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**BY EMAIL AND RESS**

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Mr. Richie Murray

Acting Registrar  
Ontario Energy Board  
Suite 2700, 2300 Yonge Street  
P.O. Box 2319  
Toronto, ON M4P 1E4

Dear Mr. Murray,

**EB-2025-0060 – Hydro One Networks Inc. – Distribution System Operator Capabilities**

On May 20, 2025, the Ontario Energy Board (OEB) released a staff Discussion Paper and consultant study on Distribution System Operator (DSO) Capabilities. The OEB held a DSO Stakeholder Symposium on June 23 and 24, 2025, where participants, including Hydro One, provided presentations on the objectives, scope and next steps for the OEB's DSO consultation.

On June 12, 2025, the Minister of Energy released his new Integrated Energy Plan (IEP), *Energy for Generations: Ontario's Integrated Plan to Power the Strongest Economy in the G7* and associated implementation Directives to the OEB and Independent Electricity System Operator (IESO). The IEP underscores the importance of grid modernization to unlock value for the system, customers and DERs and, through the Directive to the OEB, has emphasized the importance of this consultation by requiring a DSO Roadmap by December 31, 2025. Hydro One strongly agrees with the Minister and the OEB on the importance and urgency of this work. Hydro One, along with other Local Distribution Companies (LDCs), will play a critical role in supporting the industry to achieve the province's goals.

Hydro One is pleased to provide comments on the OEB's proposal in two parts: first, key recommendations below, followed by responses to the OEB's discussion questions. The feedback provided builds on Hydro One's presentation on June 23, 2025. Hydro One submits these comments as a first step in supporting the OEB in developing its DSO Roadmap and appreciates the opportunity to engage with OEB staff now and throughout this consultation.

## KEY RECOMMENDATIONS

### ***Affirm the role of utilities as Market Facilitator DSO***

Hydro One urges the OEB to expediently proceed with affirming the role of utilities as Market Facilitator DSO within the DSO Roadmap, in alignment with OEB's Proposal 3 on advanced DSOs. This approach will enable the natural evolution of utilities, already under way in Ontario, to continue, and to cost-effectively achieve the government's growth-oriented objectives. See the response to questions 1 and 2 for details.

The Market Facilitator DSO model has broad stakeholder support and assigns DSO roles and responsibilities most appropriately across industry participants (utilities, IESO and customers). A study<sup>1</sup> conducted by the Ontario Energy Association (OEA) found a positive business case for developing DSO capabilities at utilities that produced the highest net benefit when compared to the Dual Participation DSO model. The Market Facilitator DSO model strikes the right balance in leveraging the utilities' existing capabilities and building on the momentum underway resulting from OEB policies, IESO efforts, and LDC programs and pilots, while adequately addressing the risks presented by other DSO models.

Hydro One does not support the phased development of policy as outlined in the progression of Proposal 2 and the 'simplified DSO' model (Dual Participation DSO) prior to developing the 'advanced DSO' (Market Facilitator DSO) under Proposal 3. As noted in response to question 4 and 5 below, the name 'simplified DSO' is a misnomer as it is neither simpler to implement and operate, nor on the development path of the 'advanced DSO' model. It is foreseeable that pursuing the evolutionary approach to policy as outlined in the OEB Staff Discussion Paper would lead to stranded assets for both the utilities and DER providers.

### ***Enable technical evolution of DSO capabilities by supporting grid modernization investments***

The government's new vision for the energy sector in the IEP clearly and concisely describes the importance and need for grid modernization. The IEP provides the following outcome-focused definition "The paced, prudent, and cost-effective use of technologies and solutions that improve the efficiency, resilience, reliability, and capacity of electricity distribution systems. The purposes of said investments are twofold: to lower long-term costs for ratepayers and to better manage the availability of electricity to meet growing demand."<sup>2</sup>

The EDA's Solving Grid Lock report<sup>3</sup> explores grid modernization in detail, describing how it is vital for LDCs to meet the needs of its customers through the energy transition and facilitate greater partnerships with the towns and regions they service. Modernizing the distribution system is a prerequisite not only for the development of DSO capabilities but also for many other outcomes not directly related to the DSO. Local markets enabled by the DSO cannot evolve at scale without grid modernization.

As part of the DSO Roadmap, Hydro One recommends that the OEB outline the work plan to develop clear guidance to encourage necessary grid modernization investments, aligned with an amended Proposal 1.

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<sup>1</sup> [OEA DSO Study](#)

<sup>2</sup> [Integrated Energy Plan: Energy for Generations](#), Page 82

<sup>3</sup> [EDA Solving Grid-Lock Report](#)

In addition, the OEB will play a critical role in bolstering confidence in local markets, similar to its role in the wholesale markets. Market-based procurements are the most efficient way to procure DER services at both the wholesale and distribution levels. These capabilities may evolve at different speeds based on the needs of an LDC's system and customers. Affirming the use of markets as a desired outcome early will kick start the work to create the necessary oversight and guardrails to instil confidence in the markets as they naturally evolve in response to system and customer needs.

### ***Leverage industry expertise in developing a fit-for-purpose regulatory framework***

Significant work has been done over the past few years on developing DSOs in Ontario, industry stakeholders have conducted studies, published reports, and collaborated in working groups to understand the evolving role of the utility and develop technical models to facilitate DER participation in electricity markets. The OEB has acknowledged this work, and Hydro One is encouraged to see the OEB's commitment to building on what has been done to date. This approach will enable the sector to continue and accelerate the momentum that has been built up in evolving utilities into advanced DSOs.

Hydro One recommends that the OEB leverage the expertise of utilities and DER aggregators to ensure the DSO Roadmap encapsulates the necessary elements to develop a regulatory framework that is fit-for-purpose for Ontario's unique governance structure and drives the behaviors and outcomes that will unlock the value of DERs to customers and the grid.

## **RESPONSES TO OEB DISCUSSION QUESTIONS**

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

### ***Ontario utilities are already evolving early advanced DSO capabilities***

The electricity industry has spent over a century building robust capabilities as technologies and the needs of customers have changed. Building off the core mandate of delivering safe, reliable, and affordable electricity, the *Ontario Energy Board Act, 1998* and policies enacted over the last decade have enabled utilities to innovate to meet the changing customer and system needs, including modernizing the distribution system (e.g. smart meters and AMI), offering customer-centric programs (e.g. demand response, managed EV charging programs), and developing non-wires solutions opportunities with the DER community and solution providers.

These innovations have started Ontario's journey towards developing DSO capabilities within utilities. The OEB has also begun developing its regulatory framework for DSOs through its Non-Wires Solution (NWS) Guidelines, Benefit Cost Analysis (BCA) Framework, Innovation Sandbox and Framework for Energy 2.0, and upcoming work on local, utility led conservation programming (stream 2 Electricity Demand Side Management). In response, and guided by customer expectations, utilities are developing these capabilities, including connecting 10,170 MW of DER capacity<sup>4</sup>, implementing smart meters, and leveraging NWS (e.g. Hydro One's Residential Reliability Initiative and myEnergy Rewards, the York Region Non-Wires Alternative Demonstration Project, Toronto Hydro's Local Demand Response programs, etc.).

The Minister's IEP underscores the urgency of continuing progress on key DSO capabilities as "There is significant opportunity to guide DER investment to where it is most cost-effective and beneficial to local and system-wide needs – helping to relieve constraints, defer costly infrastructure, and improve overall efficiency."<sup>5</sup> Further, the IEP notes that "realizing this future will require a clear framework to unlock the value of DER, lower barriers to participation, and support smarter planning and investment across all levels of the system."<sup>6</sup> The OEB is well positioned to provide this clarity, building on the regulatory framework which has enabled the evolution into DSOs to begin already.

### ***Policy must enable the continued and efficient utility evolution to unlock DER value***

The policy objectives for this consultation must align with the outcomes the Minister has asked of the sector: to support economic development, move quickly and unlock opportunities for customers in the bulk and local electricity systems. The most efficient way to achieve these outcomes is for the OEB to assign advanced DSO roles to utilities in the near term and create the enabling framework that allows utilities to develop foundation capabilities and match their pace of evolution to the needs of their customers.

### ***Assign the Market Facilitator DSO role to utilities (advance Proposal 3)***

The Ontario electricity sector is unique, and thus the future role of the utility must address not only the provincial goals of maximizing opportunities for customers and DERs, but do so efficiently, while ensuring the safe, reliable operation of both the distribution and transmission systems. Over the last few years, an industry consensus has coalesced around the Market Facilitator DSO model as the optimal model for Ontario.<sup>7</sup>

Fundamentally, the Market Facilitator DSO has two unique attributes necessary for the Ontario-specific context:

- Optimizes DER activation by combining dispatch signals from the distribution and bulk system to ensure the safe, reliable operation of the distribution system.
- Retains DER autonomy as the financial relationship between the DER and IESO is maintained; the DSO does not act as the financial intermediary for wholesale markets.

<sup>4</sup> [IESO DER Potential Study Volume 1](#), Page 16

<sup>5</sup> [Integrated Energy Plan: Energy for Generations](#), Page 87

<sup>6</sup> [Integrated Energy Plan: Energy for Generations](#), Page 87

<sup>7</sup> Independent Electricity System Operator. (2024, May 31). [B1 Functional Assessment User journey comparisons](#) [PDF]. IESO.

The Market Facilitator DSO is best positioned to help Ontario achieve the IEP's objectives of creating the most streamlined opportunities for customers and DERs, ultimately delivering the highest customer benefits. This model also aligns with the capabilities that Ontario utilities have been developing in alignment with government and OEB policies over the last decade.

Further, a 2023 DSO study by the OEA included an economic analysis of both the Market Facilitator and Dual Participation DSO models and found that the Market Facilitator approach could deliver \$4.6 to \$9.3 billion in higher net benefits compared to the Dual Participation model.<sup>8</sup>

Hydro One supports directly advancing Proposal 3, the 'advanced DSO' or the Market Facilitator DSO. Hydro One does not support Proposal 2, the 'simplified DSO' or the Dual Participation DSO. See the response to questions 4 and 5 for details.

### ***Create an enabling regulatory framework***

The OEB should work with the sector to develop the incremental guidance and guardrails that will support utilities and guide the sector through this period of change. This would involve designing the regulatory guidance for the necessary foundational grid modernization investments and fostering confidence in local flexibility markets that will unlock the best value for our customers and the distribution system.

#### ***Grid Modernization Investment Guidance (advance amended Proposal 1)***

As noted in the OEB's Staff Discussion Paper, "grid modernization refers to investments in advanced monitoring and communications infrastructure that distributors make to support goals such as DER integration, enhanced resiliency and more efficient operations. Although not synonymous with a DSO, the underlying tools and investments are similar."<sup>9</sup> Hydro One supports this definition and appreciates that the nuance and overlap of grid modernization and DSO is appropriately captured. As noted above, the IEP also underscored the importance of grid modernization with an outcome-focused definition that speaks to the need for paced, prudent and cost-effective grid modernization to achieve lower long-term costs and to meet the needs of growing electricity demand.

Ontario has a strong regulatory history of developing guidance and corresponding mechanisms for foundational infrastructure through, for example, its smart meter and AMI deployment. Today, the opportunity is to take that one step further to support the prudent adoption of foundational investment and in-field equipment through an outcomes-based framework that establishes the necessary guardrails that will ensure that utility investments going forward are aligned and optimized to this end state. See more specific recommendations in the responses to questions 4 and 5.

This direction would be in line with the Minister's expectations in the IEP Implementation Directive to the OEB "to facilitate electricity distributor investment in new cost-effective technology that benefit customers and modernize the operation of the distribution grid, so that the sector could be better positioned to explore new and innovative ways to deliver on their mandate and broader government priorities."<sup>10</sup> Utility

<sup>8</sup> [OEA DSO Presentation](#), slide 13

<sup>9</sup> [OEB Staff Discussion Paper: DSO Capabilities](#), May 20, 2025, Page 12

<sup>10</sup> [Implementation Directive to the OEB](#), page 9, Direction #19

investments would continue to be prudently paced according to customer expectations and would be subject to the OEB's adjudicative process.

Hydro One recommends that the OEB develop clear guidance to encourage necessary grid modernization investments, aligned with an amended Proposal 1.

### *Instill confidence in local markets as they emerge*

In the OEB's stakeholder symposium, there was a vibrant discussion on the timing and value of local markets vs program-based or rules-based procurement of DER services. These questions are well grounded in jurisdictions that have already implemented DSO roles. In the United Kingdom (UK), local markets have been in place almost 10 years, and with inception of the Energy Network Association (ENA's)<sup>11</sup> Open Networks project that laid the foundation for industry consensus, built on successful pilot projects. Recent reporting demonstrates how stable local markets attract new DER resources because they are best able to unlock value for both DER owners and the distribution system. For example, UK Power Networks dispatched 7.8 GWh of flexibility in the 2023/24 operational year<sup>12</sup>, a seven-fold increase from previous years and delivering \$91M in customer benefits. In addition, National Grid released its Flexibility Market Insights Report in June 2025, which reported dispatch of 2.9 GWh of energy<sup>13</sup>, through 162,800 flexibility assets on their market platform, more than double relative to the previous year.

Currently in Ontario, distribution level procurements of DER services are often short-term programs-based procurements to address specific needs, offering little long-term certainty for market participants, for whom financial certainty is a key driver for participation. Participants in the IESO's York Region Non-Wires Alternatives Demonstration Project Evaluation repeatedly emphasized the need for long-term commitments and greater certainty<sup>14</sup>. Unlike prescriptive and rigid rule-based approaches or offering multiple one-off programs, local markets enable dynamic and responsive pricing, where price discovery is done through competition, reducing the risk of price inelasticity, which will eventually bring the cost of services down.

The market-based approach allows utilities to incentivize investments at the right time and right place. Well-designed and enduring local markets that procure services to meet a variety of distribution system needs can provide the necessary financial certainty to attract these resources to Ontario. For DERs, pairing the local and wholesale markets opportunities unlocks the full value chain and ensures these resources are fairly compensated for the services provided.

The OEB has an opportunity to build confidence in local markets through thoughtful and light-handed regulation. While technological advances are able to effectively manage some of the risks associated with local markets, the OEB has an important role in working with utilities and DER providers to identify residual risk and set the guidance and oversight necessary to ensure confidence. This work will ensure a level playing field in local markets that will spur investment in new resources and unlock the full value chain for customers and Ontario's DERs.

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<sup>11</sup> The ENA is a not-for-profit industry body representing the energy network companies in the UK and Ireland.

<sup>12</sup> [UK Power Networks' DSO Hits flexibility milestone](#)

<sup>13</sup> [National Grid – Flexibility Market Insights Report](#)

<sup>14</sup> [IESO York Region NWA Demonstration Project Evaluation Presentation](#)



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?

The OEB's statutory objectives as set out in section 1 of the *Ontario Energy Board Act, 1998*, relate to customer protection with respect to prices, adequacy, reliability and quality of electricity service; promoting economic efficiency and cost effectiveness to facilitate the maintenance of a financially viable electricity industry; promoting conservation and demand management; and facilitating innovation. The OEB has effectively balanced these objectives through their Renewed Regulatory Framework over the past decade. The OEB is now tasked with regulating utilities that are moving from passively managing one-way power flow to actively managing two-way power flows. Further, Bill 40 introduced earlier this year<sup>15</sup>, has proposed including 'economic growth' as a part of the OEB's statutory objectives as well.

***The Market Facilitator DSO Regulatory Framework enables OEB to balance objectives***

Hydro One submits that assigning the Market Facilitator DSO role ('advanced DSO') to utilities and developing the associated regulatory framework described above is the most effective way for the OEB to deliver on its statutory mandate and the expectations outlined in the Minister's new IEP. As described in the previous section, this would facilitate an evolution of a vibrant local market that both provides opportunities for customers to participate in the grid and enables utilities to access a wider range of tools to meet their system needs. Further, through the work to provide grid modernization investment guidance and ensure local market confidence, the OEB will deliver on its customer protection mandate and promote conservation and demand management, in alignment with the government policies.

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?

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

***The OEB should take an evolutionary approach to technical development, not for policy - reject Proposal 2 and proceed with Proposal 3***

The OEB's Staff Discussion Paper outlines a phased approach to its policy and developing DSO capabilities, such that Ontario's electricity sector would need to develop two different DSO models over time, starting with a 'simplified' DSO model, later followed by an 'advanced' DSO model.

Hydro One does not support an evolutionary approach to policy and strongly recommends the OEB reject Proposal 2 'develop a simplified DSO model', rather the OEB should proceed with proposal 3 'develop an advanced DSO model', leveraging the Market Facilitator DSO as developed in the Transmission-Distribution Coordination Working Group (TDWG). See response to question 2 for more rationale on proceeding with Proposal 3.

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<sup>15</sup> [Bill 40, Protect Ontario by Securing Affordable Energy for Generations Act, 2025 - Legislative Assembly of Ontario](#)

**Simplified DSO (Dual Participation) has higher costs, increases risk and increases burden on DERs**

The OEB's consultant recommends this phased approach to mitigate a variety of risks raised in other jurisdictions. However, in focusing on other jurisdictions, the report fails to capture the complexity and nuance of Ontario's electricity sector in its recommendations. While in theory this phased approach seems prudent, in practice it is foreseeable that this approach will lead to higher costs, greater complexity for DER participants, higher operational risks for the distribution system and less optimal dispatch of DERs.

Changes in the desired end state DSO model will require recalibration of a variety of systems, investments and capabilities, increasing the total implementation costs. For example, in the 'simplified' Dual Participation DSO model, the DER proponent would be required to communicate the IESO's dispatch signals to the LDC, requiring the LDC to have systems to accept and integrate that information into their systems and the DER to have two communication channels. Deploying the 'advanced' Market Facilitator model later would strand both LDC and DER assets, the LDC would no longer need those systems, instead relying on existing communication channels with the IESO to receive and then optimize dispatch signals. Similarly, DER participants would likely have to abandon the investments made in their dispatch communication channel with the IESO.

The Dual Participation communication configuration also introduces risk to distribution system operations. Under this 'simplified' model, the DER proponent would be accountable to inform the DSO of the IESO dispatch signal increasing the burden on the DER participant. However, the utility bears the full risk to the safe, reliable operation of the distribution system if that dispatch signal is not conveyed in a timely manner. Utilities must have full visibility of the activity on their systems, including any dispatch of DERs, to ensure that the system remains balanced, and assets are operated within their technical limits.

Unlike the transmission system, the distribution system is highly dynamic, experiencing more frequent system reconfigurations to address load growth, distribution planning needs, and unplanned outages (e.g. storms). Each instance of reconfiguration could impact the dispatch of a distribution-connected DER. Under the Dual Participation model, the dynamic nature of the distribution system could only be accounted for in IESO dispatch signals reactively, with the DSO informing the DER that it cannot dispatch as per the IESO's request. This would likely limit the opportunity for the DERs and the value to the bulk system. By contrast, under an 'advanced' or Market Facilitator DSO model, the DSO would receive the dispatch signals from the IESO and would be able to optimize these signals with the distribution system conditions and any DSO dispatch signals, resulting in a streamlined DER participant experience, and likely more frequent dispatch.

***Clear policy direction should enable technical evolution of DSO capabilities – Proposal 1 should proceed, building on existing work***

Establishing the desired end state and associated regulatory framework elements will allow utilities to evolve their DSO capabilities prudently, paced to the needs of their customers and service territories. This aligns with the Minister's latest direction to the OEB "to drive, through new and ongoing initiatives, prudent electricity distribution grid modernization that improves operational efficiencies, affordability and cost effectiveness, increases reliability, cyber security and resilience to severe weather events, and supports increasing electricity demand on the distribution grid"<sup>16</sup> and continues to support the OEB's consumer

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<sup>16</sup> [Implementation Directive to the OEB](#), page 9, Direction #19



protection function through investment guidance and adjudication of utility rate applications and investment plans.

Through the TDWG, an LDC survey was conducted<sup>17</sup> to better understand LDC preparedness across Ontario in terms of potential implementation of DSO capabilities. The survey had a 74% response rate, a testament on the LDC community's high engagement on the DSO topic. The survey highlights that utilities are ready for the change – 70% of utilities have strong operational foundations through centralized control tools and more than half manage DER connections on their system. Hydro One recommends the OEB leverage this collaborative work as their 'readiness assessment' and use these results to inform the investment guidance developed under proposal 1.

The OEB proposes to establish standardized tools to assess the need for grid modernization investments and DSO capabilities to address system needs. Hydro One supports the OEB's objective of supporting utilities in bringing forward proposals for grid modernization investments through rate applications. Hydro One recommends the OEB explore a "Least Cost, Best Fit" framework to ensure utilities are able to capture the diffuse benefits that grid modernization investments will provide. Unlike a BCA framework that is best suited to discrete projects with quantifiable benefits, a "Least Cost, Best Fit" framework would support utilities in assessing the tradeoffs and diffuse benefits that would accrue over time.

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*

***Standardize grid modernization outcomes, allow flexibility to evolve DSO capabilities***

The OEB's outcome-focused Renewed Regulatory Framework has already produced an efficient electricity sector that is responsive to customer and system needs. As the OEB develops its DSO Roadmap requested through the IEP Implementation Directive, it should work with the industry to identify the outcomes needed to support the evolution of DSOs in Ontario in a manner that provides the highest value to customers, DERs and the electricity system.

Standardization is most effective for outcomes where consistency across utilities is important to ensure all Ontarians have access to the same core services. By contrast, flexibility is best suited where customer needs vary and innovation is necessary.

In the context of this consultation, Hydro One recommends the OEB consider standardization as it relates to ensuring utilities are investing in grid modernization (Proposal 1), similar to the approach taken for smart meters and AMI in the late 2000's and early 2010's. While not the same, these foundational investments also enable a broad set of new capabilities that will drive value for customers across policy objectives.

By contrast, Hydro One recommends that the OEB take a more flexible approach to the implementation of DSO capabilities and local markets so that utilities are able to match the pace of development with the needs of their systems and customer expectations.

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<sup>17</sup> [OEB DSO Symposium: TDWG – B1 Functional Assessment Overview](#)

## CONCLUSION

Hydro One thanks the OEB for the opportunity to comment on the Staff Discussion Paper on DSO Capabilities. Hydro One looks forward to supporting the OEB's development of a DSO Roadmap, and recommends that in addition to working with LDCs, the OEB seek written comments on its draft Roadmap to ensure that it captures the necessary elements on sustainable timelines.

Hydro One looks forward to collaborating with the OEB in the various initiatives to achieve the Ontario government's economic development and electrification goals in a manner that aligns with the expectations of our customers.

This filing has been submitted electronically using the Board's Regulatory Electronic Submission System (RESS).

Sincerely,



Melanie Bhandari