

Massachusetts Technical Standards Review Group

Quarterly Meeting

September 26, 2024

**The Massachusetts
Technical Standards
Review Group**



Agenda

- 1:00-1:10** **Administrative Items**
- Chair/Co-Chair elections next meeting (December)
 - Confirmation of prior motions
 - IIRG/ESIRG Update
- 1:10-1:45** **Sub-Committee Updates (~15 min each)**
1. Aging inverter replacements
 2. Flexible Connections Sub-Group
- 1:45-2:15** **Group Study Status (~15 min each)**
- National Grid
 - Eversource
- 2:15-2:45** **Technical Standards Update from EDCs**
- 2:45-3:45** **SMART 2 Stakeholder Engagement - Metering**
- 3:45-4:00** **Close Out & Final Discussion**
1. Next scheduled quarterly meeting date
 - a. Dec 10 1PM-4PM
 - b. Mar 27 1PM-4PM
 2. Send topics for future meetings to
 - a. Mike Porcaro (Michael.Porcaro@nationalgrid.com)
 - b. Tony Morreale (tmorreale@ligconsultants.com)

Administrative Items

- Refer to TSRG Website for all information related to the group
<https://www.mass.gov/info-details/massachusetts-technical-standards-review-group>
 - Membership
 - Past Meeting Notes & Materials
 - By-Laws
 - Common Technical Guideline
 - Reference Documents
 - Upcoming meeting info and registration link
- For any questions, suggestions, or to get on the mailing list email:
 - Chair Mike Porcaro - Michael.Porcaro@nationalgrid.com
 - Co-Chair, Tony Morreale - tmorreale@ligconsultants.com

Membership Update

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Membership Update

Chair, Co-Chair and membership elections/confirmations in December

Utility Membership

- Chair: Mike Porcaro, National Grid / Michael.Porcaro@nationalgrid.com
- John Bonazoli, Unitil / bonazoli@unitil.com
- Shakir Iqbal, Eversource East / shakir.iqbal@eversource.com

Non-Utility Membership

- Vice-Chair: Tony Morreale, LIG Consultants / tmorreale@ligconsultants.com
- Gov/Cust Rep: Brian Lydic, Regulatory Engineer, IREC / brian@irecusa.org
- Solar Rep: Greg Hunt, Zero-Point Development / ghunt@zpeenergy.com

Ex-Officio Membership

- Brian Ritzinger, Lead Engineer, Massachusetts DPU
- Katie Zilgme, DPU DG Ombudsperson

TSRG Inverter Repowering Update

John Bonazoli

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Inverter Repowering – Proposal for Discussion

- Customer to submit revised design documentation (single line and site plan at a minimum) for review
- Submission is screened to confirm extent of change
 - **True In-Kind Equipment Replacement:** Same inverter size, listing, functionality, etc; Possibly new model and/or manufacturer
 - No new application
 - Update existing application with the new information and documentation
 - No restudy required
 - **Near In-Kind Equipment Replacement:** One system component changing; Same aggregate size however different inverter quantity, listing, individual size, derating, etc
 - Moderate change – requiring restudy
 - **New Equipment/System Replacement:** Large scale system replacement/redesign with multiple pieces of equipment changing, adding/removing certain technology (ex. Adding ESS), and/or different aggregate facility size
 - Significant change – Follows tariff process for new application

TSRG Flexible Connections SubGroup Update

Jon Beniers

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Flexible Connections Sub-Group Update

Mission Statement:

Center discussion on the use of technology, improved methods, and products that can enable dynamic management of DER assets on the grid .

As a SubGroup, our primary aim is to define and review Flexible Connections across industry. The goal being to enable DER projects in appropriate areas to interconnect to avoid significant distribution system upgrades, while reducing costs and timeframes associated with the standard interconnection process. This includes defining policy on how curtailment will work for DERs. Success may allow for faster and cheaper integration of DERs by increasing the hosting capacity of existing grid infrastructure and/or increased penetration of DERs to the grid.

Expected Group Output:

Deliverables and actionable next steps to be escalated/reported to the TSRG on the following:

- **Utility Controlled, Flexible Connections** – Use Cases, Thermal Constraints, Foundational technologies, scheduling, economics & markets, curtailment, studies, scaling.
- **Dynamic “Local” Control** – Enabling inverter functionality, Smart Inverter controls & Power Control systems, managing assets via Grid Services.

Bring/communicate any non-technical standard issues or topics to additional groups/DPU.

Team

| First Name | Last Name | Company | First Name | Last Name | Company |
|------------|-----------|-------------------|------------|-----------|---------------|
| Gerry | Bingham | DOER | Jon | Beniers | National Grid |
| Russ | Aney | Parallel Products | Michael | Porcaro | National Grid |
| Nachum | Sadan | GridEdge Networks | Justin | Woodard | National Grid |
| Doug | Pope | Pope Energy | Daniel | McDonough | National Grid |
| Greg | Hunt | ZP Energy | Gerhard | Walker | Eversource |
| Richard | Labrecque | Agilintas | Ryan | West | Eversource |
| Nigam | Trivedi | BlueWave | Michael | Taniwha | Eversource |
| | | | Jacob | Dusling | Unitil |
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Summary of Major Accomplishments & Upcoming Activities

Completed Activities:

| DATE | DESCRIPTION OF ACTIVITY |
|------------|--|
| 12/11/2023 | Kick off meeting with SMEs |
| 1/22/2024 | Review Flexibility SubGroup Charter, Defining Flexible Interconnections, Developer Feedback on Reporting |
| 3/7/2024 | Confirmed working definition and listed out scope |
| 4/12/2024 | Alignment on Initial Constraint Criterion (Thermal) and Initial Foundational Technologies (software, hardware/equipment, communication protocols - DNP3/IEEE 2030.5) |
| 5/21/2024 | Transmission system capabilities, impacts, & benefits and how this impacts our Flex Connect discussions moving forward. Thermal Constraints Data / Reporting for Viable Circuits – Preliminary List for early scaling. |
| 6/18/2024 | Initial IIRG – Flex Connect / DERMS language and deliverable list established for UL 3141, Failsafe items, & Data points |
| 7/22/2024 | UL 3141 “Outline of Investigation for Power Control Systems” criteria for equipment standardization – Review of scope, requirements, testing & optional testing. Out for industry review and comment. |

Upcoming Activities:

| | |
|--|--|
| | Define fail safe mode operation/countermeasures |
| | Develop operation requirements to address voltage issues |

Group Study Status

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Group Study Status Update

- The EDCs have provided the below links for Group Study status updates
 - Status is updated monthly
 - Intended to be generally informative on Group Study timeline expectations
 - Included here for reference and general discussion, however Group specific questions may need to be deferred to a separate Group specific forum
- Eversource
 - <https://www.eversource.com/content/residential/about/doing-business-with-us/interconnections/massachusetts/distribution-group-studies>
- National Grid
 - <https://gridforce.my.site.com/s/article/MA-Distribution-Group-Studies>

Technical Standards

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EDC Technical Standards

- As needed, EDC technical standards may be updated
- Below is general discussion for awareness of major elements that may have been changed/amended/added within the last 12 months

Eversource (April 27, 2023)

- No new updates

Unitil (May 1, 2000)

- No new updates

National Grid (January 2024)

- No new updates

National Grid Flexible Interconnections Program

- Website with full information:
 - <https://gridforce.my.site.com/s/article/ACTIVE-RESOURCE-INTEGRATION-ARI-FLEXIBLE-INTERCONNECTIONS-PILOT>
- Seeking interest from solar cases and storage cases, for both ARI and Local Power Controllers
 - **ARI**
 - [Energy Storage ARI Pilot Criteria & Eligibility Requirements](#)
 - [Solar ARI Criteria & Eligibility Requirements](#)
 - **Local Power Control**
 - [Local Power Control Participation Guidance](#)
- To submit a request for pilot consideration a customer must:
 1. Review pilot eligibility requirements to self-assess whether the application is a possible candidate
 2. Prior to **2/28/2025** send an email to NationalGridARI@nationalgrid.com to submit a request for consideration. Example requests language and content listed on the website.
 3. Once received, the application will be added to the possible candidate pool for consideration by National Grid. Requests received on or after **2/28/2025** will not be considered.
 4. National Grid will provide responses to all requests in as timely a manner as possible, indicating denial or acceptance into the pilot.

SMART 2 Stakeholder Outreach

(Brian Rice)

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SMART Program Metering Requirements (DPU [20-145-D](#))

- Enrollment in MA SMART program requires separate metering of generation output to determine incentive payments
 - SMART tariff also *permits* EDCs to require separate metering of ESS co-located with generation unit greater than 60 kW
- MA EDCs directed to file SMART program metering requirements with MA DPU following stakeholder collaboration
 - Alternative to previous EDC recommendation that further metering requirements be formalized in SMART tariff
- Metering and wiring guidelines have been maintained since launch of SMART program

[Eversource](#)

[National Grid](#)

[Unitil](#)

- EDCs plan to file current guidelines with DPU subject to stakeholder input and recommend no further tariff changes or program documentation

Closing

- **Next meetings**
 - Sept 26, 2024
 - Dec 10, 2024

- **Please send any topic requests for future meetings to Chair and/or Vice Chair**
 - Michael.Porcaro@nationalgrid.com
 - tmorreale@ligconsultants.com

Appendix

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Procedures – Rules of Order

- Raise hand to be recognized by the Chair (right to speak)
 - Hand raises to be recognized in order
 - All welcome to speak at this point (members and non-members)
- You want to bring up a new idea before the group.
 - After recognition by the Chair, present your motion. A second is required for the motion to go to the floor for discussion, or consideration.
 - Making the motion is intended to be brief. Discussion/substance on the topic follows
 - Ex. Speaker states *“I make a motion to adjust the site MW size requiring reclosers from 500kW to 1MW in the Common Guideline”*; Someone else says *“Second”*
- Chair states the motion on the floor and opens discussion for all
 - Only one motion will be discussed at a time
 - Ex. Chair states *“A motion has been made to adjust the site MW size where reclosers are required from 500kW to 1MW. Please proceed with discussion”*

Procedures – Rules of Order

- No member can speak twice to the same issue until everyone else wishing to speak has spoken to it once.
- Members who *repeat* comments or arguments will be ruled out of order.
- When there has been enough discussion
 - Make a motion to close the debate. Also referred to as “calling the question”. This cuts off discussion and brings the assembly to a vote on the pending question/motion only.
 - Called naturally when Chair recognizes that all discussion has stopped
 - Ex. Speaker states *“I move to close the discussion”*
- Once discussion is closed, move to vote:
 - Ex. *“All those in favor of the motion on the floor, which is to adjust the site MW size where reclosers are required from 500kW to 1MW, please raise your hand”*
 - Requires a 2/3rds vote to pass

Procedures – Topic Identification

- Each topic brought up must focus toward either:
 - Update Common Technical Standards (CTS), as repository of consensus items coming from TSRG discussion
 - Shorter term issue requiring resolution, not fundamental practice in CTS
- Pre-Meeting Topic Submission
 - Submit in writing to Chair & Co-Chair 3 weeks prior to quarterly meeting to appear on agenda
 - Submitter presents on the topic with clear:
 - Background on issue of concern
 - Ask for resolution/actions/next steps
 - Discussion amongst all present at TSRG (members and non-Members)
 - Vote by membership at conclusion of discussion for next steps/consensus

Procedures – Sub Groups

- Where a topic has non-consensus, warranting additional investigation, subgroups may be formed
 - Following a non-consensus outcome after topic discussion, any person (member or non-member) may propose that the topic be taken to Sub-Group
 - Person proposing must state the proposed sub-group direction/purpose
 - Of those in attendance at the quarterly meeting, a minimum of 5 individuals (members or non-members) must volunteer to support the sub-group in order for it to proceed
 - If less than 5, then the topic is logged in a tracker as “unresolved”
 - Sub-Group lead(s) must be identified at the time of subgroup creation
- Sub Group scope must be achievable before next quarterly (~3 months)

Procedures – Summaries

- Whether the topic comes from the quarterly meeting or from a sub-group, the discussion will be summarized in meeting minutes or in a separate summary document. Summarization to generally include:
 - Definition of topic discussed
 - Group activity in working through the topic
 - Group consensus items
 - Group non-consensus items, including stakeholder positions
- Summaries to be assembled by
 - Quarterly meeting topics: Chair/Vice Chair
 - Sub-Group topics: Sub-Group Lead

Procedures – Summaries

- Summaries to be shared with TSRG membership at least 2 weeks prior to quarterly meeting
 - To be voted on by membership at quarterly (2/3 vote to pass)
 - “Approval” of summary signifies that TSRG is in agreement with it as written
- For Sub-Group summaries that may be of an urgent nature, warranting vote prior to the next scheduled quarterly:
 - Sub-Group lead(s) to notify Chair/Vice Chair
 - If expediting of the vote is warranted, Chair/Vice Chair to organize interim meeting and/or impromptu vote via email amongst membership