It may be of little consequence to the ratepayers of EPLC if the learnings from this project that ultimately accrue substantially to other utility’s customers. Said differently, it does not necessarily follow that because the IESO finds merit in partially funding this pilot project that the Board must find the same. The Board’s findings, in our submission, should be based solely on the value of the project to EPLC’s ratepayers.

¹³ Undertaking JT1.2

14. Another argument put forward by EPLC is that pilot project is consistent with the with the Government of Ontario's Letter of Direction which indicates that DERs and future utility business models are "Priorities to Advance in the Near-Term"¹⁴ This is simply a truism. It says nothing new. Clearly a project that facilitates DER is "consistent" with a policy that seeks to explore or expand them. Whether it is prudent in the sense of making any sense as a financial investment is something completely different.
15. Which brings us to the main deficiency with this application. There is no rigorous, or even high level, analysis which shows that even in the event that the pilot project proves to be entirely successful that it will result in any economic value to EPLC's ratepayers. In its DVA application EPLC put forward this case for the prudence of ratepayer funding for this pilot this way:¹⁵

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

16. While the DVA application provides little in the way of the potential for specific economic value, the cost of service application does add some more details as to the potential benefits¹⁶:

"EPLC's PowerShare project looks at unlocking the potential of DERs to meet existing capacity and constraint issues. Approximately 60% of Ontario's greenhouses can be found in the Leamington area, and the high concentration accounts for a significant amount of forecasted load. EPLC currently has access to two feeders (M24 and M27) that service the Leamington community. During high producing months (approximately 6 months of the year), the load on the M27 feeder exceeds a comfortable level (greater than 50%). This limits EPLC's ability to transfer this load to the other feeder in the event of a failure. Existing measures to mitigate issues include requesting access to an additional feeder from Hydro One, however, there are constraints and cost barriers to this process."

17. EPLC reiterated in its argument-in-chief (AIC) that the implied benefit of this project was deferring overload on specific feeds in the Leamington area¹⁷. The difficulty is that in no place is this proposition factually supported. No detailed load projections are provided and no cost-benefit analysis has been completed. This means there is no way to test the thesis

¹⁴ AIC, July 16, 2024, page 6

¹⁵ EB-2024-0096 DVA Application February 16, 2024 PDF page 4

¹⁶ EB-2024-0022, Exhibit 2, Attachment 2-A, Distribution System Plan, page 73

¹⁷ AIC, page 5

of actual net benefits and what remains is simply a speculative proposition that there are net benefits in DRO dispatch as a non-wires alternative to physical plant. In fact, it appears to us that EPLC has specifically avoided making the claim that the project provides a net financial benefit to its ratepayers.

18. The other difficulty in this application is that the Board will only make a determination of the prudence of other related PowerShare's investments later as part of the cost of service application. It is entirely possible for the Board to decide in that case, based on more detailed and tested evidence with respect to related capital investments, that such investments are imprudent or at least should be delayed until the Utility is able to produce a financial business case supporting PowerShare related investments.
19. Finally, EPLC's proposal on disposition of any amounts in the account makes no attempt to align the beneficiaries or cost causing parties to the class of customers being asked to pay the burden of this pilot. On the face of the evidence, it is the peaking demands of greenhouses in southwestern Ontario in general and the Leamington area in particular which are the driving force behind these investments. As such it may be the case that a subsequent cost allocation modeling will support the contention that PowerShare related costs should be recovered from the cost causing GS>50 class.¹⁸ If true then it may be entirely inappropriate to seek recovery of any amounts in the DVA from the residential class of customers.
20. EPLC makes one more argument that needs to be addressed. This is that the costs being incurred are electricity commodity costs and because such costs are (generally) a pass-through the distributor is entitled to recovery. We submit this argument has already been implicitly rejected. If EPLC's proposition were correct then there would be no need for the application. In that case the Board would have approved inclusion in the pass-through RSVA commodity accounts (1588 and 1589). The reason they are not allowed to be passed through in this fashion is that the commodity costs in question are being incurred at a premium that would not, in the absence of the PowerStream project, be otherwise be incurred.
21. Our submission is that the Board should not approve the permanent PowerShare DVA and because there is no evidence that the project represents a prudent financial investment for the service of electricity distribution to EPLC's ratepayers.

In the Alternative

22. VECC recognizes that the Board may wish to provide some flexibility to utilities who wish to invest in speculative technologies. If that is the case we submit that it is not only ratepayers who should be at risk for such investments. Shareholders should also "have skin in the game." It is far too easy to spend and waste ratepayers' monies when there are no

¹⁸ At Undertaking JT1.8 EPLC identifies greenhouse customers as the GS>50 class

countervailing interests to assess and monitor risk. Under the current proposal should the project fail to produce any net benefits ratepayers nevertheless pay all the costs. On the other hand, should the project produce benefits ancillary or commercial benefits these accrue to the benefit of the utility shareholder – or in this case more likely the Utility’s affiliate.

23. Therefore, should the Board deem it appropriate to approve the project it should allow no more than a 50% of any costs recorded to be recovered from ratepayers. We would also submit that should the Board grant the account it defer approval of the method of recovery of balances until the time EPLC seeks disposition.
24. VECC takes no position on the appropriate implementation date should the account be approved in the proposed or some other form.
25. VECC submits that it has acted responsibly and efficiently during the course of this proceeding and requests that it be allowed to recover 100% of its reasonably incurred costs.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

July 25, 2024