

Meeting Notes

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

Meeting Date: December 8, 2020

Time: 9:30am –12:00pm

Location: Ontario Energy Board
WebEX

Attendees:

Bob Bralectic	Alectra
Sarah Simmons	Power Advisory LLC (CANSIA)
Marc Brouillette	CME
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)
Thomas Ladanyi (Tom)	Energy Probe (EP)
Justin Wahid Rangooni	Energy Storage Canada
Ryan Boudreau	Hydro One Networks Inc. (HONI)
Mohab Elnashar	Independent Electricity System Operator (IESO)
Greg Sheil	London Hydro (London)

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Bryan Pelkey	Ministry of Energy, Northern Development and Mines (MoE)
William Coutts	Ministry of Energy, Northern Development and Mines (MoE)
Mark Thompson	Ministry of Energy, Northern Development and Mines (MoE)
Roy Hrab	Ontario Energy Association
Zeina Dahdouh	Ontario Power Generation
Steve Pepper	Ontario Society of Professional Engineers
Michael Brophy	Pollution Probe (PP)
Richard Laszlo	QUEST Canada
Nishant Gehani	Rodan Energy Solutions (Rodan)
Larry Herod	Stem
Thomas Jacob	Sunly Energy
Alex Simakov	Sussex
Hani Taki	Toronto Hydro-Electric System Ltd. (Toronto Hydro)
Ryan Holder Catherine Ethier Laurie Reid James Sidlofsky Natasha Gocool	Ontario Energy Board

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

Meeting Agenda

1. Introduction:

- Welcomed participants and provided instructions on how to participate during the meeting using WebEx.
- Outlined the purpose of the meeting as being:
 - to review the status of the Tranche 2 priorities,
 - to discuss the Tranche 2 recommendations identified by the subgroups,
 - to finalize the recommendations from the Working Group (WG) to the OEB and
 - to discuss Tranche 3 priorities.

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- A new agenda item was added for discussion: A review of the Tranche 1 Recommendations and an update on their status.
- Provided a recap of the scope and focus of this initiative. A reminder, the focus on the connection point will help provide clarity when connecting to the distribution system either through the downstream lens on the consumer side or upstream lens to the distribution side.

2. Tranche 1: Recommendations Review

- OEB staff provided a recap of Tranche 1 recommendations: Preliminary Consultation Application, Preliminary Consultation Report, Standardized Connection Impact Assessment Application Form and a Sample Protection Philosophy.
- On November 26, 2020, the OEB issued informational letters to the industry. The issued letters provided clarity on information that will be exchanged between the DER proponent and the distributors at the preliminary consultation stage of the DER project. The information is intended to assist proponents at the early stages of a project to help identify if their project is a “go or no-go”.
- The second letter issued, identifies a sample protection philosophy for self-supply, non-exporting, inverter-based technology projects. It was highlighted, that to align with industry practice, the language in the sample protection philosophy was changed from injecting and non-injecting to exporting and non-exporting, as suggested by the subgroup members.
- Another completed Tranche 1 recommendation was for the WG to make a recommendation to the ESA to accept inverters certified to UL 1741 to be used in Ontario while the Canadian equipment certification standard CSA 22.2 No.107.1 is updated. As an update, the ESA announced that it will accept the inverters as required by distributors and has informed their inspectors.

3. Tranche 2: Priorities Review

Strategic Plan Roadmap:

- OEB staff presented a brief recap of the strategic plan roadmap. The strategic plan, ‘windy’ roadmap, outlines the scope and Tranche 2 priorities.
- It was noted that the subgroup members developed a more detailed roadmap outlining deliverables and completion status of priority items.
- To facilitate discussion, the recommendations were grouped in four focus areas: Process Front End, CIA process, Process Back End, and Dispute Resolution.
- OEB staff walked through the focus areas and outlined the topics that were completed and provided suggested topics that should be moved to Tranche 3.

Process Front End:

Non-Exporting Screen DSC 6.2.1- Load Displacement Generation (*Process Subgroup*)

Recommendation:

- *The Working Group recommends removing the reference to Load Displacement Generation Facilities in section 6.2.1 of the DSC.*
- *In addition, the applicability of all requirements in Section 6.2 of the DSC to LDGs should be reviewed, as LDGs may need to be treated differently than other embedded facilities in certain respects.*
- *LDCs may still adjust the level of scrutiny in the CIA based on the individual project.*
- *The Working Group recommends further improvement and clarity be provided in the definitions for LDG and Emergency Backup Generation (EBG) facilities.*
- The recommendation from the subgroup is to remove the reference in Section 6.2.1 to an exemption from 6.2 for load displacement. The exception for emergency backup generation will remain as the distributors in the subgroup agreed that it does not require a CIA. However, a better definition for emergency backup generation is needed that makes clear that it should not be dual purposed and operated as load displacement generation when grid supply us available.
- It was noted that removing the exemption in 6.2.1 means that load displacement generation will require a CIA while emergency backup generation will not.
- Proposed definitions for load displacement and emergency backup generation were provided to working group members.
 - It was noted that the emergency backup generation definition was derived from [O.Reg 346/12](#) under the *Environmental Protection Act*.
 - It was noted that non-exporting projects may still go through a less rigorous analysis than exporting projects. A member raised a concern that he believed the Working Group objective was to remove discretion from LDCs. The member suggested that more specific definitions and process requirements would provide a more predictable path forward.
 - Another member suggested the proposed definition for EBG was too specific and should not include operating requirements
- A member suggested that the second bullet of the recommendation had to be completed before the WG would be comfortable accepting the recommendation. The WG suggested that the subgroup members make a full review of Section 6.2 of the DSC to determine the implications, if any, of removing the load displacement exemption in section 6.2.1.

Discussion Outcome: Working Group members agreed the subgroup members should conduct a review of Section 6.2 to ensure the applicability of all requirements in Section 6.2 of the DSC to LDGs as LDGs may need to be treated differently compared to embedded facilities in certain respects.

Action Item: OEB staff to put forth the recommendation to the Technical Subgroup members, to review Section 6.2 as part of Tranche 2.

Screening Process - Application Completeness Check (*Process Subgroup*)

Recommendation:

- OEB should **make available** a Screening Process and work toward mandating its use.
- A review of the screening process recommendation was provided to the WG members.
- The proposed screening process was created to facilitate LDCs providing a completeness check in a timely manner and advise applications of any deficiencies that prevent processing of the application. This should allow applicants to address deficiencies and start CIA studies expeditiously.

Discussion Outcome: The Working Group members agreed the screening process recommendation can move forward into DSC Changes.

Master Study Agreement between HONI and LDC (*Process Subgroup*)

Recommendation:

- There can be a time saving for an LDC to assign binding authority for study agreements within the organization to a lower-level manager if feasible.
- Allow electronic signatures for Study Agreements
- OEB Staff provided a recap of the study agreement process, where a study agreement is signed between HONI as the transmitter and an LDC if a transmission level CIA is required.
- Subgroup members had discussed creating a master study agreement that would be prepared and executed between Hydro One and an LDC that outlines the necessary terms and conditions.
 - Feedback from Hydro One Networks Inc. indicated the implementation of the master study agreement is not feasible since all study agreements require signature by a binding authority.
 - A few members disagreed stating that the concept of a master agreement should be pursued and that it is feasible to have general terms and conditions with specific study agreements necessary to be signed for each CIA application.
 - The Working Group did not address the recommendation of delegated signing authority.
- A recommendation to the WG, would be to allow e-signatures signatures on study agreements.
 - Working Group members noted that the *Electronic Commerce Act, 2000* already allows e-signatures as legal and this recommendation is not necessary.
 - OEB staff noted that the recommendation was to make sure that documents in the process did not imply that hardcopy signatures were required.

Discussion Outcome: OEB staff will review the WG comments with the subgroup.

Risk Framework (Technical Subgroup):

Recommendation:

- *Continuing the work from Tranche 2, validate the risk grouping categories for reasonableness. Explore if the risk groupings can be used as a replacement for the existing DSC size categories.*
 - OEB Staff introduced the risk framework as developed in Tranche 2 and Nishant Gehani (Rodan Energy Solutions) provided a high-level overview.
 - The purpose for the development of the Risk Matrix was presented.
 - The intention was to create a template that enables an LDC, or a group of LDCs, to develop a risk-based classification system of DER connections that can be used as a triaging tool in the DER interconnection process or act as a risk severity tool for the purpose of technical requirements.
 - After further work proving reasonableness and reliability of the evaluation tool, it may be considered as a possible alternative gateway to the CIA process flows to replace the current micro, small and medium and large DER size categories.
 - With more testing and evaluation, it could possibly lead to various technologies and risk levels having typical technology requirements to give proponents indications early in the process on the requirements for the connection.
 - The risk framework spreadsheet is a template that allows utilities to input scores based on the distributors assessment of relative risk of connecting specific DER technology and feeder factors into the framework. The framework then calculates the risk index of projects for their technology, operational profile, and feeder location.
 - The heat levels are assigned from 1-4, where risk level 1 (green) is lower level risk potentially resulting in an easier process to connection that should be less costly. While a level 4 (red) is a high risk and likely to be more complex and costly connection. Any project over 10 MW will need an SIA based on Market Rules.
 - Identifying the risk levels and the technical requirements is expected to give proponents a better idea of the outcomes, before starting the CIA application.
 - Members are encouraged to reach out and provide examples of similar projects, that can be included into the risk framework. They may need to be added later.
 - A member stated projects that are a combination of 2 or more use cases are not included in the framework. Future projects may be these kinds of combinations e.g. solar with battery and/or rotary generation.
 - It was noted LDC's will be given a chance to review the risk framework and evaluate the model as it's been developed, by exploring the outcome of the risk groupings versus actual CIA results.

Discussion Outcome: The risk framework will continue into Tranche 3, in order to validate the risk categories for reasonableness and explore if the risk groupings can be used as a replacement for the existing DSC size categories

Action Item: The subgroup to recruit LDCs to test the Risk Framework to validate for reasonableness.



Feeder Tools (*Technical Subgroup*):

Recommendation:

- *Require LDCs to publish a list of “restricted feeders” by name and feeder designation that they operated that are known to not have capacity to facilitate a DER connection. The list can be updated as necessary by system reconfiguration or expansions. An interactive resource like the HONI capacity tool should not be mandated at this time, however interactive resources should also not be precluded. The LDC should identify their restricted feeders even if the constraint is caused by an upstream asset that they do not own.*
- A review of the subgroup recommendation to the working group was provided as above.
- A member suggested that more context around the reason for the issue has to be included when the recommendation is taken forward.
- A member enquired what the frequency of publication would be and suggested the wording in the recommendation be revised to include more clarity.
- A member suggested the wording could indicate that LDC’s update the list whenever capacity becomes available or restricted or within 6 months and include wording around ‘whichever is sooner’.
- It was stated that the other DER initiative will look at the benefits of capacity tools and the timeframe may be born out of that initiative.
- Another member stated there is an opportunity to create an automated system that would post the restricted feeders by postal code to speed up the process in Ontario.
- It was noted that the current volume of DER applications in Ontario is not as high as other jurisdictions and the work done with the introduction of the standardized preliminary consultation forms provides proponents with the information they need to make a decision as to whether to proceed with their projects. It is expected that the Responding to DERs initiative will address future policy changes and determine when more sophisticated tools are required.

Discussion Outcome: The stakeholder view of creating an automated system will be incorporated into the draft report template for future review.

Action Item: OEB staff to query the subgroup members to determine the frequency of when the feeder list is updated by LDC’s.

Standardization of Technical Requirements (*Technical Subgroup*)

Recommendation:

- *Replace DSC Appendix F.2 in favour of a reference to CSA C22.3 No 9 and a list of other useful resources*
 - *Including the HONI TIR is a guideline (or upper bound) for good utility practice for connection of DERs.*
- *Request LDCs to specify where they would differ from the HONI TIR for their system or build a repository of examples of projects and resulting technical requirements for their system.*

- *Require LDCs to provide specific, binding technical requirements for a project as an output of the CIA*
- A review of the subgroup recommendation to the WG was provided.
- It was indicated that subgroup member consensus suggested a replacement of F.2 to reference CSA 22.3.9 as standard in Canada and use HONI TIR reference as a guideline.
- LDC's will be requested to identify technical requirements specific to their system
 - HONI is currently working on the revisions to their TIR that will offer improved clarity. The TIR contains general requirements and the CIA will note specific requirements for the connection.
- A member enquired about what repository requirements would include.
 - It was suggested that utilities provide non-identifying examples of the technical connection requirements that came out of specific CIA projects. This should build up a library of connection requirements based on technology, operational profile, and feeder factors.

Discussion Outcome: Appendix F.2 will be changed to reference CSA 22.3.9 and distributors will be required to identify specific technical requirements applicable for projects connecting to their system. Distributors may create a repository list of requirements from past projects.

Action Item: No further action is required by the WG at this time.

Concurrent CIAs Process: Distributor, Host Distributor and Transmitter (*Process Subgroup*):

Recommendation:

- *Provide further clarity about the Distributor's, Host Distributor's and Transmitter's concurrent CIA processes*
- *Implement standardized Connection Assessment Application and CIA(also knowns as DTCA) – CCA/CCRA Processes' changes with recommendation to include the amended changes in the Distribution System Code (DSC)*
- *Proposing to continue working on standardized risk levels, use cases categories and time frames for connecting DERs to the distribution system and determine the need of potentially adopting the work to the process flows in the DSC as required.*
- A review of the subgroup recommendation to the WG was provided.
- Under the current process, some distributors have not provided information to the transmitter until the distributor CIA was complete, resulting in total analysis time of 120 days. The recommendation to provide clarity around concurrent studies is expected to reduce that time to 80-90 days.
- The recommendation would require a DSC amendment to the process:
 - To enable the process to be conducted near concurrently as much as possible.
 - To enable an additional CIA process that includes a host transmitter also to be done concurrently.
- The proposed recommendation concerns a dual CIA process and the WG members were asked to review the dual process and provide comments prior to the next meeting.



Discussion Outcome: Working Group members were provided the Dual CIA Process flow charts for review.

Action Item: Working Group members to review the dual CIA process flow and provide comments back at the next meeting.

Back End Process

Capacity Allocation Term Length (Process Subgroup):

Recommendation:

- *Develop additional code requirements to facilitate the understanding that the CIAs are valid for a specific time frame.*
- *At the discretion of the Distributor and or Transmitter an extension of the CIAs expiration date may be granted if deemed necessary*
- A review of the subgroup recommendation to the WG was provided.
- To provide context to the WG members, it was noted that subgroup members raised a concern that proponents who do not sign a CCA agreement within a specific timeframe will lose their capacity allocation and spot in the queue.
- One of the proposed recommendations to the WG is to amend the codes and specify the CIA timeframe is 6 months or the CIA report can note an expiration date
- WG members did not provide comments.

Discussion Outcome: Subgroup members to conduct further discussions to finalize the timeframe for this recommendation.

Action Items: No further action item by the WG.

Connection Cost Agreements and Build Flow Charts

CCA Agreement (option to enter agreement after CIA Completion) (Process Subgroup)

- WG members were provided a process flow chart of CIA/DTCA and the CCA/CCRA agreement to review.
- The purpose of the process flow charts, was to provide context to the WG members, identify responsible parties and outline the expected time frame for moving ahead when the CIA is completed. It is anticipated that the flow charts can be used as an informational item between LDCs and proponents to provide clarity on the process and responsibilities to build.

Construction Build Process

Recommendation (draft):

- Proponents should be encouraged to reach out and engage the LDCs regarding delays.
 - A proponent should be able to delay their in-service date by more than 6 months only if there is a confirmation from the LDC
 - Capacity should be made available not only on a first-come first-serve basis but should also be allocated to qualified proponents who are ready to connect within a reasonable time frame.
 - Should a proponent rejoin the queue at a future date with the same project, it may be possible to mitigate some costs by leveraging the materials and assessment previously completed.
 - Limit the ability of a project proponent to extend the agreed upon in-service date (at CCA execution), provided it is based on exceptional circumstances or project complexity, to one time only, unless mutually agreed with the LDC. If they can't connect within the extended time frame, they will be refunded their deposit (costs will be deducted), and their contract voided or their position in the queue should be reset at the discretion of the LDC. The group suggested that 6 months was a reasonable extension for smaller projects (e.g. under 2 MW).
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- To provide context to the WG, it was highlighted that subgroup members indicated the DSC does not bind proponents and cannot specify that proponents must engage the LDCs regarding delays with in-service dates. Subgroup members noted that the DSC specifies that CIAs should not be done more than 3 years before an in-service date (5 years for water-power projects). Extension should be granted for 6 months, depending on capacity allocation.
 - It was noted that the subgroup members are still discussing the timeframe but indicated that 6 months expiration is adequate for smaller projects and for larger projects, 8-10 months may be a sound timeline.
 - It was further emphasized that the recommendation is related to providing the opportunity for an extension when there is no other proponent in the queue and the capacity is still available.
 - The intention of the draft recommendation is to strike a balance between LDC and proponents to ensure queue squatting does not take place.

Discussion Outcome: Subgroup members will continue the discussion in Tranche 3 and hope to provide a recommendation to the Working Group in Tranche 3.

Action Items: No further action items by the WG.

4. Dispute Resolution Process:

- As a recap, WG members were provided a brief overview of the dispute resolution process discussions at the subgroup level.
- It was noted that every distributor is required to have a dispute resolution process in their conditions of service. LDC's also have the option to submit an industry relations enquiry to the OEB and the issue can be brought to the Board for review.
- However, utility and non-utility participants did not agree on the content of minimum standards for a dispute resolution process:

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- Non-utility participants supported interconnection dispute resolution processes that involve a neutral third party to assist in resolving disputes, especially on technical issues.
- Utility participants did not support interconnection dispute resolution processes that involve a neutral third party

The participants did not reach consensus as to continuing with the status quo or recommending specific changes. Non-utility participants ask that the matter be dealt with in a future phase of this process that will involve the OEB deciding on the content of an interconnection dispute resolution process.

- Kent Elson (Environmental Defence) provided additional context surrounding the differing views. It was noted that the dispute resolution process is important and indicated best practices are needed for facilitating a positive connection process, as seen in other jurisdictions. He noted there was a lack of a 3rd party review which is necessary to provide alternate technical views. Continued discussion is recommended at a future stage and it was suggested the use of a different kind of procedure was needed to bring recommendations to the OEB management for review. Kent stated that the Working Group consensus model favours the status quo and that there needs to be another way of bringing forward issues where there is no consensus and stakeholders disagree.
- Staff noted that the Working Group agreed in Tranche 1 how recommendations around topics for which there was not consensus would be addressed. Where there is not consensus, OEB staff provide both side to OEB management for consideration. Further, staff also noted that proponents are welcomed to submit more detailed comments for staff to take forward for management consideration.

Discussion Outcome: Continued discussion will follow in Tranche 3.

Action Item: Kent Elson will submit additional information on the dispute resolution process to WG members

5. Draft Report Template

- As a follow up to the draft report template that was issued members provided comments during the meeting.
- It was emphasized that the report is a product of the Working Group and members are encouraged to take part in providing information in the report.
- A member suggested providing a list of working group participants at the beginning of the report and moving the description of the working group participants to an appendix section.
- The report template will continue to be developed as discussions continue. Working Group and subgroup members are invited to make comments and provide contributions.
- For items on which the WG does not arrive at consensus, both views would be outlined in the report.

Discussion Outcome: The Working Group document of recommendations is the primary deliverable of the Working Group and is intended to be provided to OEB management and made



publicly available. It will be revised as Tranches are completed.

Action Item: OEB staff to distribute a 'sign-up sheet' for sections of the document. Working Group members to volunteer to be principal writer on specific sections of the report.

6. Tranche 3:

- Discussions on Tranche 3 topics is deferred to the next meeting.

7. Next Steps and Action Items:

Action Items:

1. Non-Exporting Load Displacement: OEB Staff to circulate recommendation to the Technical Subgroup members to review Section 6.2 in the DSC
2. Risk Framework: OEB staff to circulate
3. Feeder List: Working Group to provide comments
4. Recommendations: Working Group to review and provide comments

Next Working Group Meeting: TBD for February 2021 (Tentatively Feb 9)