

Distributed Energy Resources (DER) Connections Review

EB-2019-0207

Working Group Meeting

May 2, 2022

Land Acknowledgement

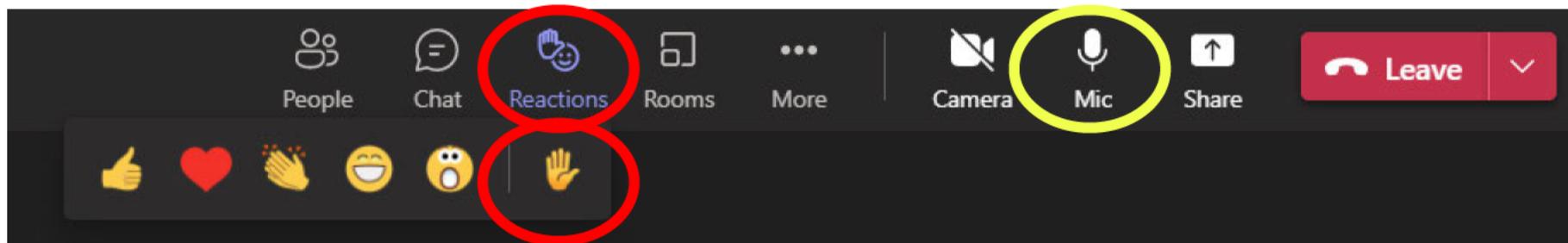
The Ontario Energy Board acknowledges that our headquarters in Toronto is located on the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples. This area is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit.

We are grateful for the opportunity to gather and work on this land and recognize our shared responsibility to support and be good stewards of it.

MS Teams – Mute and Raise Hand Feature

Please kindly mute microphone when not speaking.

Please use the Raise Hand feature (under the “Reactions” control) if you would like to speak during the meeting, and the presenter or OEB staff will call upon you.



When speaking, please start with your name and organization.

Agenda

No.	Discussion Item	Start	Duration
1.	Opening Remarks	1:00pm	15 mins
2.	OEB Staff Update	1:15pm	15 mins
3.	Process Subgroup on RRR	1:30pm	15 mins
4.	Process Subgroup on Connection Cost Estimating	1:45pm	10 mins
5.	Technical Subgroup on Risk Framework	1:55pm	20 mins
6.	Technical Subgroup on Bi-Directional EVs	2:15pm	35 mins
7.	Break	2:50pm	5 mins
8.	Tranche 3 Closeout	2:55pm	10 mins
9.	Interest and Priorities for Tranche 4	3:05pm	35 mins
10.	Proposed Next Steps	3:40pm	20 mins

Opening Remarks

Brian Hewson, Vice-President, Consumer Protection & Industry Performance

Today's Goals

01

Review accomplishments of Working Group

02

Review Tranche 3 Subgroup proposals for potential Working Group endorsement

03

Close Tranche 3

04

Determine priority areas for Tranche 4

Key Principles of Engagement for DER Connections

Industry Need

- Need ongoing engagement with industry to ensure issues remain relevant and address current and future trends
- Need to ensure level of consultation is in-line with industry expectations

Participation

- Working Group, with OEB staff facilitation, would have the following meetings:
 - Approx. bimonthly WG
 - Approx. monthly SG
 - Recurring or ad-hoc for others

Deliverables

- Seek industry proposals for solutions
- Industry to strive for consensus recommendations, with dissents noted if needed
- Use Working Group meeting summaries to document recommendations, with dissents noted if needed

OEB Staff Update

Meeting on 2 May 2022

Overview of Tranches

Tranche 1: Letters to Distributors

- Informational guidance to distributors, mainly related to preliminary consultations and sample technical documents

Tranche 2: DSC Amendments & DERCP

- DSC Amendments to codify recommendations from Tranche 1, establish DERCP, and standardize templates and forms.

Tranche 3: Metrics, Estimates, Risk, EVs

- RRR Requirements
- Cost Estimates
- Risk Framework
- Bi-Directional EVs

Tranche 3 – Overview of Subgroup Proposals

Process



Update RRR to monitor performance against DERCP



Express support for concurrent utility initiatives on connection cost estimates

Technical



Establish staged approach to Risk Framework



Provide issues list for bi-directional EV chargers

Working Group to review and reject, revise, or endorse proposals from Subgroups in order to conclude Tranche 3.

Recommendation for RRR

Process Subgroup Recommendation

See accompanying presentation

Existing RRR

RRR 2.1.15 (Deleted in 2021)

For Renewable Energy Generation Facilities greater than 10 kW:

- No. of CIAs completed within timelines
- No. of CIAs completed outside timelines
- kW of CIAs completed

For Renewable Energy Generation Facilities less than 10 kW:

- No. of Offers to Connect
- kW of Offers to Connect

RRR 2.1.14

For Net Metered:

- No. by renewable source
- Installed kW by renewable source
- Installed kW of storage used by renewable source

For other embedded generation:

- Number
- Installed kW

Overview of RRR Proposal

Context

- Prior RRR 2.1.15 for on-time performance of utility completion of CIAs for renewable projects, and offers to connect for micro renewable projects, deleted in 2021.
- No RRR for tracking new Preliminary Consultation Reports.

Recommendation

- Establish RRR for tracking number of PCRs.
- Establish RRR for tracking on-time performance for CIA completion.
- Establish RRR for tracking number of DER connections.

Anticipated Benefit

- Ability to track whether customers are using the new process for PCR.
- Ability to monitor utility performance of prescribed timelines.
- Ability to track pace of DER connections across sector.

Proposal for New RRR

The Process Subgroup recommends the following:

- The existing requirements in RRR s. 2.1.14 remain unchanged for net metering and embedded generation.
- The existing requirements in RRR be updated to include the following:
 - Number of Preliminary Consultation Reports issued
 - Number of CIAs completed within DER Connection Procedures prescribed timeframe
 - Number of CIAs completed after DER Connection Procedures prescribed timeframe
 - Number of CIAs completed
 - Number of DERs connected

Outstanding Issues for RRR

- The Process Subgroup did not arrive at recommendations related to additional reporting related to the type of DERs being connected, and expressed a desire to review this in future tranches.

Recommendation for DER Connection Cost Estimating

Process Subgroup Recommendation

See accompanying presentation

Overview of Cost Estimating Proposal

Context

- Subgroup identified +/- 50% uncertainty reported in Hydro One cost estimates to be a source of concern for developers.
- Subgroup reviewed possible solutions for refined estimates or new ways of reporting cost estimates.
- Hydro One has ongoing initiatives to improve uncertainty.

Recommendation

- Confirm support for Hydro One continuing its efforts to improve cost estimate uncertainty, request an update from Hydro One on status of initiatives during future Subgroup meetings, and revisit whether further review is warranted during future sessions.

Anticipated Benefit

- Hydro One will be able to continue to execute its internal initiatives to improve expected uncertainty range of estimates, and can report back on its internal plans.
- Subgroup can make recommendation that will remain relevant once outcomes of Hydro One's initiatives are further advanced.

Proposal for Cost Estimating

The Process Subgroups recommends the following:

- The Working Group should confirm support for Hydro One to continue its internal initiatives to i) improve cost estimate uncertainty and ii) potentially revisit the way in which estimates are presented.
- The Process Subgroup should receive updates from Hydro One as appropriate and re-evaluate whether further review is warranted, once the outcomes of Hydro One's ongoing initiatives are better known.

Recommendation for Risk Framework

Technical Subgroup Recommendation

See accompanying presentation

Overview of Risk Framework Proposal

Reference

Context

- Risk Framework Small Group advanced a tool related to DER features, faced challenges in incorporating feeder characteristics in tool.
- Multiple objectives complicated ability to advance.

Recommendation

- Focus efforts on Risk Framework, distinct from a Risk Tool.
- Establish a staged approach for development of Framework, focusing on characterization of connection complexity at Stage 1.

Anticipated Benefit

- Risk Framework Small Group can work towards concrete output for Stage 1, and establish a foundation for subsequent stages.

Recommendation for Bi- Directional EV Issues List

Technical Subgroup Recommendation

See accompanying presentation

Overview of Bi-Directional EV Issues List

Reference

Context

- Small Group identified three types of challenges for bi-directional EV integration:
 - Technical.
 - Application.
 - Connection Cost.

Recommendation

- Support continued exploration of issues and potential opportunities, as presented in accompanying presentation.

Anticipated Benefit

- The Working Group will be able to better understand barriers to bi-directional EV connections, and form high-level recommendations for their resolution.

Overview of EV Issues

Technical Challenge

- Bi-directional chargers can increase the total nameplate of installed DER at a connection point beyond the **micro limit** of 10 kW.
- LDC may not have **visibility** on all EV deployments (uni- or bi-directional).
- Certification **standards** for stationary and mobile inverters fall under different jurisdictions.

Application Challenge

- Application **forms** do not explicitly list bi-directional EVs.
- CIA **application cost** can be prohibitive for 10-30 kW installations.
- **Requirement** for CIA may not be clearly understood for cases with incremental deployments (e.g. several <10kW facilities deployed over time).

Connection Cost Challenge

- **Baseline connection costs*** can be prohibitive for projects <30kW.
- **System upgrade** costs may impact viability, particularly when costly upgrades are triggered by incrementally small facilities.

* For the present discussion, baseline connection costs refers to standard process and infrastructure costs that are incurred for all projects, even when system upgrades are not required.

Overview of Subgroup Areas of Exploration

Micro Threshold

- Should the micro threshold be increased above 10 kW?

Export Control to Limit Application Costs

- Can an export control reduce the evaluated size for a connection application, to either eliminate or simplify CIA study requirements and costs?*
- What technical commitments are required to allow this?

* Not all electrical parameters would necessarily be impacted by an export control – for example, export control may not impact the potential short circuit contribution of a facility.

Simplified CIA for Systems up to ~50 kW

- Can a simpler CIA process be established for systems up to, for example, 50 kW?*
- What technical commitments are required to allow this?

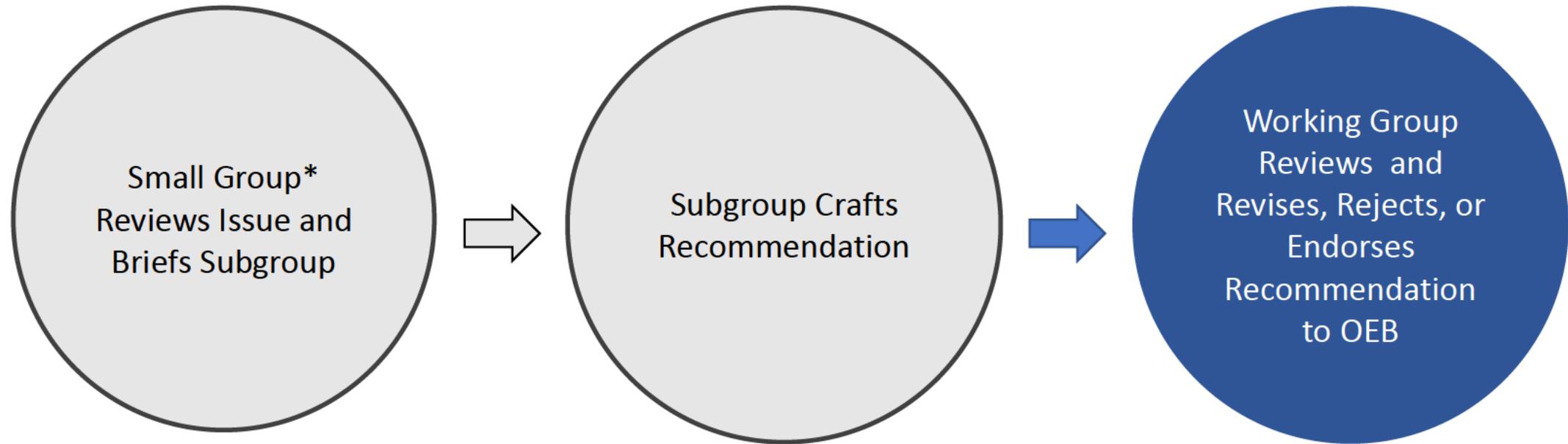
** There was discussion that some LDCs may already have streamlined processes for such applications.

Break

Tranche 3 Closeout

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- Discuss whether Working Group agrees to close Tranche 3.



*If established by Subgroup

Tranche 4

Reviewing Working Group interest in Tranche 4 and potential priority areas

Proposed Tranche 4 Topics

Process

1. Connection Cost Estimating
2. CAE for Small Generators
3. Capacity Deposits

Potential Parking Lot:

1. RRR on Types of Connected DERs
 - a. In-meeting note: Some interest in tracking rate class of net metered customers; % of customers on constrained feeders; MW capacity of connected DERs.
2. Connection Deposit Refund Timelines
3. Dispute Resolution
4. Potential Revisions to Agreements

Technical

1. EV Charger Connection Issues

- a. Can address LDC ability to charge a fee for micro CIAs through this discussion
- b. Expand to cover both uni- and bi-directional EVs
- c. Establish issues list for Working Group review by July 2022 (TBC)

2. Risk Framework

Proposed Next Steps

Proposed Next Steps

Month	Activity
May 2022	WG Establishes Tranche 4 Process Subgroup Reviews CAE and Capacity Deposits Technical Subgroup Updates EV Charger Connection Issues List
June 2022	Process Subgroup Generates CAE and Capacity Deposit Recommendations Technical Subgroup Updates EV Charger Connection Issues List
July 2022	Process Subgroup Finalizes CAE and Capacity Deposit Recommendations* Technical Subgroup Finalizes EV Charger Connection Issues List WG Reviews EV Issues List
August 2022	Process Subgroup Reviews Connection Cost Estimating Recommendation Technical Subgroup Reviews Risk Framework Recommendation
Fall 2022	Process Subgroup Finalizes Connection Cost Estimating Recommendation* Technical Subgroup Finalizes Risk Framework Recommendation* WG Reviews and Finalizes Remaining Recommendations
* If needed	