QUEST

November 11, 2019

Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, Suite 2700
Toronto, Ontario
M4P 1E4

To Board Secretary Walli,

Re: OEB Distributed Energy Resources Connections Review Initiative
Board File Number: EB-2019-0207

The QUEST Ontario Combined Heat and Power (CHP) Consortium thanks the OEB for initiating the Distributed Energy Resources (DER) Connection review. The Consortium members have consistently raised connection issues as part of their efforts to install CHP and other DERs at customer sites across Ontario and we welcome the opportunity to share some of our insights with the OEB.

QUEST has reviewed the OEB's August 13 letter announcing the DER Connections Review and finds the objectives clear and that the right topics have been identified. This submission is focused on identifying specific problems with current DER connection processes and practices, and we point to some potential solutions that we hope will inform the development of the OEB's forthcoming issues scoping paper.

Executive Summary

Challenges and barriers to DER connections are very serious as we consistently hear customers, consultants and suppliers reporting high connection costs, uncertain and changing timelines, and conservative approaches to connecting DERs which are all real barriers for customers pursuing grid-connected projects. In part due to these DER connection barriers, more often now companies are actively considering off-grid solutions rather than working in conjunction with the LDCs and Hydro One.

As outlined in the QUEST Ontario CHP Consortium's submission to the OEB's parallel Responding to DERs policy proceeding, there is a systematic problem in which LDCs are not properly incentivised to facilitate DER projects and are instead incented to build

more conventional wires solutions. Work can and certainly should be done to address specific issues and barriers to DER connections, some of which are detailed below. However, these efforts will be of limited efficacy without a concerted effort on behalf of the OEB to address the more systemic problem that the conventional utility business model does not incentivize utilities to facilitate DER projects.

Specific Problems and Suggestions Solutions:

Problem #1: The OEB is not hearing enough from Customers
Most of the feedback received on the OEB's DER Connections proceedings reflect organizations that prefer more regulation, more standardization, more costs, and more time for reviewing DER connection applications. CanSIA, in their appendix letter to Hydro One, had some of the big cost and complexity items listed. However, strangely missing from the list of submissions are bona fide customers, as well as equipment manufacturers and consultants serving customers that have the detailed knowledge and experience in helping build and connect DER projects.

- ✓ **Solution #1:** More collaboration and consultation with customers, industry groups, technology and service providers regarding their experience with DER project development and connections. We recommend that the OEB poll 20 or 30 specific customers as to their connection experience, and we could provide this contact information to the OEB.

Problem #2: The regulatory framework does not incent Utilities to connect DERs
The Board Staff recommendations put forward earlier this year came into focus at the recent Responding to DER proceedings, with many presentations highlighting the fact that our current regulatory model incentivizes utilities to make more capital investments, and install more DER remote monitoring and protection equipment, rather than being incentivised to connect DER resources and keep their involvement and costs down.

- ✓ **Solution #2:** The OEB needs to develop an incentive mechanism to encourage distributors to facilitate DERs and streamline the DER connections process to minimize the time, cost and uncertainty for customers

QUEST applauds the OEB for implementing the regulatory sandbox initiative and we hope that the sandbox will identify new policy and regulatory practices - which will inform new business practices – that would facilitate the adoption of innovative DER technologies. By providing a space for safe testing of new policies, programs, and technologies, a regulatory sandbox could provide an opportunity for Ontario to more quickly and effectively move to a lower emissions energy system and economy that integrates innovative DER technologies that benefit all customers. QUEST is launching a research and engagement project looking at how the regulatory sandbox concept can be applied to jurisdictions in Canada in an effort to facilitate an energy transition through more effective policies, regulations and programs.

Problem #3: Timelines are not properly adhered to

Many distributors take 3-4 times as long as is permitted in the Distribution System Code (DSC) with no consequence. There appears to be no enforcement of the DSC and if a complaints and appeals process exists it is not clearly defined. Based on actual experiences, some distributors have taken liberties with the DSC requirements, such as:

- interpreting the 60 days as “working days” instead of calendar days
- excluding administrative time to process applications and pass them to technical reviewers (which can add several months)
- claiming applications are incomplete (after 1-2 months of administrative review time) due to insignificant issues, thereby resetting the clock
- incorrect and/or confusing, conflicting, or onerous instructions on application forms
- mandating hard copy applications but then requesting electronic because they can’t use the hard copies
- no administrative process to log receipt of applications, pass them to the appropriate parties, scheduling the work/deadlines, and following up to ensure they are completed on time
- requesting additional information that is unnecessary or irrelevant to the impact assessment
- sending questions to persons other than the contact provided in the application
- losing cheques for application fees, or receiving cheques but not cashing them
- excluding the connection cost estimate from the report, sometimes not provided until months later
- minor revisions to application forms that cause applications to be rejected (even if the form was revised after the application was submitted)

When a distributor and transmitter are involved, the distributors often spend 3-4 months doing their own assessment before starting the application with the transmitter, and/or make errors in their submission to the transmitter, resulting in significant delays.

- ✓ **SOLUTION #3:** The DSC needs explicit, clear definitions for how much time is permitted under specific scenarios, when the clock starts and stops, what days are included or excluded, etc., as well as consequences of not following the code, and a detailed complaints and appeals process. Further, the DSC should include an explicit deadline to account for projects where both distributor and transmitter are involved, such that they are required to complete as much of the work as possible simultaneously (for example, total combined review time of 90 days).

Problem #4: technical capacity at the LDCs:

Many CHP Consortium members cited a lack of technical knowledge and experience regarding generation, various types/configurations of distributed generation, and practical comprehension of design limitations of related systems, both within distributors and the consultants they hire to complete impact assessments.

Several members also referenced a lack of quality control systems to review impact assessments and ensure they are free of errors and that requirements are appropriate and relevant for the project. And there appears to be a significant inconsistency among distributors with undocumented and regularly changing requirements defined by individuals.

- ✓ **Solution:** LDCs need to provide a standard of service as the regulated distributor, including having individuals on staff or on contract that are dedicated to DER connections with enough training and experience regarding practical implementation.

Problem #5: Costs of DER connection

Several CHP Consortium members cited inadequate cost estimating procedures, leading to over-estimated connection costs that prevented projects from being economically viable. For example, one customer reported a distributor that did not investigate the connected TS to see what may or may not be required before providing a cost estimate.

Overestimated connection costs are required to be paid 100% paid up-front prior to beginning any coordination work, with excess funds held until well after the project has been commissioned, with no interest returned despite holding the funds for years in some cases.

Customers have also reported that some distributors have identified connection costs as a lump sum with no breakdown or explanation, no tracking/validation or transparency on how the costs are obtained, no updates throughout the project showing progress, and no evidence of control/constraint on distributor spending. If a cost tracking method exists, it is very rarely shared with the customer and only upon request.

There is no accountability on the part of distributors to stay within the bounds of estimated costs and therefore no way for customers to accurately budget for substantial connection costs. Although some distributors offer a more accurate cost estimate for a fee, it can be very expensive (in the range of 15-20% of the entire connection cost) and would likely add unacceptable delays to the process.

- ✓ **Solution #5:** LDCs and the OEB should look at pragmatic approaches to keep connection costs down, avoid basing connection costs on overly conservative assessments, and work with customers on reasonable payment terms

Problem #6: Technical/regulatory requirements

It is our view that generally the LDCs take an overly conservative approach to assessing and designing for DER connections. This includes such things as:

- Taking worst case contingency-scenarios as the base-design vs. more realistic scenarios, and/or offering customers options, such as contingency circumstances under which the DER might not be able to run
- Applying generic technical requirements that are designed for specific types of DERs but not relevant to the specific project
- Onerous and complicated legal requirements in connection cost agreements, such as unlimited costs to be borne by the DER proponent, which result in delays in negotiating and/or understanding the risk of such clauses.
- Request for SCADA data, sometimes after construction is complete, utilizing expensive methods (such as dedicated utility supplied RTU's) leading to additional design modifications to add meters, communications, etc.
- Technical requirements that result in restrictions on generator operations and/or frequent nuisance trips in order to avoid highly unlikely scenarios that could be avoided with more appropriate inexpensive solutions to detect said scenarios directly.
- Oversimplifying grid capacity based on extreme worst-case scenarios for existing generation, which reserves more capacity than it can use. Inability to consider appropriate, reliable, and simple solutions to capacity constraints caused by rare scenarios, rejecting generation applications even though the generation could operate 99% of the time without issue – for example, intermittent generation and/or generation with low capacity factor reserves 100% capacity at all times, and worst-case scenario is 100% capacity operating during minimum load conditions.

✓ **Solution #6:** LDCs and the OEB should consider pragmatic approaches to keep technical requirements to a reasonable level, avoiding unnecessary burdens on customers. Regulatory framework should allow for and encourage capacity to be shared among resources wherever possible.

The QUEST Ontario CHP Consortium thanks the Board for considering our comments. We look forward to the opportunity to continued engagement in this proceeding.

Yours Sincerely,

Richard Laszlo
Senior Associate, CHP, QUEST
Ontario CHP Consortium Chair

Tonja Leach,
Executive Director, QUEST