

BY EMAIL

May 31, 2022

Amanda Panetta  
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Essex Powerlines Corporation  
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Dear Ms. Panetta:

**Re: OEB Innovation Sandbox Guidance for Essex Powerlines Corporation  
on the Essex Powerlines DSO Pilot Project**

We are pleased to follow up on Essex Powerlines Corporation's (EPLC) successful application in response to the Independent Electricity System Operator (IESO)/Ontario Energy Board (OEB) Joint Targeted Call (JTC) for innovative projects focused on deriving value from distributed energy resources (DER).

On March 7, 2022, EPLC was advised that its proposed pilot project, the "Essex Powerlines DSO Pilot Project" (the Pilot Project), was successful in qualifying for funding through the IESO's Grid Innovation Fund and support from the OEB Innovation Sandbox.

This letter provides the regulatory guidance EPLC requested from the OEB Innovation Sandbox. For the reasons below, OEB staff agrees with EPLC that its proposed activities in connection with the Pilot Project can be considered distribution activities within the meaning of s. 71(1) of the *Ontario Energy Board Act, 1998* (OEB Act). EPLC may therefore undertake the Pilot Project directly, rather than through an affiliate, and need not keep its accounts for the Pilot Project activities separate from its accounts for its other distribution activities under s. 72.



## The Pilot Project

EPLC submitted its JTC application on November 30, 2021 and revised it on February 8, 2022.

The application describes the Pilot Project as the first of its kind in Ontario and explains that it is designed to explore “utilizing DERs to their full capacity” to alleviate distribution system constraints, particularly in the Leamington area which has a high concentration of greenhouses that represent a significant load.

The Pilot Project will enable EPLC to act as a Distribution System Operator (DSO) for a distribution-level market for activation of DER flexibility in near real-time. Through a platform developed by EPLC’s partner, NODES, DER owners in EPLC’s service area will be able to participate in a local flexibility market to sell excess or stored power to support grid resiliency. The Pilot Project will also test coordination of the distribution-level market with the IESO-administered market so that participating DERs may participate in the local flexibility market as well as the IESO-administered markets.

OEB staff’s understanding is that 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 instead be handled by NODES, with NODES acting as the aggregator and the IESO market participant.

EPLC will engage in the following activities as part of the Pilot Project:

- Recruit DER owners to participate in the local market
- Assess coordination measures to ensure interoperability, coordination, and prioritization of services amongst DER asset owners, the local market and the IESO-administered markets
- Define congestion zones on EPLC’s local grid
- Using the NODES platform to facilitate transactions between EPLC and the DER owners for flexibility services from when congestion is identified and flexibility is needed
- Work with NODES to create the “Rulebook” for the local market
- Recruit and onboard DER asset owners to the NODES platform
- Test an integrated market design approach to DSO/IESO coordination

The application also notes that EPLC, “through its affiliate company, Essex Energy, plans to design, procure and install a 1MW solar and 1MW battery storage unit at the Pollution Control Plant located in Leamington, Ontario. The battery storage unit will be an active participant in the pilot market and will be a critical component of ensuring a net-negative [greenhouse gas] emissions impact.”

EPLC raised the following questions in its request for support from the OEB Innovation Sandbox:

- Whether its proposed activities as part of the Pilot Project fall within the scope of “distribution of electricity” for the purposes of s. 71(1) of the OEB Act<sup>1</sup>
- If OEB staff is of the view that these activities do not fall within the scope of “distribution of electricity” for the purposes of s. 71(1) of the OEB Act, confirmation from OEB staff that the intended activities fall within the scope of services contemplated in s. 29.1 of the *Electricity Act, 1998* and s. 71(2) of the OEB Act

Although the application raised some questions concerning bypass compensation under the Distribution System Code, we understand from follow-up discussions with EPLC that it is no longer seeking any guidance in that regard.

### Sandbox Guidance

OEB staff’s view is that the activities EPLC proposes to undertake in connection with the Pilot Project, as described in its application, are distribution activities within the meaning of s. 71(1) of the OEB Act. EPLC may therefore undertake those activities directly, rather than through an affiliate, and need not keep its accounts for those activities separate from its accounts for its other distribution activities under s. 72.

OEB staff understands that the main purpose of the local DER market that is being established through the Pilot Project is to meet distribution system needs. The goal of the Pilot Project is to allow EPLC to use customer-owned DER assets as non-wires alternatives to create flexibility within its distribution system and to mitigate local constraints on the grid. As the application puts it, “As a DSO, Essex Powerlines will be able to increase flexibility within its grid, ultimately providing increased reliability and resiliency to its customers.” Through the Pilot Project, EPLC will test how the

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<sup>1</sup> Section 71(1) says, “Except as provided by this section or the regulations, and subject to subsection 70 (9), a transmitter or distributor shall not, except through one or more affiliates, carry on any business activity other than transmitting or distributing electricity.” Section 72 requires separate accounts to be kept for distribution and permissible non-distribution activities.

implementation of a local market for flexibility could help avoid the need to build new infrastructure by instead providing EPLC with the ability to provide distribution services and mitigate grid congestion by utilizing local DERs.

The OEB's recently updated *Conservation and Demand Management Guidelines for Electricity Distributors* (CDM Guidelines) state that distribution rate-funded activities "are expected to address a specific system need, at the distribution level or the regional level." The CDM Guidelines provide examples of activities that distributors may undertake to address system needs, including activities that increase the efficiency of the distribution system and activities related to energy storage and generation (in front of or behind the meter). The CDM Guidelines also acknowledge that "A distributor may also have an opportunity for its CDM activities to earn revenues through the IESO's wholesale markets, reducing the costs that need to be funded through distribution rates." At a more general level, the revised CDM Guidelines are indicative of the OEB's broader efforts to encourage regional planning and, where cost effective, non-wires alternatives to traditional capital investments.

In OEB staff's view, the Pilot Project activities in which EPLC will be engaged align with the kinds of activities that the CDM Guidelines contemplate may be funded through distribution rates, and the characterization of those activities as distribution is in keeping with the OEB's statutory objective of facilitating innovation in the electricity sector on a cost-effective basis.

To be clear, in concluding that EPLC's proposed activities in connection with the Pilot Project constitute distribution, OEB staff is not including the construction, ownership and operation of any DERs located at the Leamington Pollution Control Plant, which we understand from the application will be done by EPLC's affiliate Essex Energy rather than by EPLC directly. We expect that EPLC will ensure that the *Affiliate Relationships Code for Electricity Distributors and Transmitters* is adhered to in regard to any activities undertaken by or with EPLC's affiliate. We also note that there is a brief reference on p. 42 of the application to a "100kW-500kW battery pack with energy management system" to be installed at "various locations". We assume (although it is not clear from the application) that these battery systems will also be installed, owned and operated by Essex Energy, not EPLC. But if our assumption is incorrect we would be happy to further discuss the regulatory implications for EPLC.

OEB staff acknowledges that questions regarding potential new distribution services and the activities distributors may undertake are currently being explored in the OEB's ongoing Framework for Energy Innovation (FEI) consultation (EB-2021-0118). Our views are confined to the particular facts of this Pilot Project and rooted in the OEB's current policies including the CDM Guidelines. This letter should not be taken as expressing the

broader view that DER aggregation more generally should be considered a distribution activity, and the OEB's policies may evolve as the work we are undertaking through the FEI consultation progresses.

Finally, OEB staff has focused on the specific regulatory questions EPLC put to us; we have not turned our minds to any other regulatory issues that may arise in connection with the Pilot Project such as any potential licensing requirements for aggregating DERs and participating in the IESO-administered markets. However, the Sandbox team would be pleased to consider any further regulatory questions that EPLC may wish to raise.

### Closing

The views expressed in this letter are those of OEB staff and are based on the revised application provided by EPLC and discussions between EPLC and OEB staff. OEB staff's views are not binding on any panel of Commissioners of the OEB.

The Sandbox team looks forward to hearing more about the Pilot Project as it is deployed, and the lessons EPLC is able to learn from it.

Any questions relating to this letter should be directed to Mima Micic at [mima.micic@oeb.ca](mailto:mima.micic@oeb.ca).

Yours truly,

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