

Massachusetts Technical Standards Review Group (MTSRG)

Chair: John Bonazoli, Unitil

Vice Chair: Mike Brigandi, Borrego Solar

MA TSRG Regular Meeting

Date: March 29, 2018

Time: 8:00AM-1:00PM

Location: Columbia Gas - 4 Technology Drive, Suite 250, Westborough

On Phone:

Dave Moyer (Borrego Solar)

Quincy Vale (MA American Energy)

Vince Westfallen (ComEd IL)

Vince O'connel (Eversource)

Dave Forrest (ISO-NE)

Bret Jacobson (Eversource)

In Room:

John Bonazoli (Unitil)

Paul Krell (Unitil)

Patrick Canning (Nexamp)

Tim Roughan (National Grid)

Jeannie Amber (National Grid)

Mike Porcaro (National Grid)

Ghebre Daniel (MA DPU)

Brian Ritzinger (MA DPU)

Nancy Stevens (MA DPU)

Tony Morreale (LIG Consultants)

Gerry Bingham (DOER)

Will Lauwers (DOER)

Mike Coddington (NREL)

Nachum Sedan (Grid Edge Networks)

Moody Demetry (Eversource East)

Mike Brigandi (Borrego Solar)

Shay Banton (Borrego Solar)

Intro

- Nancy Stevens - reminded the group that the TSRG Bylaws require the TSRG Agenda to be sent out 10 BD prior to a given meeting
- A question was also posed as to when the official TSRG leadership/membership would be reflected on the website

- John Bonazoli - created a new Sheet to show attendance and indicate level of membership
- John B - will be very focused on timelines of meeting agendas going forward

TSRG Membership and Group Agenda

- 1547 standard is approved
- Mike Coddington - raising concerns on new standards coming out and possibility of obsolete standards being referenced in the MA Tariff
- Tim R - the language takes that into account with language stating "latest version of" applicable standards
- Paul Krell – content of 1547 is not a 1 to 1 fit of what the old standard was saying. There are a variety of new capabilities and AHJ references that should be considered
- Mike C – lots of net new set points
- Paul K – what will the date of the adoption of the new 1547 be?
- Mike Coddington – next TSRG we brainstorm on topics that may need to be taken on by this group such as 'what changes will Utilities be requiring?'
- Shay Banton – flicker is a topic that would be valuable to discuss in with the group
- Mike Coddington agreed and brought up the fact that LED lighting and current lighting technology makes old Flicker calculation methods obsolete
- John B – Common Guidelines are topic we need to continue to focus on as well
- An updated version of the Common Guidelines was posted in December, 2017.
- Shay B asked if these would be updated every year.
- John B explained that the group is not mandated to update periodically, but if any of the utilities update their requirements, they must inform and present the changes to the TSRG.
- Mike Coddington – Brought up the necessity to understand what parts of the new IEEE are going to be Utility Specific
- Mike Coddington – Referenced a major Transmission system event that had major implications
- Gerry – There is unfinished business in the original DG Working Group Report to the DPU.
- Raab associates report may have outstanding TSRG prescribed items
- Jeannie Amber - said they will have a list of functionalities that will need to be off or on in the Inverters when IEEE 1547 becomes live
- Tim R - expressed concern that 1 GW of DG already on the system currently has no Ride-through capability

Initial Review Deliverables

- Shay B - requested consistent approach toward initial review
- John asked what Developers are using Fault current for when provided by utilities
- Shay B indicated that Fault Current is not really useful and is not critical information.
- Shay B – brought up the fact that Borrego has received pre-app data from Utilities that does not always align with information received later in the process

- Tim R – There are two different things – pre-app and initial review and there is opportunity for inaccuracy due to the high volume that Utilities are receiving
- Mike Brigandi – Expressed that the concern with inaccuracy of Utility provided data is that Developers are making business decisions and investing real dollars based on this Utility provided info and it needs to be correct
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- John B - presented the following data as being potentially provided for the initial review:
 - Available Fault current at the proposed location
 - Existing peak loading (previous year) on the lines in the general vicinity of facility
 - The configuration of the distribution lines
 - If the application is subject to the pre-app report may, as necessary be discussed at the initial review

Actions:

- Tim R - offered to take feedback on the types of inaccurate data that is being sent out and address it formally. Shay Banton to send this information along
- The utilities will meet prior to next TSRG meeting to attempt to create a consistent list for all EDC's

ISO-NE Ride-through Requirements

- National Grid's ESB 756 was updated to reference the new ISO Ride-through requirements
- Eversource has included the information in their seminars and also put the information on their DG website
- Dave Forrest on phone – CT and RI and ME are being notified of the Ride-through requirements as well
- ME didn't want to have separate rules from the rest of NE
- ALL were very open to having one source requirements Doc
- NH Coop has not been notified
- Dave also was invited to one of the WMECO meeting for developers and Dave plans to do the same in Eastern MA
- There was comments from Jeannie on the possible need for a letter specifically stating that there may be a need for an additional letter stating that the inverter has a requirement for the SRD settings
- Some developers have been rejected due to the "inability to study the settings that will be ultimately in the inverter"
- There was discussion as to what is required to deem an application complete
 - It was agreed that the following would be required at time of application
 - Certification to UL1741 SA from the inverter manufacturer
 - Or a letter from the MFR that states although UL1741 SA certification is not yet granted, the inverter will meet all necessary requirements before the project is interconnected,

- The settings and functionality of the inverter would then be reviewed in analysis process and possibly tested as part of the witness test procedures.

Storage Subgroup Update

- Will Lawler provided an update on the storage subgroup (see meeting attachment)
- Have been going on for 6 months
- Hawaii has served as a model
- NY tariff changes have also been paid attention to
- Discussions on level of granularity the guideline would ultimately cover are still ongoing
- Talked about creating an interface where the selections as you move through the questionnaire would change potential answers such that only relevant options appear.
- Will L- reiterated that the storage sub-team proposal does not include policy or regulatory aspects of the storage. It is technical only but indicate whether there may be a fast track processing method available.
- Tim R – Suggested that the storage subgroup may be approaching this problem from the wrong angle. He comments that customers do not necessarily know all the technical aspects of what they want to do at the point of application.
- Gerry Bingham - brought up a point that the Interconnection process is used for PV market to determine whether a given proposed project can interconnect and this should be no different
- Will - posed the question as to whether the Storage subgroup should continue, and it was conveyed by multiple people in the room that the storage subgroup should be continued. No decision was made, but there was no objection to continuing the effort.

Utility Interpretation of 2MW Inverter Limit (use of 1500V Inverters)

- Shay B and Mike B – Asked the Utilities in the room whether they would entertain the idea of electronically power limiting an inverter that is more than 2MW. The example they gave was power limiting a 2.5 MW inverter to 2MW in order to take advantage of certain cost economies associated with using the larger inverter
- Jeannie A - said that that developers would have to be careful that in limiting the Inverter's output power the UL listing would not be violated. In that regard the utilities would want verification that this was not the case.
- Jeannie – Ngrid would likely still evaluate the inverters at full name plate with respect to fault current contribution in particular unless the manufacturers could officially state that the fault current would be in line with the power limited nameplate value. This would only affect protection considerations.
- Mike Porcaro – The Inverter would need to behave across all functionalities as the limited nameplate value. Ngrid would be looking for verification that this was the case
- Mike P - said that there is a concern that the settings could be changed down the line. Therefore some verification of Inverter security may be required as well
- Paul K – We must be clear that the re-rating applies to all the functionality and behaviors of the inverter – not just steady state output.
 - Firmware update override the de-rating

- Is the fault current reduced in the de-rating?
- Moody D – Concerned because it is not possible to police this de-rating.

Actions:

- Utilities asked that Clarification from the Inverter mfr for the following:
 - Verification the UL Testing that has been done will cover all ranges within new power rating of the inverter
 - All functionalities active in the inverter will be same and equal to the new power output setting
 - If available – Clarification on how the Inverters will behave under fault conditions