

Date:	June 30, 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.
Prepared by:	Tony Morreale tmorreale@ligconsultants.com	

Participants:

Shakir Iqbal (Member – Eversource)	
John Bonazoli (Member – Unitil)	
Michael Porcaro (Member – National Grid)	
Tony Morreale (Member – LIG Consultants)	
Greg Hunt (Member – Zero-Point Development)	
Brian Lydic (Member – IREC)	
Brian Ritzinger (Member – DPU)	
Gerry Bingham (Alternate – DOER)	
Andrew Bernstein	Jason Dwyer
Andrew Hickok	Jennifer Chalifoux
Beau Millett	Jon Knauer
Bradley Marszalkowski	Joseph N Debs
Brandon Natale	Julia Bucceri
Brian J Rice	Kelly Musto
Carson Bullock	Manuel Saadallah
Cheng, Tom	Marc Monbouquette
Chris Dube	Mark Bentson
Christopher M Kellogg	Matthew W Secovich
Courtney Feeley Karp	Melusi Nyoni
Daniel J Mungovan	Mohamed Kassamali
Daniel McDonough	Muhammad A Khan
Daniel Passarello	Nachum Sadan
Dominic Gatti	Naera Haghnazarian
Doug Denny-Brown	Natacha Caner
Doug Pope	Nathan Charles
Emily Peck	Nathan Walsh
Emily Slack	Patrick M Fam
Farzam Nejabatkah	Paul Krell
Fritz G Octave	Quinn Perry
James George	Rahul Pantagada

Notes:

1. Meter Socket Adapters “MSA” Discussion – Enphase, Telsa Energy, ConnectDER

- Presentation led by Marc Monbouquette – Enphase, Dominic Gatti – Tesla Energy, & Jon Knauer – ConnectDER.
- See slides for details.
- Reviewed DER Installation Challenges / MSA Benefits. Existing residential equipment may not be suitable for integration of DER. MSA can provide easier integration.
- MSAs are currently being used across country. Similar to line-side tap. MSAs are for 200A or less services. Installs between customer meter socket and utility meter. MSAs are certified to UL standards. Installation can be simple, but utilities need to develop procedures and bulletins.
- All three companies reviewed their MSA product offerings.
- Request to form a subgroup and update technical standards as needed.
- Russ Aney, Parallel Products: Aren't MSP upgrades primarily caused by load upgrades, not DG additions?
 - MM: For Enphase, it provides microgrid isolation, not to avoid panel upgrades.
 - JK: Suspect that electrification or home renovation are a bigger driver for service upsizing than DG.
- RA: Are your disconnects rated to interrupt loads?
 - Nathan Charles, Enphase: UL 414 listed, can disconnect loads under load.
- RA: As I understand it, your metering requirements do not require a bypass lever for 200A services, correct? Why are you not offering a MSA for 400A (320A continuous) services?
- JK: Moot point as we cannot go that large.
- NC: Do not see a reason why MSA would inhibit a bypass lever though.
- Farzam Nejabatkhah, Eversource: No controller, correct?
- JK: Do not contain a breaker, but a switch that is like a smart meter. It has sensing, not manual. Monitors line voltage.
- Shakir Iqbal, Eversource: Any lessons learned from other states (especially for safety)?
- DG: Tesla has been quite successful in terms of safety with it being UL certified. No issues with design, but have fine-tuned installation procedures to increase safety.
- SI: Open it up to EDCs to discuss MSA adoption/review status.
- Patrick Fam, Eversource: Working on this in CT. If approved, may do something similar in MA.
- RA: Did Eversource sell or rent MSAs in the past for generators?
- PF: Yes. Not too many were installed. Only in Connecticut. There were some issues with lever bypass in CT. Not compatible with DG.
- RA: Why is it no longer offered?

- Mike Porcaro, NGRID: How would they work with AMI? Does it impact arcing warnings and thermal protection? Test data?
- JK: Tested extensively. In practice, the thermal concerns do not tend to be as dramatic as assumed. We have test reports.
- DG: Wanted to get these deeper technical discussions going and provide the equipment to utility metering groups to review.
- No questions from Unitil at this time.
- Unanimous vote for Yes to form a subgroup.
- Industry to reach out to Tony Morreale to join subgroup.

2. Metering Update

- Eversource to provide updates on metering requirements and auxiliary load service in the next few weeks.

3. FERC 2222 Overview and Implications for Interconnection Process - Muhammad Khan, Eversource

What will this presentation cover and what to expect?		
This presentation will briefly describe FERC 2222, its high-level requirements, efforts by EDCs and ISO-NE to develop an implementation plan to ensure compliance by November 1, 2026, and a discussion on the eligibility, safety, and reliability review process for DERs under DER aggregations.		
In Scope Discussion	Out of Scope Discussion	Primary Asks
<ul style="list-style-type: none"> • Eligibility, safety, and reliability review proposal • DER Interconnection Tariff considerations 	<ul style="list-style-type: none"> • DER participation models • DER, metering, and locational requirements • Operational coordination • Metering and settlement 	<ul style="list-style-type: none"> • Discussion and alignment on EDC process to perform additional safety and reliability studies for DERs with unconstrained ISAs • Discussion on DER Interconnection Tariff considerations

- See slides for details.
- On September 7, 2020, FERC issued Order 222 requiring ISO/RTO to allow DERs to participate in the wholesale market via DER Aggregations (DERAs).
- DERAs have a 100-kW minimum size, but no minimum size for individual DERs.
- Review process includes the following checks: Double Counting Assets, Dual Participation, Metering Domain, Existing Utility Agreements.
- EDC's agreed that DERs with an ISA have already gone through extensive study, but EDCs will have option to impose additional safety and reliability checks for unconstrained DERs.
- GH: Why would there be additional study?
- MK: System could have changed. Systems that used to operate individually, but now ramp together may cause new issues.

- John Bonazoli, Unitil: Mainly if system is in abnormal condition. May need to inform ISO.
- Tony Morreale, LIG Consultants: Could there be new system upgrades required?
- SI: Yes, it is possible. Part of the scoping process right now is determining how EDCs will study and who would pay for upgrades.

4. Subgroup Updates

- Flexible Connections – Mark Bentson, Eversource
 - Two meetings since last TSRG meeting in May and June. Continued discussion on the Curtailment Catch-All Doc, flex connect schedules and implementation, how we study and what it means for customers, 8760 models in connection with studies, different types of DE profiles.
 - Upcoming Activities: Establish deliverable document with scope list, decisions/outcomes, and highlighted differences of any EDCs / group members. Continue discussion on studies and 8760 modeling. Discuss different revenue markets for DER's and how it could tie into the study process.
- In-Service DER Equipment Change Procedure – John Bonazoli, Unitil
 - Subgroup membership included ECS, Solect, ACT, and Kearsarge Energy.
 - Need to submit application for equipment replacement. Specify existing and in-service equipment Detail equipment to be changed. No pre-application required. Company processes application and determines the scope of the study required. Most analysis will be reduced scope. If change are not significant, study should be able to be isolated from group studies.
 - All new equipment must meet present certification requirements (IEEE 1547 settings, UL 1741 SB).
 - Company reviews requirements in existing ISA and amend per new equipment and requirements.
 - Requirement for facility to meet updated EDC technical requirements would be on a case by case basis.
 - Recommendation to update tariff to add revision requirements (list of application requirements and deadlines of notifications).
 - GH: Does this include small-scale or warranty replacements?
 - JB: Did not draw a line. For record, we would have to at least update records.
 - GH: If it must meet new standards, this would be a major issue for warranty like-for-like swaps.
 - JB: Need application to determine what is required.
 - RA: Would like to be part of this subgroup. Recommend exempting small systems from requirement. Replaced dozens of SolarEdge inverters for the last several years. Usually

just get the same one and swap it out. Probably not useful for warranty replacements.
Should focus on repower and large changes.

- GB: During IIRG hearings, there was testimony that DOER will help foster through issues raised including equipment changes. Request DOER be added to subgroup.

5. Tariff Revision Process Update

- IIRG Update: 6/17/2025 DPU has public hearing to hearing comments on IIRG filing. There was a request to extend comment period. DPU asked IIRG members to memorialize what was said during hearings by 7/9/2025 (extended date). A lot of topics are being discussed at IIRG.
- IIRG ESS Subgroup Update, Mike Porcaro, National Grid: Working through a couple open items in the next couple weeks including metering and aux loads. Agreed to pause group until September due to on-going discussion in other groups that will impact this group.

6. Group Study Status

- SI: Eversource has four (4) group studies looking to file CIP today (6/30/2025).
- Courtney Feeley Karp, Klavens Law Group: Why the delay?
- SI: Needed to do additional outreach before filing.
- RA: Can Eversource provide feedback on level of enabled capacity based on attrition?
- SI: Will take this back to customer care team.
- GB: Seeking that info in monthly reports.
- RA: Last time EDCs updated sheets was March.
- GB: Did get secondary submission from Eversource that will be incorporated in the coming days.
- National Grid Updates: <https://gridforce.my.site.com/s/article/MA-Distribution-Group-Study-Documents>
- JB: Unitil forming a group now. Scoping process underway. First group study, but do not expect this to include a CIP.

7. Queue Management/Study Philosophy Applicability

- SI: Looking forward to discussion of open docket. Hoping to discuss at September TSRG meeting.

8. Technical Standards Update from EDCs

- SI: Eversource still working on updating standard with Effective Grounding update discussed at last TSRG meeting.
- RA: As you update thresholds, can you please consider making them “over” round numbers such as over 500 kW rather than equal to 500 kW and over.
- MP: No ESB updates to discuss at this time.
- JB: Unitil in the process of updating technical standards. Will work to change thresholds as discussed. Current standards are general.
- GB: Point of TSRG is to review new requirements before they are finalized not after.

9. Common Technical Standards Document Update

- SI: Eversource to discuss changes at September meeting.

10. Close Out & Final Discussion

- Next scheduled quarterly meeting date:
 - Thursday September 18, 2025, 1PM-4PM
 - Thursday December 11, 2025, 1PM-4PM
- Send topics for future meetings to:
 - Shakir Iqbal (shakir.iqbal@eversource.com)
 - Tony Morreale (tmorreale@ligconsultants.com)