

## MA TSRG Video Conference

May 20, 2021

### Meeting Minutes

#### **Participants:**

Mrinmayee Kale	John Bonazoli	Jon G	Aharon Wright
Jeannie Amber	Brad Marszalkowski	Brian Ritzinger	David Erhart
David Norman	Doug Denny -Brown	Doug Pope	Gerry Bingham
Daniel Ghebre	Jacob Gay	AC Williams	Anas Alrifai
Abdlmnam Abrahem	Brian Lydic	Christian Eder	Brett Jacobson
Greg Hunt	Jeremy Kites	Gwendoly Espe	Maria French
Mark Durrenberger	Mike Porcaro	Miles Russell	Kim Cullen
Nancy Israel	Nigam Trivedi	Jay Fundling	Paul Krell
Robel Arega	Russ Aney	Ruvini	Sanae Matsuki
Sean Diamond	Stephen Cialdea	Steve Wurmlinger	Terence Parker
Thomas Tansy	Tony Morreale	Will Kern	Will Lauwers
Mrunmayee Gujar	Kavita Ravi	Bob Mack	Bob White
Emily Hwang	Kevin Chen	Jonathan Calva	Eric Lorenze
Samer Arafa	Shakir Iqbal	John Drummond	Noel Augustine
Daniel Passarello			

#### **MA simplified process changes:**

##### Proposed solutions:

- Aggregate analysis as part of the planning process
- Increase eligibility for larger systems
- DER planning analysis will not affect individual applications.
- Power flow screen, substation saturation screen, simplified aggregation screen
- 67% of the minimum load taken from SANDIA anti-islanding screen.
- Simplified process extended from 15kW to 25kW for single phase and from 30kW to 60kW for three phase.
- The One-Line Diagram will need a PE stamp for all projects sizes >25kW.
- Clarification: The nameplate will not take into consideration the capacity of backup generators
- Specific effective grounding criteria defined
- Secondary voltage rise is becoming a common problem for smaller residential type system connections. Now a screen testing for +-5% voltage boundaries will be used.
- Shared overhead single phase, the service transformers are usually 25kVA limit. With underground systems
- The EDCs are developing a tool to determine voltage rise for single phase.
- Are there discrepancies between kVA nameplate ratings and kW thresholds? Shall we change all kW references to kVA?

#### **MA adoption of IEEE 1547-2018 and the new ISO-NE Source Requirements Document (SRD)**

- Implementation dates: 4/01/2022 date is tight. End of September for final voting for 1547.1 document.

- The 100kW should be for inverters and not DERs. Typically it is 12 months after the publication of testing document.
- HECO, MA and CA aligning timelines is a good idea.
- FIIGI to update the MA TSRG on the results of their survey regarding timelines.
- Islanding detection time delay will remain 2s even if the 0.88 pu voltage trip is extended to 2s.
- For rural areas, the impedance is high between the inverters and the bulk system. Will the inverters see the same voltage levels as the bulk system?
- The undervoltage tripping is being used as a redundancy to the islanding detection. With inverters we are not dealing with high short circuit currents. The larger concern is around IBR riding thru bulk system events.
- Both MISO and CA are going for longer trip delays. CA is 21s and MISO is at 7s.
- Anti-islanding tests are performed with the ride-through enabled.
- Are you specifying categories for different technologies?
- Why doesn't MA want to use some of the advanced functions? Not enough modeling capability available. Several reports from NREL and EPRI to inform how to implement this functionality.
- RLC is studying Volt-VAR in the continuous operation region.
- For short circuit analysis, the inverter behavior is not the same as it would be within the 0.88-1.1 pu voltage. Volt-VAR has a min 1s response time and too slow to respond to a short circuit event. Short circuit contribution can be modeled as  $\sim 1.1-1.2 \times$  nameplate.
- Some devices use ROCOF for island detection. ROCOF ridethru is mandatory for all DERs
- Add categories for each DER type to be listed in the document.
- Add partial certification to the future topics.
- For voltage phase angle change ride thru capability, has anyone looked into whether 59N scheme at substation choking the capability? No good industry guidance on setting 59N for bulk transmission system. The setting needs to be more effective. The voltage pickup could be close to 0.2pu if it is for transmission islanding.
- A proposed standard CSV file format for settings and ride-thru capability can be found at <https://www.epri.com/research/products/000000003002020201>
- Developers and manufacturers advised to push industry to adopt this format for submission to utilities at the time of witness testing. This is not part of the UL1741sb testing.

### **Transient Analysis in DER studies**

- Risk of Islanding
- PSCAD models standardization required. RLC has a checklist for standard features.
- <https://www.electranix.com/pscad-model-requirements/>
- <https://www.electranix.com/pscad-requirements-rev-10-feb-3-2021-has-been-released/>
- IEEE P2882 has been submitted as a PAR for Standard for Validation of Software Models of Renewable and Conventional Generators for Power System Studies. That should help standardize models.
- Next meeting 8/18 1pm-4pm