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July 18th, 2025 **Via Email**

Ritchie Murray
Acting Registrar
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, Ontario
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RE: Consultation on Distribution System Operator Capabilities
Ontario Energy Board File Number: EB-2025-0060
Ontario Association of Physical Plant Administrators

Dear Mr. Murray:

Jupiter Energy Advisors submits this letter on behalf of its client, the Ontario Association of Physical Plant Administrators (OAPPA). OAPPA is a not-for-profit organization whose membership includes the physical plant administrators for provincially assisted universities in Ontario. Several OAPPA members are owners and operators of cogeneration facilities and other resources that are considered Distributed Energy Resources (DER). As a result, OAPPA member universities have a direct interest in policies affecting the creation and development of Distribution System Operators in Ontario. OAPPA has been engaged in the Board's discussions on policies affecting distributed energy resources since its participation in the Load Displacement Generation Working Group (EB-2013-0004).

Jupiter Energy Advisors attended and presented on behalf of OAPPA during June 23 and 24th, 2025, Stakeholder Meeting on this consultation. In this written submission, OAPPA reiterates and expands on the concepts presented at the stakeholder meeting.

OAPPA Submission

Overall, OAPPA supports the plan set out in the Board's Discussion Paper to pursue development of simplified DSO model for near term implementation in Ontario, while simultaneously continuing development of more advanced DSO models. Simplified implementatrapidly butidly speed the advent of DSOs in Ontario, which in turn will accelerate integration of DERs as resources available to meet the needs of an electrical

system that must grow rapidly, but also cost effectively. OAPPA does not want the "perfect to be the enemy of the good". There is an opportunity cost in delaying the launch of DSO models until all the necessary elements are in place for the most sophisticated models to be possible.

However, simplified implementation is merely a quick-start strategy, and not a satisfactory endpoint. Simplified models fall far short of the kind of DSO models that will fully leverage the potential of DERs to enhance electrical system capacity and resiliency and lower costs. Care must be taken to ensure that simplified models do not embed provisions that constrain timely evolution to more sophisticated models.

1. Principles to be satisfied by a suitable DSO model

OAPPA submits that there are several key principles which together define the requirements to be met in a model for DSO operation.

1.1 Promote Access

A Distributed Energy Resource should have access to opportunities to help meet system needs based only on its ability to offer operating characteristics that benefit the system, and its cost to do so. Potentially valuable assets should not be stranded by the lack of DSO capabilities in the area. The terms on which DSOs are implemented must facilitate propagation of DSO capabilities across the province, not merely in areas where there are large, sophisticated utilities.

DSO models that enhance the ability for DERs to contribute to solving local distribution system needs must not impair the ability of the same DERs to also (or instead) provide services to the IESO and the wholesale grid. A DER's ability to access its highest value use ensures the greatest benefit to the electrical system and ensures the DER provider gets fair value for its resource.

1.2 Achieve Optimal Scale and Scope

DSO operations will involve capital investment in information systems, among other things. There will be returns to scale in these investments. DSO models must allow DSOs of a size to capture these economies. Balkanized DSO services will be inefficient.

The opportunities for DERs to provide value to the electricity system will be dictated by the physics of the electrical system and by economics and should not be constrained by municipal boundaries. An obvious example is when a resource located in one distributor franchise is potentially valuable as a non-wires' solution for a neighbouring utility (perhaps as close as across the street). DSO models must

allow DSOs with a geographical scope of operation that transcends municipal boundaries, to achieve an optimal geographic scope.

1.3 Maintain technological agnosticism

The value of a DER lies in the operational benefits it offers the system and the cost at which it can do so. Program design should be based on the benefits the system is seeking to acquire, and not on the technology used to provide the benefit, so as not to exclude or impair the participation of unique resources or innovative solutions (e.g., cogeneration systems, hybrid chillers, thermal storage systems).

1.4 Use market-based models where feasible

In its report for Board Staff for this consultation, DNV observes from its jurisdictional review that "market-based solutions stimulate innovation, can be technology-agnostic, and can reduce the overall costs of the energy system and energy transition"[1]. These characteristics have been demonstrated in other aspects of Ontario's energy market. The observation that "market development takes time, effort, and cost" is not a reason to forego the expectation of DER markets, but rather a reason to begin work now to pursue them. A simplified implementation model is a reasonable compromise to get rudimentary DSO capabilities initiated in the meantime.

Markets are essential to ensure DER providers can obtain fair value for their resource, which in turn incents participation. In a bilateral negotiation for the use of a DER as a non-wires solution, the DER provider is at a competitive disadvantage. The resource is connected to one distribution system (the buyer of DER services is a monopsonist). The distributor has all the knowledge about the value of the DER to the system, while the DER provider has little of this knowledge or none. We say the distributor has a knowledge monopoly.

Access to economic competition through market mechanisms is the only way to balance this relationship. The DER provider must be free to offer the resource to other buyers (the IESO for example), and the value of the DER must be determined in competitive market or auction whenever feasible, to ensure the DER provider gets fair value for its resource.

2. Policy Choices

The principles set out above can be used to guide resolution of the policy choices that are central to this consultation.

[1] Considerations for Establishing DSO Capabilities in Ontario, Final Report, DNV, May 12, 2025, pg 4.

2.1 DSO Corporate Structure

The implementation model must allow for DSOs that are arm's length from the distribution system they are operating on. In other words, distributors will need to be able to contract for DSO-as-a-service. This structure addresses the case, noted by DNV[2], where small DSOs may be inefficient, or may not have the capacity or motivation to undertake the investment necessary to develop DSO capabilities, leaving DER resources stranded. It also addresses cases where the optimum scale of DSO operations is larger than the scale of the local utility. A DSO affiliated with one local utility may be well suited to expanding its services across neighbouring utilities to achieve an efficient scale and scope of operations.

OEB staff have determined that legislative and regulatory changes would be required to enable arm's length DSOs to operate. Since arm's length DSOs are an inevitable and foreseeable evolution, the work to enable their existence should begin now, so as not to delay this evolution.

It is also necessary that DSOs become at least legally separate entities from the local distributors. Requiring this at the start-up of the DSO model will increase barriers to participation and delay the start of DSO services, so it is not a requirement in a simplified implementation model. However, a sunset date should be defined by which DSOs will have to be legally separate from the distribution company. This approach would allow DSO functions to be established internally, and then eventually spun off.

DNV's jurisdictional review notes that: "A clear functional separation could mitigate or remove potential conflicts of interest and could, for instance, create more transparency in the choice between grid investments and non-wires solutions, building consumer/market confidence."[3] OAPPA submits that functional separation is not sufficient, and that transparency and consumer and market confidence depend on legal separation of the DSO and the utility.

There are long established principles that set out why and how the operations of an electric utility must be separate from the operations of affiliated companies, principles captured in the Affiliate Relationship Code for Electricity Distributors and Transmitters. The utility's economic interests and its preferential access to information create at least a perception of a potential conflict of interest if the DSO and the distribution company are the same company, when the DSO is tasked with procuring resources that may reduce the distribution company's earnings and operation of the local grid in a way that does not unduly favour the distribution company over DER providers.

[2] DNV, pg. 5.
[3] DNV, pg. 5.

The DSO must be perceived as objective and independent of the distribution company and must be seen transparently to be pursuing least cost solutions to the benefit of electricity ratepayers. This concept was recognized in the Electricity Act, 1998, with the restructuring of the former Ontario Hydro into Hydro One (transmission and distribution) separate from the Independent Market Operator (now the IESO) and other entities. The rationale applies equally to DSOs.

There is no justification for housing an organization that will operate in a competitive marketplace (e.g. Aggregating DERs for market participation, a business that has several commercial service providers already) within an organization that is a regulated utility. This is just the circumstance the Affiliate Relationship Code was created to address.

Mandating that the distributor and the DSO must be at least legally separate would make them affiliates, invoking the provisions of the Affiliate Relationship Code and helping to ensure trust in the DSO model.

2.2 Market mechanisms where feasible

Programs that make a standard offer to all participants may suit mass-participation programs (e.g., residential air conditioners). But they are sub-optimal if applied to a large, diverse set of potential solutions. In those cases, the program compensation offered is likely to be either too much or not enough. Also, standard program definitions and qualification rules can have the unintended effect of excluding certain types of resources that could otherwise have provided value.

DER resources are more likely to receive appropriate compensation where technologically agnostic, market-based procurement mechanisms are used. A good example is the IESO's seasonal Capacity Auction, which attracts a high level of participation from a large variety of resources, from aggregators as well as from DER providers directly (including OAPPA members). The Capacity Auction provides a fair, transparent mechanism for DER providers to capture the current market value of their resource. The existence of the Capacity Auction has helped to incent participation by a growing number of DER resources, which in turn has had the effect of lowering the cost to the system of obtaining the resources it needs[4], demonstrating the effectiveness of this market approach.

[4] The IESO's 2024 Capacity Auction procured more resources than ever, at lower prices. https://www.ieso.ca/Sector-Participants/IESO-News/2024/12/IESO-Secures-More-Megawatts-at-Lower-Price-in-2024-Capacity-Auction

An effective market would be one in which the DER has a choice where to sell its resource (for example, to the IESO or the DSO), and the seller gets fair value through a price determined in competition with other sellers.

Some scenarios may necessitate a bilateral negotiation, rather than a market solution. A large, single-site DER may provide unique local system benefits (for example, a large cogenerator offering significant capacity for a non-wires' solution to a distributor in an urban core) or there may be physical constraints that inhibit its participation in other markets. While market-based models are preferred, DSOs and DER providers must be able to use other models when markets are not feasible.

2.3 DER access to both IESO and DSO programs

DER providers should be able to commit their resources to either the IESO market or the DSO market or both, while respecting their contractual obligations to each. The DER provider has a right to seek the highest value use of the resource, and in doing so ensures the resource is put to its best use within the overall electric system.

DER providers, participating in the IESO Capacity Auction, have demonstrated that they have the capability, on their own or through commercial aggregators, to offer their DER to the wholesale market. There is no justification for DSOs to have a mandate to mediate a DER's participation in the wholesale market. Doing so puts the DSO in a conflict of interest and could impair the DER provider's ability to get full value for their resource. Commercial aggregators already exist to assist those who need assistance to get their resources to market. The contractual obligations of the DER provider should be sufficient to rationalize the obligations of a DER that is committed to both the IESO and the DSO.

Summary

OAPPA supports the move to develop DSO operations in Ontario, to fully leverage use of DERs to help address the need for timely and cost-effective expansion of the electric system. OAPPA supports a simplified implementation model as a strategy to quickly start the development of DSOs, but DSOs will need to develop beyond the simplified models for the potential benefits of DSOs to be fully realized. It is important that any simplified implementation model is not considered adequate as a long-term solution, and care must be taken to ensure that steps taken to launch the DSO model quickly do not create policy or investment blind alleys that ultimately constrain further development of the model.

It will be necessary that DSOs are at least legally separate from affiliated distribution companies, and that arm's length DSOs are permitted in a DSO-as-a-service model. Legal separation means that the Affiliate Relationship Code will apply, which will help to ensure

transparency in the DSO relationship, contributing to consumer and market confidence. DSO-as-a-service will enable DSOs to operate where the local utility does not have the capability to develop a DSO, avoiding the stranding of DERs, and will allow DSOs to expand according to natural economies of scope and scale. Work should begin on the necessary legislative and regulatory changes to permit these structures, since it will take time. A date should be established by which DSOs must achieve legal separation from the distribution utility.

Where they are feasible, markets for DER services and non-wires solutions represent the best way to procure resources. Markets will help to ensure that DER providers get fair value for their resource. DER providers should be able to participate in both wholesale and local markets for DER services, to ensure their resources are put to the highest value use and to ensure the provider gets fair value for their resource.

We appreciate the opportunity to participate in this consultation, and we remain available to discuss further the points set out in this submission.

Yours truly,

Scott A Walker

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cc. M. Quintana, OAPPA Energy Chair / Brock University (e-mail)