



Meeting Notes

DERs Connection Review (EB-2019-0207) Working Group Meeting #1

Meeting Date: December 4, 2019

Time: 9:30am – 2:30pm

Location: Ontario Energy Board
2300 Yonge St. ADR Room, 25th Floor

Attendees:

Jake Brooks	The Association of Power Producers of Ontario (APPrO)
Bob Braletic	Alectra Utilities (Alectra)
Michael Lister*	
Patrick Dalzell*	Bruce Power (Bruce Power)
Dan Guatto	Burlington Hydro (Burlington)
Nicolas Gall	CanSIA (CanSia)
Lisa Barber	CEM Engineering (CEM)
Rachael Taljaard	CIMA
Paul Luukkonen	Customized Energy Solutions Ltd. (CES)
Tatjana Dinic	Electrical Safety Authority (ESA)
Kathryn Farmer	Electricity Distributors Association (EDA)
Marty Tzolov	Elenchus Research Associates (For PWU)
Bayu Kidane*	
Kim McKenzie*	
Kent Elson	Elson Advocacy (On behalf of Environmental Defence) (ED)
Dan Sweeney	Enel X Canada LTD. (Enel X)

These notes are for the Working Group purposes only and do not represent the view of the OEB.

Sarah Griffiths Colin McBain* Andrew Battaglia* Thomas Ladanyi (Tom)	Energy Probe (EP)
Justin Wahid Rangooni*	Energy Storage Canada (ES)
Tim Hesselink Brandon MacDonald* Robert Barkley	EPCOR Ontario (EPCOR) Great Circle Solar (Great Circle)
Ankur Mehrotra David Inkley* Ryan Boudreau	HCE ENERGY INC. (HCE) Hydro One Networks Inc. (HONI)
Mohab Elnashar	Independent Electricity System Operator (IESO)
Greg Sheil	London Hydro (London)
Bryan Pelkey	Ministry of Energy, Northern Development and Mines (MoE)
Kerry Lakatos Hayward	OSEA
Roy Hrab Vince Brescia*	Ontario Energy Association (OEA)
Jack Simpson Ian Chow*	Ontario Power Generation (OPG)
Steve Pepper Paul Acchione* Jim McConnach*	Ontario Society of Professional Engineers (OSPE)
Richard Stephenson*	Paliare Roland (For PWU)
Matt Sachs Valerie Kitchel* Imran Noorani*	Peak Power Inc. (Peak Power)
Michael Brophy	Pollution Probe (PP)
Sarah Simmons	Power Advisory LLC (CANSIA)

Paul Reece*	Power Workers' Union (PWU)
Neil Freeman	Public Energy Inc. (PE)
Richard Laszlo	QUEST Canada (QUEST)
Eric Muller*	
Fidel Reijerse*	RESCo
Michael Scott*	
Nishant Gehani	Rodan Energy Solutions (Rodan)
Ted Ko*	Stem
Larry Herod*	
Utilia Amaral	
Marc Brouillette	Canadian Mfrs. & Exp.(CME)
Alex Simakov	Sussex
Jake Brooks*	The Association of Power Producers of Ontario (APPrO)
Hani Taki	Toronto Hydro-Electric System Ltd. (Toronto Hydro)
Sagar Kancharla	W S P

**Participated Via Tele-conference/WebEX*

Purpose

These notes summarize the information provided during the working group meeting and key points of the issues presented in the published materials.

Background

The Ontario Energy Board (OEB) initiated a review of the connection requirements for distributed energy resources (DERs). The review is focused on the connection of generation and storage facilities to the distribution system.

The purpose of the consultation process is to identify any barriers to the connection of DERs, and where appropriate, to standardize and improve the connection process for DERs.

The working group (WG) to review the issues, identify and to develop a set of options and recommendations for the OEB to

Meeting Agenda

1. Introduction :

- Provided a brief executive summary, background and welcome.
- Introduced Key OEB staff and linkages RDER initiative

2. Overview of the Initiative

- Purpose of the Working Group

The purpose of the Connections Review Working Group is to discuss the issues identified in the stakeholder's comments and identify potential solutions that will result in clearer and more consistent rules with respect to process, timeframes, costs and technical requirements for connecting DERs.

- Scope

Discussion comments included a clear identification of what is in scope and what is outside the scope of this initiative. The working group will focus on the point of connection between the customer's electrical equipment of storage and generation facilities with the distributor's system only. This will include the metering point, whether before or after the connection point.

The issues arising downstream within the customer's premises or upstream in the distributor's system **will not** be considered unless they impact the connection.

Staff outlined that the scope would focus on the connection of electrical generation and storage distributed energy resources (DERs) to a distribution system by a licensed electricity distributor.

OEB staff advised that issues relative to changes in regulations or legislation which are outside of the OEB's authority would also be out of scope.

It was suggested that the group first recognize the connection costs before looking at the benefits of the DER system as the connection cost can become problematic.

It was also commented that the aim is that the stakeholder process will result in recommendations that will improve where appropriate the DER connection process through streamlining and ensuring that all utilities apply the process consistently.

A WG member agreed with the need for clearer connection requirements for DER's by LDC's so that new requirements cannot be introduced during the process.

Members discussed the need for a common definition for DER as there is a wide range of definitions in common use. Some WG members pointed out that common rules would be difficult to develop due to the differences in the distribution system across the province.

It was noted that a common definition would be developed and agreed by this WG for the purpose of this consultation.

3. Working Group:

- Proposed Approach

Staff outlined a WG approach in consideration of the stakeholder comments as it allowed staff an opportunity to be better informed on the issues and potential solutions.

- Outcomes

The expectation is the WG to provide feedback on the issues and to propose solutions and recommendations to staff based on groups experience and expertise. It is anticipated that as the group reviews the issues and develops suggested solutions, some quick wins can be identified and provided to the Board for consideration. Subgroups responsibilities and composition

Stakeholders agreed on the formation of two subgroups to work on specific issues, streamline and optimize the process and help reduce costs where appropriate:

- A. Process and Timelines
- B. Technical Requirements

Subgroups will develop options and recommendations for review by the Working Group.

WG members were asked to nominate one representative volunteer from their organization to participate on a subgroup by providing their name, organization and qualifications to OEB staff by **December 11, 2019.**

OEB Staff suggested that each subgroup should set its meeting schedule with logistical support provided by OEB staff aligned with the WG's meeting plan and desired outcomes.

The subgroups will be expected to review and map out the connection process and technical issues for connecting DERs to the distribution system. This would include clarifying definitions where necessary, identifying which tasks are required to facilitate the connection and assigning execution responsibility to the distributor or the customer for those tasks within the connection process. OEB staff anticipates that, within the scope of this project, cost responsibility will follow respectively based on the various task assignments.

OEB Staff suggested that a few subgroup meetings be held to determine the issues to be tackled and this information be reported to main WG for discussion. It was discussed that the subgroups would begin meeting in January 2020. WG members agreed with the approach.

OEB Staff advised that the views and information provided by the WG will be used by staff to develop recommendations to be presented to the Board for consideration.

4. Connection Paradigm

- Introduction of New Paradigm

OEB staff suggested a new connection paradigm for looking at connections:

- 1) **Non-Injecting:** where the connection is considered a load.
- 2) **Injecting:** where injection to the system may occur whether intentional or not in which case the connection is considered a generator.

OEB Staff noted that the new paradigm was a starting point for discussion purposes and additional sub categories to injecting and non-injecting can be added.

WG members suggested that there may be additional categories instead of the two outlined because projects behind the meter cannot inject into the grid at all times. It was suggested that the OEB needs to be clear on what constitutes a DER and what is happening at the connection point when a customer proposes that it be connected in parallel to the grid. In addition the long term energy

thermal impact of connecting a DER to the grid needs to be considered in this review.

OEB Staff reiterated the scope and noted that we are looking at the connection point and are trying to define the connection by the characteristics of the power flow through the connection point, the size of the DER and its purpose, i.e. whether there is intention to inject or not.

A WG member pointed out that the size of a DER has a greater impact on the connection as oppose to the direction of power flow (i.e. injecting or non-injecting).

Another WG member suggested presenting the new paradigm as a 2x2 matrix with parallel and non-parallel as sub categories thus allowing relevant connection requirements to be defined for each quadrant. OEB staff agreed to try and incorporate the suggestion into the revised deck.

5. Definitions

- Distributed Energy Resources (DERs)

OEB started the discussion using the IESO definition for DER with examples of the various DER categories. WG members discussed the relevance of the various DER examples however it was decided that a broader definition is needed for the purposes of reviewing the connection process issues.

OEB staff undertook to develop a revised DER definition based on the input received for the next WG meeting discussion.

- Electrical Demarcation Point:

OEB staff provided three definitions from the DSC for electrical demarcation. Members outlined that these definitions may appear in other parts of the code and should not be changed if they do.

WG members suggested two additional definitions for consideration, point of common coupling and point of connection. The point of common coupling is the point where the customer connects to the distribution system and the point of connection is where a customer owned asset connects to a distributor's asset. WG members highlighted that the current DSC and Hydro One Technical Interconnection Requirements (TIR) definitions for these two terms were inverted when compared to the IEEE definitions for these terms. OEB Staff advised that the definitions for point of common coupling and point of connection would be reviewed and discussed at the next meeting.

6. Wrap Up and Next Steps:

- Next WG Meeting date: December 16, 2019
- Next meeting will:
 - 1) Outline the definitions
 - 2) Scope and mandate of for Subgroups
 - Subgroup meetings to begin early January 2020
 - End of January 2020- subgroups to give WG update

ACTION ITEMS:

- OEB Staff to send out presentation (as is) to WG by end of week (Dec 6th).
- OEB Staff to send out modified presentation to WG by mid-week (Dec 11th).
- WG Members to send in subgroup nominations to OEB Staff by Dec 11th.
- Meeting Notes from 1st Working Group to be sent out to WG members by end of week (December 13th)
- Modified OEB presentation to be sent out to WG members by mid-week (Dec 11th)



NEXT MEETING:

1. Next WG Meeting (#2) will be held on **December 16, 2019**.
2. The purpose of the WG Meeting (#2) will be to finalize on the definitions and the scope of the subgroups that were identified in WG Meeting (#1)