

Ontario Energy Board  
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February 17, 2021

**Re: Board File Number: EB-2018-0287/0288  
Utility Remuneration and Responding to Distributed Energy Resources (DERs)  
Feedback following February 3, 2021 Stakeholder Meeting**

Energy Storage Canada (ESC) is the national association for the energy storage industry in Canada. Our membership represents all players along the energy storage value chain – technology providers, project developers, investors and operators, utilities, electricity distribution companies and NGOs.

ESC commends the OEB staff on recent efforts and achievements of the Connections Working Group (EB-2019-0207). Tranche 1 recommendations have been published, with tranche 2 recommendations to follow shortly. We understand that tranche 3 is expected to include amendments to the Distribution System Code. We appreciated that these efforts are being implemented to ensure consistency of rules so that the system and customers are better served. We encourage the OEB to continue its efforts to modernize as it moves forward with Utility Remuneration and Responding to DERs policy consultation.

Recently, ESC commissioned a study to assess the value of energy storage in Ontario. The report, [\*Unlocking Potential: An Economic Valuation of Energy Storage in Ontario\*](#) (“our Study”), shows that the introduction of at least 1,000 MW of energy storage can provide net savings between \$774 million to \$2 billion under a base case and a high estimate case, respectively. Importantly, this study considered the potential benefits associated with the deferment of transmission and distribution assets (i.e., energy storage as a non-wire solution). Unlocking the value of energy storage in Ontario will require a coordinated effort with the OEB, IESO, utilities and energy storage providers on matters such as planning, cost allocation, remuneration, and pathways for regulated utilities to partner with the private sector.

Ontario is well positioned to take advantage of energy storage technologies and services, modernizing the grid, and reducing system costs. The energy storage industry works alongside customers in Ontario to provide energy services and helping to manage costs. In addition to quantifying system wide-benefits, our Study also considered the benefits of energy storage to customers directly (i.e., reduced costs, resiliency, etc.). While behind-the-meter services directly benefit their host customer, there are aggregated benefits for the electricity grid as well. For example, Alectra estimated that the POWER.HOUSE program could see participation of up to

30,000 customers and provide benefits to customers at large.<sup>1</sup> Further, we acknowledge the potential increased value of energy storage as the electricity grid changes with the adoption of solar PV and electric vehicles.

ESC asserts that time is of the essence to move forward with specific consultations and proceedings as contemplated by the OEB's expert reports. We believe it is likely that we will see a high-penetration of distributed energy storage due to:

- Province-wide resource adequacy requirements and the need for new resources as identified by the IESO in the Annual Planning Outlook emerging in the mid-2020s; distributed energy storage resources are scalable and deployable within this timeframe;
- Local and regional capacity constraints as identified in the IESO's IRRP process; for example, IESO has identified the potential for 650 MW of local supply/storage to meet capacity needs in the west of London area;
- Federal climate programs and carbon pricing incentivizing a lower-emissions grid; for example, the Federal government announced new investments in clean energy (i.e., \$964 million over four years to be invested in smart renewable energy and grid modernization projects which includes energy storage), and carbon pricing increasing to \$170/tonne of CO<sub>2</sub>e by 2030;
- Increasing consumer adoption of energy storage due to improved availability and affordability of technology, as well as increasing customer awareness of energy storage and product offerings;
- Reduced market-entry barriers and clearer rules and regulations from the OEB facing how utilities and customers alike can deploy and benefit from DERs in Ontario;
- Increased market programs and valuation of DER resources for existing IESO or utility products (e.g., bring your own device / localized DR programs) to generate new compensation pathways); and
- Increased value and emphasis placed on customer-level backup power using BTM DERs related to smart grid resiliency as a non-wires solution.

We agree in principle with the priority projects that have been identified by ICF. In particular, we support the emphasis on incorporating new best practices in distribution system planning, as it relates to the identification of opportunities for non-wires solutions, as well as the identification of regions of the grid that may benefit from the deployment of distributed storage. Examples of new best practices are emerging across North America as reported by the Smart Electric Power Alliance, *Integrated Distribution Planning: A Framework for the Future* (September 2020). We encourage the OEB to consider these elements in integrated distribution system planning process, such as forecasting, sourcing, transmission-distribution integration and hosting capacity.

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<sup>1</sup> <https://www.ieso.ca/en/corporate-ieso/media/news-releases/2017/04/alectra-study-identifies-residential-solar-storage-potential>



Source: Smart Electric Power Alliance, 2020.

Further, given that investment planning by distributors is ongoing, we consider it essential for the OEB to evaluate the remuneration framework in order to provide clear direction and expectations for investments non-wires solutions. The following quotes from our valuation study (referenced above) underscore the root of the challenge:

*Regulated utilities do not have sufficient guidance for the treatment of revenues derived from wholesale markets through the operations of energy storage solutions. Given this lack of clarity, utilities discount these potential revenues, and therefore energy storage solutions may be deemed uneconomic compared to traditional utility T&D investments.*

And,

*Regulated utilities, including some ESC members, have a responsibility to consider least-cost options within their distribution system plans, including balancing investments in operations and maintenance with capital expenditures. Further guidance would be helpful for the entire sector. For example, instead of making an investment in a traditional wires solution, a utility could contract for services from an unregulated entity if the services obtained meet reliability*

*and system needs. Under this arrangement, a utility could procure services from an energy storage operator, the owner of which would have the flexibility to offer excess capabilities (such as supply of ancillary services) to the wholesale market or other customers. The unregulated energy storage operator would be incented to maximize revenues from other value streams, in order to provide the most competitive offering to regulated utilities, and would bear the risks associated with those additional revenues.*

We therefore consider it essential that the OEB take proactive steps in the near-term to ensure that there is a clear alignment of incentives to ensure the adoption of non-wires solutions where solutions are cost-effective relative to traditional options.

We look forward to participating in future proceedings and thank you for your consideration of our submission.

Sincerely,

A handwritten signature in black ink that reads "Justin W Rangooni". The signature is written in a cursive, flowing style.

Justin W. Rangooni  
Executive Director  
Energy Storage Canada

**Attached: Energy Storage Canada's report done by Power Advisory LLC, *Unlocking Potential: An Economic Valuation Study of Energy Storage in Ontario***