

## TSRG IEEE 1547-2018 Sub-Committee

### 2020 Meetings Summary

In 2018, the Technical Standards Review Group (“TSRG”) created an IEEE 1547 Sub-Committee to review the new IEEE 1547-2018 standard (the “Standard”) and make recommendations to the TSRG in adopting the Standard. In a May 14, 2020 Memorandum, the DG and Clean Energy Ombudsperson explained that the TSRG would hold meetings to continue discussions on discrete topics related to IEEE 1547-2018 identified by the Department and provide periodic summaries following the meetings. This memorandum summarizes the meetings held in 2020 by the TSRG IEEE 1547 Sub-Committee.

#### **I. 2020 – Q2 (April – June):**

Between April and June, 2020 the TSRG IEEE 1547 Sub-Committee gathered three times (i.e., on a monthly basis). During the meetings the Sub-Committee discussed the following topics:

- ISO-NE presented on its preferred DER Category Selection;
- Dynamic VAR support, which is mentioned, but not *required*, by IEEE 1547-2018. Lacking specifications for this function, it would be difficult to implement without tariff requirements like California Rule 21. As such, the Sub-Committee does not expect it to be a part of the requirements when published, but will recommend that requirements for Dynamic VAR support be made as soon as industry-standard behavior & test verification protocols are established.
- National Grid presented on the UK blackout and the importance of ride-through for rate of change of frequency (ROCOF) & phase jump. The Sub-Committee expects to make clear that these functions will not be preferred as trip functions in any DER, and will enforce IEEE 1547-2018 ride-through requirements for both of these functions. This is in part due to the issues seen in the UK because of DERs set to trip using these functions.
- DPU 19-55 Glide Path questions discussion. The Sub-Committee determined that ISO-NE Source Requirements Document (SRD) updates and new DER requirements must be completed before legacy DER requirements can be completed.

#### **II. 2020 - Q3 (July-Sept.):**

The Subcommittee met twice and discussed the following topics:

- The Sub-Committee completed recommendations for the adoption of Power Quality specifications and presented its recommendations to the TSRG.
  - Exception: Rapid Voltage Change requirements for secondary voltages left to other portions of the MA TSRG.
- There was a discussion of how the recommendations will be documented for the TSRG. It was decided to include the recommendations in the Common Guidelines, after adoption by the EDCs and TSRG.
- A meeting was held to plan tasks for the 4<sup>th</sup> quarter.

### III. Q4 (Oct-Dec):

The Subcommittee met three times and discussed the following topics:

- Language has been drafted for frequency-droop adoption. The Sub-Committee is completing final review and presented a draft to the TSRG on December 8. The Sub-Committee expects completion in Q1 2021.
- Language has been drafted for Abnormal Response Category selection. The Sub-Committee is completing final review. The Sub-Committee expects completion in Q1 2021.
- All default voltage and frequency trip settings requirements are completed, with the exception of determining whether the distribution system can take DERs that support PRC-024 with an adjusted trip setting of 88% in 3s. This can have potentially negative impacts on risk of islanding, arc flash hazard, and other concerns for the distribution grid, and therefore the EDCs are taking this into careful consideration before the Sub-Committee recommends keeping the 88% in 2s trip setting (which appears to be difficult for maintaining bulk system stability during undervoltage events) or adjusting it, and distribution processes & standards that are built off of the 88% in 2s trip setpoint.
- Kicked off a communications discussion for IEEE 1547 categories related to reactive power capability and voltage regulation performance requirements (Clause 5). The Sub-Committee's goals are:
  - Identify “low-hanging fruit,” including specifications that can be communicated to developers now so that DERs are more “plug and play” in the future if/when DERMS systems are installed.
  - Identify items that should be discussed with respect to IEEE 1547-2018 that require more discussion. Provide a rough timeline for when these items might be accomplished.
    - Note that the subgroup does not necessarily plan to *dive into* these more complex items, as that is viewed as more of a Grid Modernization task.
- Kicked off voltage regulation functions discussions with a Clause 5 overview. The subgroup is prioritizing which functions to tackle first, as well as what hurdles there are to full adoption.