

**To: Ontario Energy Board**

**From : Neil Veilleux, Vice President of Market Development, Uplight and Utilia Amaral, President, MarketStep**

**Date: Jul 22, 2025**

**Re: Comments on Ontario's Distribution System Operator (DSO) Capabilities Consultation (EB-2025-0060)**

Uplight is pleased to provide the following response to the Ontario Energy Board (OEB) regarding the Distribution System Operator (DSO) Capabilities Consultation (EB-2025-0060).

Uplight is a technology provider to over 80 electric and gas utilities and energy companies across North America, Europe, and Asia. We provide customer engagement and demand management solutions to help utilities and energy companies achieve their energy goals. Uplight orchestrates DER assets (including smart devices, electric vehicles, batteries and more) to maintain a reliable and affordable grid. Our software enables utilities and their residential, commercial, and industrial customers to deploy a range of solutions, including demand response along with energy efficiency, electric vehicle, rates engagement, and other demand management solutions.

This submission addresses the OEB's key questions, drawing on our expertise operating across North America and Europe. We welcome the opportunity to contribute to a well-defined and pragmatic DSO policy framework for Ontario.

Please do not hesitate to reach out if we can be of further assistance.

## **1. What are your views on the opportunity and policy objectives for DSO capabilities?**

Uplight agrees with OEB's views on the opportunity and policy objectives for DSO capabilities. As OEB notes, investments in DSO capabilities and associated grid modernization will help enhance system reliability and optimize local electricity networks, especially in light of increasing load growth and affordability pressures on ratepayers. Introducing DSO capabilities aligns with Ontario's policy objectives, including supporting electrification and ensuring cost-effective system planning. By enabling more dynamic and efficient grid operations, these investments help the province adapt to evolving energy needs while maintaining affordability and reliability for consumers.

Moreover, Uplight echoes the Ontario Energy Association's (OEA) recommendation that OEB's policies enable development of local distribution companies' (LDCs) DSO capabilities in Ontario. It is important for distribution planning functions to leverage the LDC's intimate knowledge of local grid requirements and customer needs.

## **2. What are your views on the use cases and value of DSO capabilities for Ontario, including the importance of DSO capabilities in capturing more of the benefits DERs can provide?**

In alignment with OEB's Discussion Paper, we believe DSOs can unlock a variety of use cases and value for DERs, customers, and the grid. Chief among these is that DSOs can enable cost-effective aggregation of DER assets, simplify DER vendor management for utilities and customers, increase visibility and control of DER assets on a utility's distribution network, and foster high quality customer engagement.

In addition, we concur with OEA's perspective on the value of bottom-up distribution system planning. As noted by OEA, electricity grid planning has traditionally been a top-down exercise, meaning planning has primarily originated from centralized generation and transmission assets with power flowing in one direction to consumers. In contrast, bottom-up planning starts at the local distribution level, considering the specific characteristics, needs, and opportunities presented by distributed energy resources (DERs) and evolving customer demands.

A bottom-up approach is crucial for accurately valuing and optimizing DER integration and enabling cost-effective investments to meet local needs. It can significantly enhance grid management, improve reliability, and enable proactive handling of dynamic conditions particularly in scenarios with high DER penetration and electrification.

## **3. How should the OEB's objectives (as set out in section 1 of the OEB Act) be balanced and reflected in the development of a DSO policy framework for Ontario?**

Section 1 of the OEB Act asks the OEB to balance the following objectives: (1) protect consumer interests with respect to price, reliability, adequacy and quality; (2) promote economic efficiency and cost effectiveness while maintaining a financially viable sector; (3) promote electricity conservation and demand management in a manner consistent with the policies of the Government of Ontario; and (4) facilitate innovation.

To achieve these objectives, we encourage OEB to work collaboratively with LDCs, DER aggregators, DER providers, and interested customers through stakeholder working groups, program design consultations, program deployment, and continual evaluation. The understanding gained by the OEB by engaging across these development phases will inform regulatory actions to protect customers, provide proper incentives, and ensure the financial viability of DSO activities.

#### 4. Is an evolutionary approach to developing DSO capabilities appropriate for Ontario to pursue in order to achieve the policy objectives set out in the Staff Discussion Paper?

Uplight strongly encourages a phased approach that enables the ecosystem to develop capabilities and take advantage of technology and market developments regardless of the approach.

Uplight notes that a successful DSO requires regulators, LDCs, and industry to consider a range of market and program design factors, including: the maturity of the local demand flexibility industry, electricity prices, size of load being aggregated (e.g., C&I vs residential), access to utility customer and meter data, efficacy of distribution-level markets, and utility compensation (e.g., earnings opportunities).

Moreover, there are varying perspectives on how the DSO market should be designed within Ontario, including who should administer the DSO, the role that aggregators should play, and the means to ensure cost-effectiveness.

While many design issues must be addressed, we believe the starting point should be the end-use customer—specifically, whether they are engaged via (1) centralized, utility-led aggregation or (2) decentralized, third-party aggregation.

Key considerations for each are briefly described here.

- **Centralized, utility-led aggregation:** Utility-led aggregators are vendors that work directly on behalf of the LDC, i.e., they act as an extension of the utility. In a utility-led program, the LDC competitively procures a software vendor to aggregate and manage DER assets. In this case, the software vendor works as an extension of the utility to design the demand flexibility program, engage customers (via utility-branded marketing), dispatch assets, conduct M&V, and compensate participants.

This model adheres to the historical role of a utility as the single grid operator for all customers, wherein behind-the-meter DERs also become a valuable grid asset managed by the utility (just as it would a substation or transformer). This approach also places the LDC at the center of customer engagement, enabling LDCs (in collaboration with their selected vendor) to leverage their trusted customer relationships and data to educate, engage and aggregate customers in order to optimize DER assets for grid operations.

- **Decentralized, third-party aggregation:** By contrast, third-party aggregators work independently of the LDC. Here, multiple aggregators compete against one another within a utility territory to independently develop customer relationships and bid aggregated capacity into the wholesale market—or where one exists into the local distribution market. In some cases, third-party aggregators could also respond to a standard-offer utility tariff.

Here, the LDC is not driving customer engagement. Instead, third party aggregators compete for customers and have much greater latitude to manage and dispatch DERs, so long as they adhere to offtaker (utility) contracts or wholesale market rules. This model adheres more closely to a competitive retail model, assuming that consumers are motivated to compare competing offers from aggregators and that competition will drive down costs.

Notably, the success of distribution-level markets also depends on robust competition between third-party aggregators.

**For the residential and small commercial sectors**, Uplight believes the utility-led program model affords a number of critical benefits to Ontario's distribution grid and customers. This model has been the successful approach in the Connected Solutions program across Massachusetts, Connecticut, New York, New Hampshire, and Rhode Island; for PSE's programs in Washington State; and for CPS Energy in Texas; among many others. We see two main benefits of the utility-led model.

First, by embedding demand flexibility software into the utility's operations, the utility-led model offers LDCs greater insight into the impacts of DERs on their network and affords more control of those assets. This is especially important to enable management of DER assets on the distribution network: according to the Brattle Group, one-third of the value generated by demand flexibility accrues directly to the distribution grid.

Put another way, the LDC, which is responsible for planning and operating the system for an increasingly distributed and flexible future, requires tools to visualize and manage those distributed assets. For this reason, it is critical that the LDC has access to centralized software systems that facilitate analysis, planning, and management of DER assets.

In addition, unless residential customers are subject to very high electricity costs, they tend to lack motivation or sophistication to compare aggressively marketed demand flexibility offerings. The simplicity of a single demand flexibility solution, offered and managed by the trusted LDC, reduces customer confusion and the potential for false or misleading advertising that has, at times, plagued the DER market.

Having noted that, Uplight also believes that in some cases the third-party aggregator (and associated distribution market) model can be successful. In Ontario's case, we posit that a distribution market that encourages competition between 3rd party aggregators could be effective **for the Commercial and Industrial (C&I) sector**.

C&I customers tend to be more sophisticated buyers (than residential or small commercial customers) and thus better able to compare benefits and drawbacks of competing offers from 3rd party aggregators. In addition, C&I customers tend to have very large loads, which are highly attractive to third party aggregators. As a result, we believe that a competitive distribution market focused on C&I customers is more likely to drive down costs.

Finally, LDCs could implement a DSO model in concert with the utility-led (centralized) approach or the third-party (decentralized) aggregation approaches. As discussed in the next section, given the nascence of DSO capabilities in Ontario, we believe it is critical for OEB to enable flexibility in DSO structure across LDCs in order to develop firsthand experience and knowledge of what works and does not work.

## **5. What are your views on each of the three proposals presented in the Staff Discussion Paper?**

We encourage OEB staff to continue to support utilities, IESO and third parties to find a path that works for Ontario's market. We encourage the OEB to ensure that regulatory flexibility exists to address the diversity of needs that necessitate the development of capabilities.

Regardless of the model selected, it is critical that the end-use customer remains a central consideration. Residential and small business customers have different needs, motivations, and acquisition models than large C&I customers. While all customer segments can provide value to the grid, understanding their distinct characteristics is essential to the successful implementation of a DSO.

This foundational understanding will enable Ontario to build on existing progress and develop an advanced DSO model that is tailored to the needs of unique customer segments. It will also support program design that reflects varying conditions on distributor networks, preferences for utility-led or third-party aggregations, and the evolving requirements for distribution-level markets, among other factors.

Finally, we also agree with OEA's suggestion that Ontario should establish a clear roadmap for DSO implementation, defining the end-state vision, key milestones, and a structured path forward. A sector-led working group should be formed to co-develop the DSO model and roadmap. Doing so would help align expectations, avoid duplication, and ensure a coherent, scalable path to DSO implementation.

## **6. How should the OEB best balance the benefits of a standard approach relative to the innovation and insights that could be gleaned from enabling greater flexibility and diversity through experimentation?**

Experience shows that the most effective programs follow a **design-test-learn-refine cycle**, allowing LDCs and stakeholders to experiment, evaluate, and ultimately scale the approaches that work best in their specific market context.

We recommend the OEB encourage LDCs to implement 3- to 5-year programs that test and measure key elements of DSO design. This would generate critical data and insights to guide the development of a scalable, evidence-based roadmap for DSO implementation.

In summary, combining a structured design–test–learn–refine approach with a broader road mapping process would give LDCs the flexibility to try different models, identify what works, and build long-term implementation plans around the most effective strategies.