

<b>Date:</b>	April 4, 2025	Meeting held as part of the Massachusetts Technical Standards Review Group (TSRG) for discussion of industry topics and collaboration amongst utilities and the DG community. Meeting minutes are outlined below. If there are any corrections, additions, or omissions please notify the preparer.
<b>Prepared by:</b>	Tony Morreale tmorreale@ligconsultants.com	

Participants:

Michael Porcaro (Member – National Grid)	
John Bonazoli (Member – Unitil)	
Tony Morreale (Member – LIG Consultants)	
Greg Hunt (Member – Zero-Point Development)	
Brian Lydic (Member – IREC)	
Brian Ritzinger (Member – DPU)	
Brett Jacobson (Alternate – Eversource)	
Gerry Bingham (Alternate – DOER)	
Adam Houghton	Jorge Jorge
Anish Ganta	Mark Bentson
Beau Millett	Melusi Nyoni
Carless, Travis S	Nachum Sadan
Carson Bullock	Nathan Walsh
Claire Loe	Niall Pascal
Claudia Cobani	Patrick M Fam
Courtney Feeley Karp	Paul Krell
Cristian P	Prasanth Gopalakrishnan
Daniel J Mungovan	Quinn Perry
Daniel McDonough	Rahul Pantagada
Daniel Passarello	Ruvini Kankanamalage
David LaPlante	Tara Reisner
Farzam Nejabatkhah	Timothy J Callahan
Heath Rosenstiel	Xin Li
James P DiLuca Jr	
Jeannie M Amber	
Jeff Long	
Jennifer Chalifoux	
Jeremy Kites	
Jordan Graham	

Notes:

## 1. Subgroup Updates

- Flexible Connections – Michael Porcaro, NGRID (on behalf of Jon Beniers, NGRID)
  - Progress on “Catch-All” document defining curtailment and policies.
- Inverter Repowering – John Bonazoli, Unitil
  - John Bonazoli, Unitil: Last meeting, we decided we would create tariff language and bring it to the IIRG.
  - Gerry Bingham, DOER: Last meeting there was discussion on what level of modification would be considered a material/major change.
  - JB: Utility would determine if the change is “like for like”. Some level of analysis would still need to be completed.

## 2. Tariff Revision Process Update

- IIRG Process Update and Procedural Schedule – Brett Jacobson, Eversource
  - BJ: Simplified/Expedited redlines submitted to the DPU. Updated definitions around energy storage. Added field limiting controls to allow for flexible interconnection for smaller projects. Increasing size of simplified cutoff to 25 kW for single and three phase, which aligns with the new net metering rules.
  - Courtney Feeley Karp, Klavens Law Group: If there is a technical issue that is ongoing at TSRG that should be discussed at IIRG, it would be helpful to coordinate.
- IIRG ESS Subgroup Update – Michael Porcaro, NGRID
  - MP: Discussion on what is station service load and how to meter. Had ISO-NE on call to get their point of view. Talked through different approaches. Each EDC has a different approach. Looking for new topics to discuss as well.

## 3. Group Study Status Update

- See meeting slides for details and links.
  - <https://www.eversource.com/content/residential/about/doing-business-with-us/interconnections/massachusetts/distribution-group-studies>
  - <https://gridforce.my.site.com/s/article/MA-Distribution-Group-Studies>
- BJ: FERC filing to ISO for cluster studies: something coming out today on transmission side.
- BJ: Looking at ways to get more projects into Level 0 status to avoid group studies.
- GB: Plan is to address FERC 2023 today.

#### 4. EDC Technical Standards

- Eversource: No updates.
- National Grid: Recent updates to ESB 750 and ESB 756. Technical Specifications available [HERE](#).
- Unutil: No updates, but went through a process to revamp existing document touching every section. Added a few sections including facility import/export limiting.
- Tony Morreale, LIG: Shouldn't EDC's be presenting proposed changes before formalizing?
- JB: We can present, but the intention is not to vote.
- GB: TSRG was formed to allow developers to review technical requirements and rationale and respond with alternatives if needed.
- Jordan Graham, Tesla: Can you please explain the clarifications regarding de-rated inverters?
- MP: States that if permanently de-rated, it needs to be shipped from the factory that way and cannot be changed later.

#### 5. Effective Grounding

- Tim Callahan, Eversource: Reviewed requirements for effective grounding. Also presented common comments on Single Line Diagrams. See slides for details.
- TM: The issue we are having is getting the X0/X1 ratio over 2, which is what the Eversource Technical Requirements document shows.
- TC: We are removing that constraint.
- Cristian Paduraru, Eversource: The >2 requirement was too stringent. Reviewed EPRI findings in updating the standard. Reviewed the technical details of this change.
- TM: How do we address projects that are already in queue?
- TC: You can bring us projects and we can review on a case-by-case basis.
- Brian Lydic, IREC: Is load involved in analysis or not?
- CP: If we consider the load, we would have to model every scenario as the load is always changing.
- BL: IEEE recommendation is to review at minimum load.
- CP: Minimum load might not have that much of an impact. Grounding transformers should still provide effective grounding.
- TC: Please reach out directly and we can discuss concerns.

#### 6. Metering Update - Patrick Fam, Eversource

- BJ: Still trying to get clarity on 1 meter vs 2 meter solution.

## 7. Open Loop Response Times

- MP: Discussion on this topic at IIRG ESS subgroup.
- MP: UL3141 lists a 30-second response time. EDC's looking for 2 second or less response time.
- MP: At last meeting, industry agreed to look at common response times.
- MP: Can we use a 32-element relay to protect when we use a longer open response time?
- BL: In California, response time determines initial review or supplemental review. Systems with 2 seconds or shorter, allow them to rely on that in the initial review. If it is 10 second or less, it goes to supplemental review.
- BL: Pacific Northwest National Laboratory looked at 30 second response time, determine it likely would not be an issue, but could be in worst case / unlikely situations, 10 seconds would be better.
- BL: 30 seconds is to not move voltage regulator around. Most modern systems can meet 10-second response time, which would likely minimize voltage effects. UL3141 certification only requires 30 seconds so additional testing would be needed to prove 10 seconds time.
- MP: Was there any discussion on the long term effects of short time overloads?
- BL: There were many discussions of consequences and whittled it down to distribution transformer effects as the main concern, but found it would not be negative. Will share report.
- [https://www.pnnl.gov/main/publications/external/technical\\_reports/PNNL-36933.pdf](https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-36933.pdf)

## 8. Close Out & Final Discussion

- TC: We have a standard design for Direct Transfer Trip (DTT). Curious what other EDCs are doing. Would like to align with other EDCs.
- BL: Agree that would be a worthwhile discussion. IREC is coming out with new research on unintentional islanding and reference to DTT. Perhaps wait until that is published to discuss.
- Farzam Nejabatkhah, Eversource: Will that be available for everyone to review or internal research? Different than SANDIA screening?
- BL: Will be published publicly. Should be out by June. Would be complementary to SANDIA screening. Hope to reference a new paper from SANDIA. Would replace 2012 paper on screening, but paper cannot be published at this time.
- Paul Krell: Would be good to coordinate on the islanding and DTT screening.
- BL: ConnectDER brought up topic regarding meter socket adapters.
- TM: Will be on next agenda.
- Next meeting: June 30<sup>th</sup> 1-4PM