

**PREP WORK for Oct. 19th TSG, #8**  
**References; Definitions; 1-line diagram requirements; Agreements**

Subgroup members review agenda and provide the following to staff by 10/9/18.

- 1) Propose edits to the Regulated Utilities' TIIR Draft Proposal and/or flag topics for discussion. Send as red-lines and comments using track changes to the 9-14-18 Draft TIIR. Slides calling out proposed edits to the draft TIIR are encouraged.**
  - a. References in Section 2
  - b. Definitions in Section 3B
  - c. Agreements in Section 13
- 2) Review and be prepared to reference IEEE 1547-2018**
  - a. References in Clause 2
  - b. Definitions in Clause 3.1
  - c. Power Quality in Clause 7 and Informative Power Quality clause concepts and guidelines in Annex G
- 3) Review and be prepared to cross-reference the TIIR Draft proposal definitions with the [MN DIP](#) and the proposed DGWG subgroup edits to MN DIP Attachment 5 (attached to email). Also review past TSG meeting slides (specifically TSG In-person 9-21). Although not the only definitions up for discussion, definitions known to need work include phrases for referring to a limited value of capacity, the application of storage capabilities, and inadvertent export. Slides with summary of proposed changes are encouraged.**
  - a. Simplified Application Form, Attachment 2
  - b. Certification Codes and Standards; MN DIP Attachment 4
  - c. Certification of Distributed Energy Resource Equipment; MN DIP Attachment 5 (consider email attachment version)
- 4) Utilities: Please provide an example of the Operating Agreements and/or Maintenance Agreements required and explain the rationale. Non-Utilities: What, if any, concerns do you have with the items included in the agreements as described in the Draft TIIR Sec 13?**
- 5) What elements of the 1-line diagram are most frequently contested or missing? Are there ways to improve 1-line diagram details being required from utility and DER's perspectives? Slides are encouraged, including a potential example one-line diagram.**

-----End Of Prep Work -----

**Technical Subgroup Meeting 8 DRAFT AGENDA**

**Friday, October 19<sup>th</sup>**

**9:30am – 12:30pm Central Time**

[Join Webex meeting](#)

[844-302-0362](#) US Toll Free

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**Proposed Agenda**

9:30 – 9:40 Welcome, Intros, Overview of Agenda, Recap

9:40 – 10:50 Operating Agreements and Maintenance Agreements

10:50 - 11:40 Reference and Definition Reconciliation

- UL 1741 (2010) – how cited in MN DIP Att. 4
- DER unit, DER System, DER equipment package – see MN DIP Att. 5
- Inadvertent export
- Control Limited Capacity consistent with MN DIP 15.4
- Clarify or replace “ESS Operational Control Modes” to address differences between application of storage capabilities and charge/discharge settings

11:40 – 12:10 Aligning on expectations for One-line Diagram Submittal and Review

12:10 – 12:30 Next Steps; including writing group update

Phase II Technical Subgroup Roster

Craig Turner, Dakota Electric	Robert Jagusch, MMUA	Patrick Dalton/John Harlander/Alan Urban, Xcel Energy
Lise Trudeau, Dept of Commerce	Kevin McLean/Jenna Warmuth, MN Power	
	Kristi Robinson, MREA	John Dunlop/Chris Jarosch, MNSEIA
Brian Lydic/Sky Stanfield/Laura Hannah – Joint Movants	Dean Pawlowski, Otter Tail Power	Commissioner Matt Schuerger; Michelle Rosier; Cezar Panait
Professor Mahmoud Kabalan, St. Thomas Affiliation		Technical Assistance*: Michael Coddington and Michael Ingram, National Renewable Energy Laboratory Tom Key, Jens Boemer, Nadav Enbar; Electric Power Research Institute Pam Johnson, DOE Solar Energy Innovator Fellow

\*Technical assistance is not a participant or party to the docket and does not advocate for specific outcomes in the proceeding. The role of technical assistance is to support Commission staff in the process for these proceedings, and to provide an objective source of information or data, as requested, by Commission staff to understand areas of disagreement amongst participants.

## Draft Meeting Topics Proposal

<u>Date</u>	<u>Topic</u>
3/23/18	Meeting 1 Scope/Overview** (Walk-through with explanations: Red-lined TIIR; List of topics in scope of TSMs; Definitions
4/13/18	Meeting 2 Performance Categories**, Response to abnormal conditions; MISO Bulk Power System
5/18/18	
6/1/18	Full DGWG Meeting Technical Subgroup update; Phase I Update/Next Steps
6/8/18	Meeting 3 Reactive Power and Voltage/Power Control Performance**, Protection Requirements
7/20/18	Meeting 4 Energy Storage**, Non-Export and Inadvertent Export**, Capacity**
8/3/18	Meeting 4 topics continued
8/24/18	Meeting 5 Interoperability** (Monitor and Control Criteria); Metering**, cyber security
9/14/18	Meeting 7; Test and Verification**, Witness Test Protocol
9/21/18	Full Day, In Person TSG Meeting – Power Quality; Follow up items; Review/Reconcile edits in the draft TIIR
10/19/18	References; Definitions*; 1-line diagram requirements; Agreements*, Frequency Ride-through
11/9/18	Full DGWG Meeting 7