

MA TSRG Meeting Minutes
June 21, 2018

Attendance:

On Phone

Bret Jacobson
Cindy Janke
Brian Lydic
Shay
Bret Pinbree from soltage

In Room

Steven Casey
Nancy Israel
Jeannie Amber
Frank Schneider
John Bonazoli
Mike Birgandi
Mike Coddington
New Unitil Eng
Mrinmayee Gujar
Vincent O'Connell
Brian Ritzinger
Ghebre Daniel
Nancy Stevens
Gerry Bingham
Will Lauwers
Samer Arafa
Nachum Sadan
Jeremy Kites
Greg Tremelling
Ram Rao
Dave Forest
Tony Morreale

Membership of TSRG

- It was asked who will be the Eversource rep – Still no official direction on that
- John Bonazoli mentioned all members should plan for official alternates. It is still unclear whether alternates will be listed on the TSRG Website
- Mike Brigandi posed a question as to whether an additional member can be added to TSRG to represent the interests of Energy Storage
- John Bonazoli mentioned this would require revising the bylaws of the TSRG and thought it was probably not required. Although the use or importance of Energy Storage is not expected to diminish, there may not be the need for a separate rep specific to Energy Storage after a few years

- There was disagreement in the room that Storage was not an established technology that had incentives build around it
- Tony Morreale also agreed that the conversation around new membership is worth having
- John B reiterated that there is a subcommittee for energy storage that can address storage issues and recommendations, but stated that he would add the topic to the agenda for a future meeting

1547 update

- Mike Coddington - coordination is needed with regard to frequency and voltage response and Frequency ride-through setpoints need to be consistent
- Dave Forrest – Frequency requirements will be established by NERC
- Voltage support will require working together collaboration between Utilities and Developers
- Jeannie – without 1547 complete there is no test standard (1547.1) and therefore no certified equipment
- TOV is an issue to be discussed
- Brian - Issues in MN – beyond technical issues on what do we adopt from 1547 there are also process issues with regard to interconnection process, how settings may be applied, and other customer issues. IREC recommends that Voltage Regulation be activated for all DG's.
- Nachum – IEEE SCC21 (Standard Coordinating Committee) has developed an educational kit – can we make a request to get those educational materials? Charlie Vartanian would be good contacts for this material
- Dave Forrest – The IEEE 1547 full revision document is large and we may need to focus on certain sections with regard to educating folks on the update
- This topic be on next meeting's agenda
- Usage of Ancillary services as to increase penetration and hosting capacity
- Mike Brigandi - Some states have opened the door for Compensation mechanism for Ancillary services – Volt VAR needs to be discussed as to whether utilities would require volt var and whether they would want to activate volt var for system benefit on demand or out of the box

Ride-through update

- Public Utilities – Dave Forrest will be giving a NEPA annual conference presentation. ISO wants public Utilities to adopt the SRD as well.
- Dave Is interested in changing the agreed upon settings in the SRD document when IEEE 1447 full revision is published
- Jeannie – Would like some clarification on what would be changed
- Mike B – There was a heavy lift coming out of the agreement on the SRD doc to get the regional setting groups set up with inverter manufacturers. Any changes would require an update to that regional setting group and therefore firmware changes.
- Nameplates need to say Grid support

Initial Review Deliverables

- Utilities got together and determined what information could be consistently provided

- Unitil – showed an example of a spreadsheet of what they provide at the initial review phase of a project. (See meeting attachments)
 - Some of the attributes of the spreadsheet included:
 - Circuit Voltage
 - Peak Load
 - Min Load – Calculated from 30% of Peak load from last year
 - All circuits within .25 miles
- Shay Banton – It would be beneficial to have limiting conductor type included in lieu of fault current
- Mike Brigandi – Reiterated that the Tariff required fault current and that limiting conductor may be a suitable substitute if it is more difficult to provide fault current
- Tony Morreale – Commented that Utilities are obligated to deliver fault current in the initial review per the MA Tariff and if they can not then they should consider delivering something else such as limiting conductor size
- John Bonazoli – What would customers need fault current for?
- Mike Brigandi – Gave an example where low available fault current at PCC could lead to the DG having more of an impact and therefore that fault current would be actionable information for the customer's engineer
- National Grid also gave an example of what they provide customers at Initial review phase of projects (See Meeting attachments)
- Some of the items include were
 - Circuit rating
 - Xfmr rating
 - Sub Station
 - Circuit Voltage
 - Distance to circuit
 - Peak load
- Jeannie Amber asked whether it would be beneficial for the Utilities to provide an explanation of each attribute they provide at Initial review and memorialize it in the common guideline
- There was positive reaction in the room to the idea of more explanation of the Utility's initial review deliverables
- Mike Brigandi – Asked whether it would be possible to provide Peak load on transformer in addition to transformer rating and circuit rating and Queued DG ahead of project. This would enable more comprehensive understanding of potential impact the are the project will have.
- Mike B – Asked if the can provide limiting conductor.
 - National Grid and Unitil said it would be difficult to provide this
 - Vincent O'Connel from Eversource said they already gather the limiting conductor information and provide site specific fault current for each location using a spreadsheet calculation.
- Shay Banton – What happens when there are multiple circuits within .25 miles of proposed site where the farther circuit is more viable
- National Grid and Unitil both stated the most viable circuit may not be identified in the impact study. Initial review prioritizes the closest circuit
- ACTION - Eversource to produce a formal conveyance of their information provided

Energy Storage subgroup update

- Will Lauwers gave a storage subgroup meeting update
- Sub-team has been having biweekly meetings
- There has been discussions on what criteria should be provided at application timeline by Developers
- Had a call with Utility members and decided that a formal utility request for this information would make this process more efficient
- They will be finalizing a document for multiple utilities to use
- May need to have a re-org of the Storage sub-team moving forward as Screening criteria begins to be discussed
- There was a comment by Gerry Bingham that Utilities cannot deem an app 'not complete' if the peripheral info is not provided. Utilities can request the missing information in the process later but not hold the completion of the application
- Subcommittee does not have a formal leader and that person as well as the membership needs to be created
- Dave Forrest – storage can trigger an application under FERC jurisdictional
- If a project triggers FERC the circuit thereafter becomes FERC jurisdictional
- However state interconnection process still applies
- Vince O - posed the question whether Utilities are notifying customers as to whether the circuits they are connected to have become FERC jurisdictional. The answer was no.
- Dave Forrest expressed interest into joining the TSRG as an official member representing ISO NE

Max Export Topic

- Mike Brigandi gave a presentation on an application for combining PV+Storage (AC Coupled) where a 'Max Export' scheme is implemented to limit power export to a predetermined amount (See meeting materials).
- Jeannie Amber - Max Export Relays need to have a failsafe for tripping on loss of power
- Utilities would be concerned with both PV and batteries ramping at the same time
- WMECO would likely accept this at the max export level
- Action – Jeannie Amber will provide to the group National Grid's new criteria for allowing Max Export schemes
- Jeannie – will still study protection at full nameplate
- IREC - Bran Lydic have a presentation on IREC's involvement in the standardization of Max Export Criteria for PV+Storage Projects in CA (See meeting attachments)
- Expanding the Minimum import rules and expand it to max export

Grid Update on PV Installations

- There is a white paper they have developed that is available to the group

- There was brief presentation on the idea of creating optimal PV settings that would allow for the mitigation of upgrade costs
- Power Quality metering is necessary
- Recommend 1-4 second data
- DERMS (Distributed Energy Resource Management) only recommended for sites over 500kW

2MW Limit on DG

- Mike Brigandi started the conversation by presenting a response to the Utility's questions from last meeting (See Meeting attachments)
- The questions were answered by a senior Engineer at SMA
- There was still concern by Jeannie Amber that resetting the firmware would void the power limiting function.
- The argument was made that her concern would apply to any inverter setting that was input at any time and therefore would be holding power limited inverters to a different standard
- Jeannie asked if UL themselves could clarify whether the Inverter would operate the same in power limited status
- Another question was posed as to whether inverters larger than 2 MW could be utilized.
- The answer was that Inverters larger than 2MW could interconnect as a qualified facility or under the new smart program