

MISO IEEE 1547 Work FAQ

1. What is IEEE 1547 and IEEE 1547-2018?
IEEE Std 1547-2018 (abbreviated IEEE 1547) is a newly published standard for distributed energy resources (DERs) interconnection and interoperability requirements that may be adopted by regulatory agencies and jurisdictions throughout North America and elsewhere to specify technical minimum interconnection requirements for DERs.¹ It is a technology-neutral, voluntary IEEE standard that has been highly vetted by a large group of stakeholders ranging from DER manufacturers to distribution and transmission utilities with the aim to harmonize technical interconnection performance capability requirements and functional specifications for the growing installations of distributed generation and energy storage systems
2. How is MISO involved in IEEE 1547-2018?
IEEE 1547 added new requirements regarding voltage and frequency ride-through capability, to help the reliability of the Transmission system. It asks for coordination with Reliability Coordinators, which is MISO in the MISO region. MISO would like to coordinate with the distribution utilities and experts to provide a regional preferred choice of performance category and setting selection.
3. What's MISO's work plan on IEEE 1547?
MISO plans to issue a MISO regional guideline on IEEE 1547 voltage/frequency ride-through requirements. Target date is August 2019. We will first form a stakeholder group to get pre-education on IEEE1547, starting late 2018. Then a workshop in early 2019 with the same group will follow to come up with the guideline proposal. More meetings may be needed afterwards to finalize the proposal. A more detailed plan can be found on the IEEE 1547 information page on MISO website.
4. What is the end product MISO will deliver?
MISO will get input from interested parties in the MISO region to form a MISO region guideline on the voltage/frequency response requirements in IEEE 1547. The guideline itself will not be mandatory unless it is adopted by local state or utility rule. The guideline will provide recommendation of which performance requirement category to use from IEEE 1547, along with recommended parameter settings – IEEE 1547 provided more than one performance requirement categories to choose from and range of acceptable inverter settings. As a result the document will be brief – it is not another standard.
5. Will the MISO guideline become mandatory?
Not directly. The guideline itself will not be mandatory because Distribution system is not under MISO's jurisdiction. However, if any state chooses to adopt MISO's guideline and make it a state rule, it will then become mandatory through statutory power.

¹ IEEE, <https://standards.ieee.org/findstds/standard/1547-2018.html>.

6. What does MISO want to achieve by a workshop?
We hope to reach preliminary consensus of the guidance by the end of the workshop. There are pre-sessions (calls) required before the on-site workshop, which could propose a draft for the workshop attendees to start the discussion.
7. Why is it important for Distribution Providers to participate in MISO's IEEE 1547 stakeholder discussion?
First, it is possible that States will adopt MISO's guideline into State rules which will then become mandatory, it is to Distribution Provider's benefit to have an input to the final MISO guideline. Second, when the Distribution Providers' IEEE 1547 requirements conform to a regional guideline, it makes inverter provider's delivery and testing easier, resulting a faster installation time for customers. Note that MISO's guideline will include 'preferred' voltage and frequency trip settings that should be coordinated with and may impact distribution protection practices currently used by Distribution Providers.
8. How do we learn more about IEEE 1547
The first EPRI training module has been made publicly available at <https://www.epri.com/#/epri-u/course/ce5e54a2-f32f-4ad3-bfc3-288f6bf4119e?lang=en>.
9. What is currently in MISO BPM and what is missing?
Distribution system is not under MISO's jurisdiction, so MISO does not have any rule today on DER voltage/frequency performance. MISO Generator Interconnection Agreement (GIA) has a generic requirement for transmission-connected generators regarding voltage/frequency ride-through requirements. It only says to follow NERC regional reliability council's requirement, if any. In comparison, IEEE 1547 has very detailed requirements on ride-through settings regarding timing and voltage/frequency magnitude.