

## Meeting Notes

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

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**Meeting Date:** March 25, 2020

**Time:** 9:30am –2:20pm

**Location:** Ontario Energy Board  
2300 Yonge St. North Hearing Room, via WebEX

Attendees:

Bob Bralectic	Alectra
Nicolas Gall	CanSIA
Nick Martin	CanSIA
Sarah Simmons	Power Advisory LLC (CANSIA)
Marc Brouillette	CME
Lisa Barber	CEM Engineering (CEM)
Vince Green	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)
Falguni Shah	Elexicon Energy
Kent Elson	Elson Advocacy (On behalf of Environmental Defence) (ED)
Sarah Griffiths	Enel X Canada LTD. (Enel X)
Thomas Ladanyi (Tom)	Energy Probe (EP)

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

Justin Wahid Rangooni	Energy Storage Canada
Robert Barkley	Great Circle Solar (Great Circle)
Ankur Mehrotra	HCE ENERGY INC. (HCE)
Ryan Boudreau	Hydro One Networks Inc. (HONI)
Mohab Elnashar	Independent Electricity System Operator (IESO)
Greg Sheil	London Hydro (London)
Peter Ronson	Markham District Energy
Bryan Pelkey	Ministry of Energy, Northern Development and Mines (MoE)
Kerry Lakatos Hayward	OSEA
Roy Hrab	Ontario Energy Association (OEA)
Ian Chow	Ontario Power Generation
Steve Pepper	Ontario Society of Professional Engineers
Matt Sachs	Peak Power Inc. (Peak Power)
Michael Brophy	Pollution Probe (PP)
Neil Freeman	Public Energy Inc. (PE)
Richard Laszlo	QUEST Canada (QUEST)
Nishant Gehani	Rodan Energy Solutions (Rodan)
Larry Heron	Stem
Utilia Amaral	Stem
Alex Simakov	Sussex
Hani Taki	Toronto Hydro-Electric System Ltd. (Toronto Hydro)
Sagar Kancharla	WSP
Jordan Hoogendam	Zon Engineering
Ryan Holder Catherine Ethier Laurie Reid Natasha Gocool Lester Yue	Ontario Energy Board

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Rachel Anderson Lenore Robson Tara Brautigam	
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*These notes summarize the information provided during the working subgroup meeting and key points of the issues presented in the published materials.*

## Meeting Agenda

### 1. Introduction:

- Stakeholders welcomed and participants introduced themselves
- Provided a brief summary of the Working Group mandate and an summary of issues identified in subgroup meetings
- Reviewed the focus of this first Tranche was on achieving “easy wins” or “low hanging fruit” and the purpose of the meeting was to discuss subgroup recommendations to the Working Group

### 2. Overview Tranche 1:

- An overview of the subgroup meetings was provided, including a review of Tranche 1 outcomes
- A list of recommendations was presented for further discussion and approval.
- The following were the stakeholder issues:
  - a. **DER Providers and LDCs** have raised questions about terminology and regulatory rules in respect to DERs
  - b. **Consumer Groups, Customers and LDCs** are concerned with cost responsibility and the need for clear rules.
  - c. **Existing LDC Working Groups and DER Providers** are seeking solutions that will reduce connection timelines.
  - d. **LDC Groups and DER Providers** are seeking clarity and consistency about technical requirements.
  - e. **Customers** want clear and consistent connection rules and requirements
- Outlined the scope of the WG and subgroup and how recommendations flow from the subgroup to the WG to the OEB.
- Reviewed the focus of discussions for both the Technical and Process subgroups highlighting the items that were discussed and those items that remain to be address in other Tranches.
- A concern was raised that the new paradigm is in contrast to development in jurisdictions around the world. The discussion evolved around whether it was too simplistic. It was asserted that proponents have expressed a need for clarity and consistency and the new paradigm facilitates that by focusing on what is happening at the connection. Based on the issues raised, the subgroups could further discuss the development of detailed technical requirements and process based on criteria such as risk to the system. The new paradigm is a mean to change the perspective with a goal of providing clear and more consistent rules.

- Another member pointed out the need for there to be a list of issues (i.e. proponent connection behavior –dispatchable and non-dispatchable) that are identified for future discussion or passed onto the other OEB DER initiatives to allow the group to easily track items
- OEB Staff advised that staff track the list of priorities identified at the working group and subgroup levels and as we take a deeper dive in Tranche 2, this list will be made available to stakeholders. Staff also advised that issues that fall outside the scope of this consultation are handed off to other OEB DER initiatives (Responding to DERs and Utility Remuneration). It was noted that Lenore and Rachel were also on the conference call.
- The Working Group received a detailed overview of the Subgroup recommendations
- Members raised concerns with the recommendation, most notably the protection philosophy contradicting the requirements for “ride-through” capability and the possibility of it being mistaken as technical requirements or OEB requirements. Concerns were also highlighted with the minimum requirements provisions of the other recommendations.
- It was asserted that the protection philosophy is not a technical requirement or an OEB requirement. It is a guidance document intended to provide proponents an idea of the typical kinds of protection that utilities would expect to see when connecting DERs to the distribution system. In terms of minimum requirements provisions, the requested information was what subgroup members agreed was necessary for them to evaluate if their project was a “no-go” or a “maybe” early in the development phase. Staff outlined that there would be additional opportunity for stakeholders to comment as we addressed the individual recommendations later in the meeting.

### 3. Ontario Regulatory Framework:

- An overview of the Ontario Regulatory Framework and Ontario Energy Board’s authority which included the [Electricity Act, 1998](#) and the [Ontario Energy Board Act, 1998](#) was provided to the working group.
- OEB acts under the authority of the legislations and must abide with the requirements of the Acts
- OEB licenses activities (transmission, distribution, generation, wholesaling, retailing) as required by the legislation and establishes licence conditions by which licencees must abide. These licence conditions include provisions requiring Transmitters and each licensee to abide by the codes and rules outlined in the licenses
- OEB also has the ability to issue bulletins and guidelines such as filing guidelines

### 4. Ontario Regulations 326/09

- OEB staff provided an overview of Ontario Regulations (O.Reg.) [326/09](#) which was created under the *Electricity Act, 1998* and primarily focuses on the mandatory information requirements for Connection Impact Assessment Application (Form B) and CIA report for renewable energy generating facilities
- A suggestion was noted to ensure that O.Reg. 326/09 should include all generating facilities in order to bring consistency across the sector

## 5. Recommendations Discussion:

- An overview of each recommendation was presented to the Working Group for discussion and final approval prior to presentation to the Ontario Energy Board to review
- The outcome of Tranche 1 subgroup discussions looked at quick wins or low hanging fruit issues that could be recommended to the Working Group and then onto the OEB for review and implementation.
- A member suggested that items that did not meet consensus should be tracked. The member also inquired about the OEB's role in reviewing the more contentious issues.
- OEB staff outlined that if consensus is not reached on an issue, those issues would flow up through the working group to the OEB. At that stage the OEB may put the opposing views out in a paper and invite comments.

**Action Item:** OEB to issue a parking lot list of items discussed and outline those issues that met consensus, did not meet consensus and a list of items that were passed over to the other DER Initiative to review

### A. Sample Protection Philosophy:

**Recommendation: "The OEB to make the Sample Protection Philosophy available on the OEB website and for LDCs to provide as guidance to proponents."**

- An overview of the Sample Protection Philosophy was presented to the Working Group for discussion and approval to be presented to the Ontario Energy Board for review
- The Sample Protection Philosophy was a derivative of the battery energy storage system Protection Philosophy presented in the OEA report. It was modified to be more generic so that it would apply to a range of non-injecting inverter based sources
- The subgroup recommended that OEB distribute the Sample Protection Philosophy as guidance to proponents of good utility practice and that it should be posted on the OEB website
- One member stated there was inconsistencies with the sample protection philosophy and the UL 1741 standards
- A brief discussion on internal faults outlined in the sample protection philosophy ensued and the whether the philosophy was encouraging the disconnection of generation from the system vs having the generation ride through the fault.
- It was noted that the Sample Protection Philosophy outlines the typical kinds of protection a utility would expect when connecting an inverter based DER and is not intended to provide actual protection settings. The actual protection settings would be derived from a protection study. It was reiterated that this document was not a requirement by the OEB nor was it a standard.
- It was highlighted that this document provided proponents with a guideline as to the format in which this information can be provided to the utility as opposed to a requirement on technical functionality. It comes down to the issue of time coordination to detect faults on the feeder and stability of the grid at the IESO or system level. Local distributors need to clear

faults on their system. This document does not impose any requirements that would interfere the distributors need to clear faults or with the overall grid stability requirements.

- A suggestion was made to add wording that clarified that the multi-function relay for internal faults should be utility grade. Another member outlined that the documents itself is not a set of requirements and hence still allows the LDC to evaluate what is an acceptable multi-function relay. It is still lies within the LDC's purview if it is still acceptable to use.
- Upon discussion, members agreed with the idea of posting the Sample Protection Philosophy document but requested an opportunity to review revised wording which would more clearly convey the intent of the document prior to agreeing to the recommendation.

**Outcome:** OEB to send the Sample Protection Philosophy to the Working Group for final review and comments.

## B. Recommendation to the ESA in regard to CSA C22.3 No.9 and Equipment Certification

**Recommendation: “The OEB Working Group asks the Electrical Safety Authority (ESA) to confirm that, until C107.1 is updated to include low voltage ride-through, inverters certified to UL 1741 will be considered to meet the requirements of CSA C22.3 No.9.”**

- It was noted that the new CSA 22.3 No.9 interconnection standard includes equipment requirements. Hence to maintain compliance with the standard, equipment (inverters, etc.) certification is now required under the interconnection standard. Until manufacturers start to build new products to the new CSA 22.3 No 9 standard or the equipment certification C107.1 is updated, there is a gap in the market. UL 1741 provides some of the ride through capability required by CSA 22.3 No 9 and can serve as an interim step
- Members noted that under Ontario Regulation [22/04](#), all equipment used has to be certified and meet the current standards. Anything beyond the demarcation point has to satisfy ESA standard and should be reviewed and approved by ESA. Hence, if a supply authority is willing to allow inverters certified to UL1741 to be connected to the distribution system, approval from the ESA is still required.
- The ESA's Working Group and Subgroup representative posed a series of questions necessary to refine the recommend request the Working Group would be posing to the ESA. The refinement questions are:
  1. Does it apply only to the mandatory tests of UL1741 or should it include the optional test as well,
  2. Does it apply for exporting DERs only or both exporting and self-supply DERs
  3. For what time period does this condition apply
- It was noted that C107.1 standards will not be finalized until 2021 at the latest and the Working Group could make a recommendation to the ESA to allow a bridge condition to exist to allow UL 1741 until the Canadian certification comes into force
- Similar to the previous recommendation, members requested a small window to provide written comments on this recommendation.

**Action Item:** Working Group to provide comments to ESA's three questions

**Outcome:** Written comments on recommendation to be provided to the ESA by way of the Working Group's ESA representative

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### C. Preliminary Consultation Application Form:

**Recommendation:** “OEB would *mandate minimum requirements* for a Preliminary Consultation Application (PCA) Form *and provide as guidance a* template form that utilities may use. Utilities wishing to use an alternate form must file the alternative form with the OEB so that the OEB can, from time to time, monitor and evaluate its effectiveness for the goals of a consistent, transparent, and efficient process. “

- A review the Preliminary Consultation Application Form was presented to the Working Group for discussion and final approval prior to being presented to the Ontario Energy Board for review
- The Preliminary Consultation Application Form serves as a template of minimum requirements that will serve as a tool to bring consistency in the industry.
- It was noted that some of the smaller LDC don't have resources to identify the information required for DER connections and may request more information than is needed to provide proponents with a “no go” or “maybe” response as it relates to connecting a DER. Hence the standard form serves as a template which establishes minimum requirements and which can be used to enhance consistency across the province
- This form is being positioned to augment the requirements of DSC 6.2.9 for a preliminary meeting and provides a more streamlined option for proponents that may be seeking a simple confirmation from the LDC as to a “no go” or “maybe” versus a preliminary meeting. A request for a preliminary meeting can still be initiated
- The form also provides a tool that will help smaller LDC's differentiate between the impact assessment process versus the preliminary consultation process
- A suggestion was made to make it clear that the OEB recommends the use of the form and that alternatives must be filed with the OEB with an explanation as to why the alternative is required.
- Additional questions were raised relative to including additional information on the form, however a proponent outlined that for those utilities that currently use forms, this process works well and provided the information required.
- It was noted that proponents can use the OEB's Industry Relations Enquiry inbox if they find utilities are not filing alternative forms or not following the process.
- It was also noted that administrative staff would process these forms for the utilities

**Outcome:** Preliminary Consultation Application Form recommendation was approved by the Working Group and will be taken to the Ontario Energy Board for review

#### D. Preliminary Consultation Report

**Recommendation: “OEB would *mandate minimum information requirements* that LDCs will provide in response to a submitted PCA and *provide as guidance a template Preliminary Consultation Report (PCR)* that utilities may use. Utilities wishing to use an alternate report must file the alternative PCR with the OEB so that the OEB can, from time to time, monitor and evaluate its effectiveness for the goals of a consistent, transparent, and efficient process. “**

- A review the Preliminary Consultation Report was presented to the Working Group for discussion and final approval prior to being presented to the Ontario Energy Board for review
- The response from the Preliminary Consultation Report will indicate that there is:
  - No capacity availability on the distribution system
  - No capacity on the transmission system
  - Or they can go to the HONI Calculator to check the available capacity
- It was noted that currently for projects up to 10kW, a CIA is not required
- It was noted that proponents can access HONI Calculator to check if there is available capacity based on their project’s specific required capacity.
- Members stated that other jurisdictions are able to confirmation available capacity and provide a lot more detail information at this stage than what is provided in this report
- Members also expressed a desire for a confirmation of transfer trip requirement be included in this report. It was noted that it was expected that LDCs include likelihood of transfer trip in the notes field on this form.
- OEB staff outlined that additional discussions related to Capacity Heat Maps, connection categorization by risks and a discussion of Hydro One’s White Paper on Transfer Trip will occur in Tranche 2. Keeping the template form separate from the mandated information minimums allows the OEB to make changes to the form more quickly and easily than if the form was mandated in a Code. A suggestion was made to consider a higher threshold than 10kw or a different process for connecting non-injecting DERs. It was noted that additional discussions based on risk and use cases instead of the old paradigm which categorized connections based on size are planned for Tranche 2

**Action Item:** OEB to send HONI’s white paper to Working Group for review and comment in preparation for Tranche 2

**Outcome:** Working Group consensus approved the Preliminary Consultation Report recommendation and it will be presented to the Ontario Energy Board for review



## E. Connection Impact Assessment Application Form

**Recommendation:** OEB would *mandate minimum requirements* for a Connection Impact Assessment Application *and provide as guidance* a template form that utilities may use. Utilities wishing to use an alternate form must file the alternative form with the OEB so that the OEB can, from time to time, monitor and evaluate its effectiveness for the goals of a consistent, transparent, and efficient process.

- A review the Connection Impact Assessment Application form was presented to the Working Group for discussion and recommendation to the Ontario Energy Board once the form is finalized
- It was noted that the subgroups did not complete their review of the Connection Impact Assessment Application Form and additional discussion on the content of the report is required and is planned for Tranche 2.
- It was noted that preliminary discussions with proponents and LDCs revealed a lack of consistency across the industry and the use of standardize forms may help smaller LDCs improve the outcome of the process
- Mandating information and checklist requirements will help proponents prepare a complete application and will reduce future errors. This also serves as an education tool for smaller utilities and proponents and should help with improving consistency and clarity as it relates to the DER connection process.
- The recommendations is provided to help utilities that don't have additional resources and the template form will help standardize consistency across the province
- A member expressed agreement with the recommendation but noted they would support stronger wording and encouragement to use the template forms

**Outcome:** The Connection Impact Assessment Application Form recommendation has been approved by the Working Group. Additional discussion on the content of the forms is planned for Tranche 2 prior to be taken to the Ontario Energy Board for review.

## F. Screening Process

**Recommendation:** OEB should *make available* a Screening Process and work toward mandating its use.

- A review of the Screening Process was presented to the Working Group for discussion prior to being recommended to the Ontario Energy Board for review When developing the screening process, specific wording from Ontario Regulation 326/09 was used to detail what constitutes a substantially complete CIA application
- In terms of the current process flows in the DSC code, the graph depicting the screening process is located between the basic planning and feasibility areas and the area of focus on “go or no go” results
- Complete application with a screening process will be 7 calendar days



- Substantially complete applications will be 14 calendar days to be re-submitted and will receive a queue position
- Members inquired if there is an expectation that utilities notify proponent about application deficiency. OEB staff confirmed that it is the expectation that the utility advise the proponent and confirmed via email the deficiency. It was noted that the proponent would have 14 days to correct the application. LDCs will note the deficiency rather than returning the application package.
- It was noted that is expected that the proponents engage engineering expertise to submit this application. Is was also noted that the utilities would use technical staff to process these applications
- A member asked if the queue position would be visible on the utilities website. OEB staff advised that this would have to be discussed during Tranche 2.

**Outcome:** The Screening Process was approved by the Working Group and will be recommended to the Ontario Energy Board

#### **Wrap Up and Next Steps:**

- The Preliminary Consultation Application Form, Preliminary Consultation Report and the Screening Process have been approved by the Working Group and will be recommended to the Ontario Energy Board
- The Ontario Energy Board staff will present the recommendation to OEB executive team before month end. Tranche 2 is expected to begin towards the end of April 2020
- OEB staff will advise the Working Group of the results from Ontario Energy Board's committee review
- Working Group to send in issues for discussion in Tranche 2
- A combined subgroup session will be held to complete the CIA Application Form

**Next Meeting:** After April 22-Actual date yet to be determined.