September 16, 2019

Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4
Attn: Ms. K. Walli
Board Secretary

Dear Ms. Walli

Re: **EB-2019-0207**

The Electricity Distributors Association (EDA) represents local hydro utilities, the part of our electricity system that is closest to customers. Local hydro utilities are on the front lines of power, and we know that the most important conversations about energy happen around the kitchen table, not the boardroom table. Our customers understand the power of local hydro, and they value the relationship of trust they have built with their local hydro utilities, relying on us to deliver safer, more reliable, and more affordable electricity.

Ontario's Local Distribution Companies (LDCs) are tasked with safely distributing electricity on an ongoing basis that is reliable and provided at an appropriate level of quality. The growing adoption of Distributed Energy Resources (DERs) creates challenges for distributors in the planning, operation and maintenance of the distribution system. LDCs are preparing to or are actively engaged in responding to requests to connect innovative and emerging technologies from a range of proponents. Modernizing the connection process to include these innovative and emerging technologies will ensure that the appropriate technical information is collected, the necessary analysis is performed, and the appropriate analysis and assessments are completed prior to granting connection, that proponents have access to the information they require and that all affected stakeholders understand the LDC's processes. As the capability of DER technologies changes (e.g., improvements in smart inverters provision of dynamic compensation for voltage support), distributors will need to have good working relationships with their customers and with the proponents who own and/or operate DERs to understand the risks and opportunities to the LDC's distribution infrastructure and system.

The EDA thanks the Ontario Energy Board (OEB) for the opportunity to comment on the scoping of this initiative. The EDA's perspective on each of the 4 questions is provided below.

Question:
Are the objectives for the DER Connections Review initiative clear?

EDA response:
The EDA assumes that the objective of the OEB's DER Connection Review is to address the issues identified in the OEB's August 13, 2019 letter and that these issues statements articulate the "high-level

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set of issues which may be posing barriers to DER adoption"[1]. While the EDA considers these objectives sufficiently clear at this preliminary stage, we suggest that they be expanded to:

- Consider the value DERs provide to multiple stakeholders (e.g., consumers, grid operators, wholesale markets[2])
- Include consideration of the operation of the DER, by the proponent, by the LDC
- Incorporate the perspectives of each stakeholder

It will be important for the OEB to routinely review the objectives (e.g., as technologies evolve).

All electricity stakeholders will experience the qualitative and quantitative impacts of DERs connecting to the grid, whether at the customer's site or at the distribution level or at the transmission level, differently. All impacts need to be recognized, evaluated and to the extent possible valued. The EDA proposes that the objectives be broadly scope at this early stage to minimize the risk of unintended outcomes of narrowly scoped objectives.

The EDA also suggests that the OEB clarify those objectives that are out of scope versus those that will be dealt with outside of this initiative[3] (e.g., rate recovery of common costs related to DER deployment, operation).

Question:
Have staff identified the right topics for the DER Connections Review and do stakeholders have any specific concerns that they want to identify?

EDA response:
In the EDA's view, the topics identified by the OEB are appropriate. This is best demonstrated through the observed alignment between the topics identified by staff and the EDA's vision paper; this is discussed further below.

The anticipated trend in increasing DER requests for connection to existing infrastructure requires a modern connection process that is efficient and effective for all. As detailed in the EDA's *Power to Connect: A Roadmap for a Brighter Future* developing best practices and streamlined processes for connecting DERs to the grid are among the activities required to create and establish the "DER-enabling

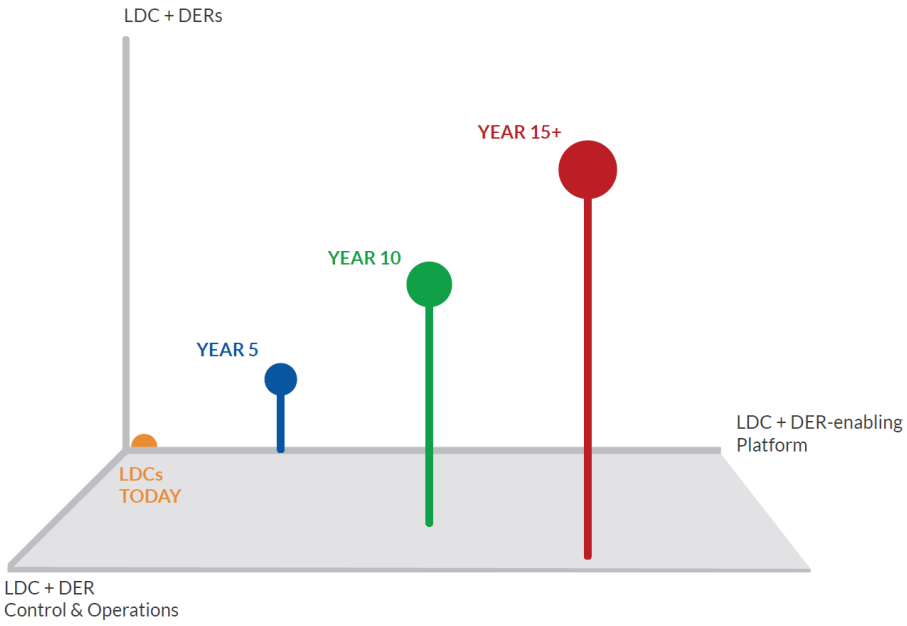
[1] The issues identified are:

- The need for standardization and clarity of definitions, terminology and regulatory rules in respect to DERs
- The need for clear rules regarding cost responsibility for connection of DERs to ensure fairness to DER customers and all other customers of the distributor
- More detailed and comprehensive timelines for the connection process to ensure the timelines are well understood
- Appropriate standardization of connection technical requirements

[2] The EDA notes that the Independent Electricity System Operator has published a series of white papers on innovation that, among other things, focus on DERs and models for expanded participation in wholesale markets. http://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Innovation-and-Sector-Evolution-White-Paper-Series

[3] For example, pursuant to OEB initiatives related to Utility Remuneration and Responding to DERs (EB-2018-0287/0288)

Platform" that will be essential to LDCs evolution (e.g., to Fully Integrated Network Orchestrators (FINOs)). As shown in the figure below, the first few years of the LDC's evolution are expected to focus on establishing these new platforms and processes; this is depicted as the blue sphere relative to the horizonal axis.



The EDA further proposes that the OEB's consideration of these topics will benefit from:

- Being framed to align with the decisions that affected stakeholders (e.g., energy storage providers) will engage in
- Contemplating the linkages between this proceeding and other related initiatives (e.g., EB-2018-0288 Responding to DERs).

As an example of linkage, LDC connection responsibilities to energy storage proponents will benefit from a definition of "Energy Storage" suitable for inclusion in the Distribution System Code (DSC) and from due consideration of whether LDCs' responsibilities to storage proponents should be consistent with or differ from their responsibilities to load customer and to generators.

As is discussed elsewhere, the topics should be sufficiently flexible so that experiences and perspectives of the different stakeholders can be accommodated as can evolving objectives. The EDA notes that at this stage, connection process standardization may only be possible for a limited number of scenarios (e.g., there may be merit in standardizing connections if specific technical criteria of the device and the distribution system can be satisfied) and that it may be more appropriate for the OEB to explore connection process consistency (e.g., of process timelines).

The EDA also proposes that that the topics under consideration should include:

- That coordination and collaboration will be required to update interconnection standards on a regular basis (e.g., for evolving international standards such as IEEE 2030.5 on smart inverter rules).
- The desire from customers for increased amounts of publicly available connection capability information.

- The appropriate project management of connection 'streams' (e.g., timeline differences, prioritization of technical issues). New connection processes could be tailored to the specifics of a project, as the OEB did when it amended the DSC and adopted process distinctions for generators depending on the level of installed capacity.
- Communications responsibilities between all parties (e.g., between individual proponents and distributors, between distributors and the transmitter(s), between the distributor and the IESO)

The EDA recognizes that costs, including the costs of distribution system investments capable of addressing identified technical constraints, will be important decision making factors. The EDA also recognizes that proponents will expect accurate and complete information on the LDCs costs, ideally as part of the connection process. While the questions of what costs will be incurred, how costs are recovered, from whom and over what time period all impact proponents' decision making, it is unclear that they are an essential aspect of this initiative. The EDA anticipates that the connection process should be clear on who provides this information. It is not clear to the EDA that this process needs to establish the rules for cost responsibility, cost recovery, period of recovery and other related issues.

Question:
Are there any proposed solutions that stakeholders wish to identify at this point?

EDA response:
In general, the EDA considers it premature to advocate for a specific solution, rather we suggest that the OEB set out the criteria by which it will assess and evaluate proposed solutions.

At this early stage, it is advantageous that a range of approaches or frameworks, criteria, methodologies (e.g., for prioritizing and valuing qualitative outcomes) be considered. The EDA recognizes that as there are a wide range of circumstances - from the uncomplicated solution that could be appropriate for a distributor that hosts a single DER attached to an uncongested and unstressed portion of the distribution system and may require little automation to the carefully parameterized solution to appropriately manage a distribution system that serves tens of thousands of end users and hosts multiple existing DERs and experiences congestion and/or stress throughout – it may be appropriate to provide a wide range of solutions.

The EDA anticipates that there will be common elements to the viable solutions that will be proposed. For example, despite the fact that the key driver for DER connection requests has 'pivoted' in the past few years proponents have an enduring need for accurate, timely and objective information on the distribution systems' ability to accommodate their project. If providing such information, which represents a change to the connection process currently authorized by the DSC, can be considered a solution then the EDA supports it and, furthermore, advocates for an enabling process.

Another common element of viable solutions is the provision of a DER-enabling Platform that ensures that the distribution network can accommodate DER connections while maintaining safety, stability, reliability and quality. The platform, as described in the EDA's vision paper, is considered a first step in the evolution of Ontario's distribution system. This review should also consider enabling investments in distribution network control and automation, in smart inverters, and two-way communication, among other things.

Question:
What is the best approach for development of solutions to the issues identified?

EDA response:
The EDA understands this question as "How should solutions to the identified issues be identified?".

Procedurally, the EDA recommends that a technical conference be convened so that stakeholders (e.g., distributors, suppliers, customers, small and large consumers) can discuss the identified issues and detail their connection experiences. The technical conference could increase stakeholders' understanding of the range of issues and engage them in providing their views on the priority issues and potential solutions. The OEB, based on stakeholder feedback, could present a way forward for DER connections that could, if appropriate, be adopted as Code amendments at a future date.

The EDA anticipates that it will be beneficial to understand the connection processes of other jurisdictions and their relevance or applicability to Ontario.

The EDA notes that time is of the essence: increased adoption of DERs by customers presents challenges for distributors that may be exacerbated if evolving the connection process is delayed. Increased regulatory certainty is expected to support LDCs as they evolve, whether to become a FINO or a Distribution System Operator, and to best prepare Ontario for the challenges of the future.

Thank you for the opportunity to contribute as the OEB scopes this initiative. LDCs acknowledge that the matters under consideration will impact the electrical sector broadly and that proponents are striving to position themselves in a competitive economy. If you have any questions or concerns with respect to this submission please do not hesitate to contact Kathi Farmer, the EDA's Senior Regulatory Affairs Advisor at kfarmer@eda-on.ca or at 905.265.533.

Sincerely

Original signed by

Teresa Sarkesian
President and Chief Executive Officer