

Staff Subcommittee on Electricity and Electric Reliability

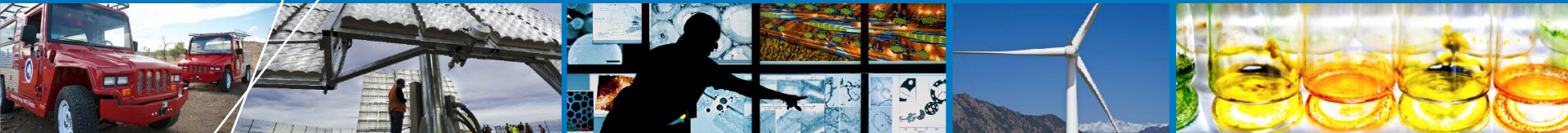
Staff Subcommittee on Electricity & Electric Reliability and Staff Subcommittee on Energy Resources and the Environment

Status of IEEE 1547

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Michael Coddington, National
Renewable Energy Lab

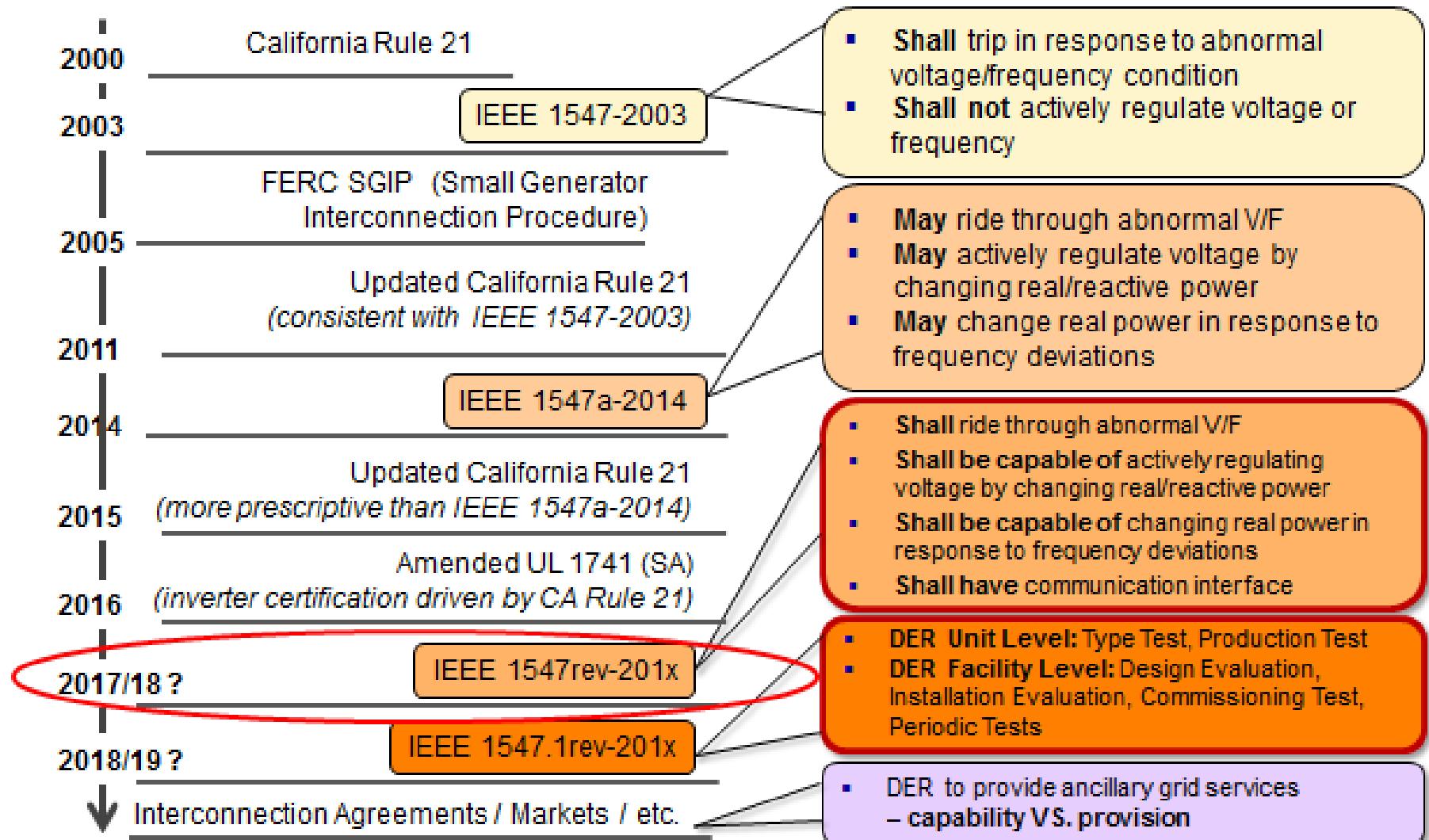
IEEE 1547 Update



NARUC Summer Meetings 2017

Michael Coddington

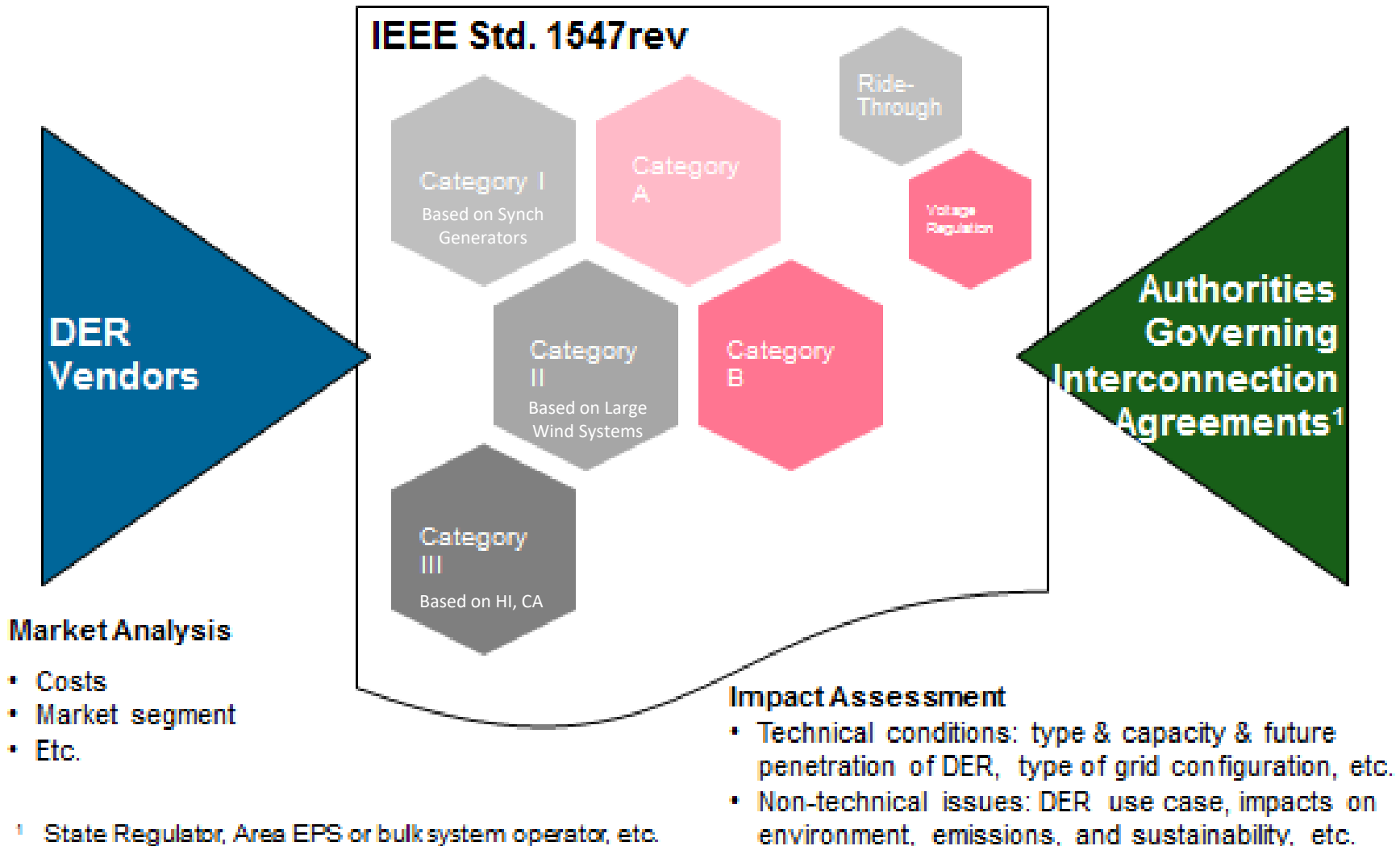
History of DER Inter. Standards in US



IEEE 1547 Full Revision – Topics

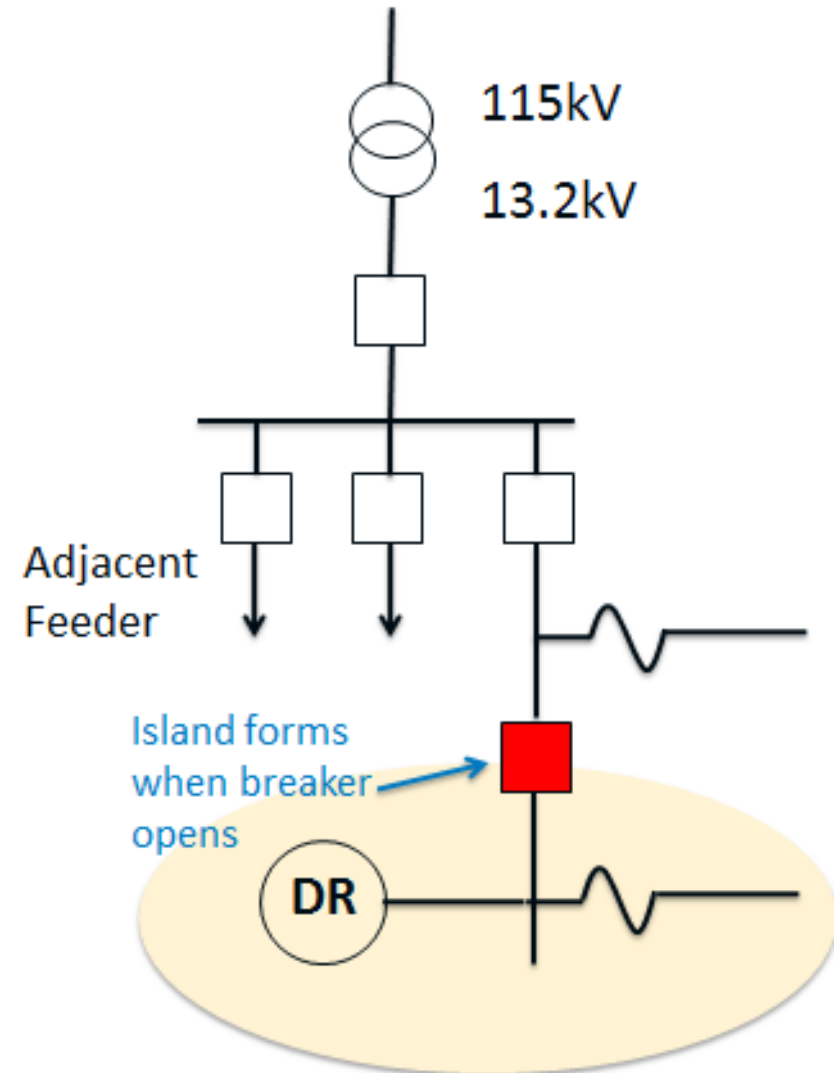
- **Voltage ride-through & frequency ride-through capabilities**
- **Some technology-specific requirements**
- **Variable settings for grid support, including Volt/VAR, Volt/Watt, frequency/Watt, etc.**
- **Revised power quality settings and requirements**
- **Intentional island and unintentional-island provisions**
- **Secondary network interconnection guidelines**
- **Energy storage system integration**
- **Grid support functions and interoperability**

NEW - IEEE P1547 DER Performance Categories



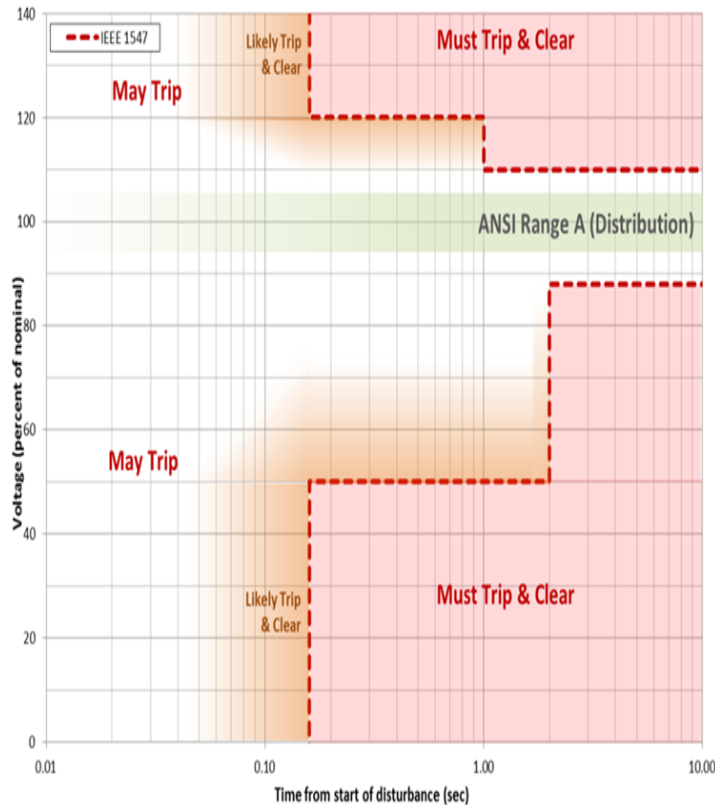
Unintentional Islanding Requirements

**IEEE 1547 requires
disconnection of DER in
2 seconds or less if an
island is formed**

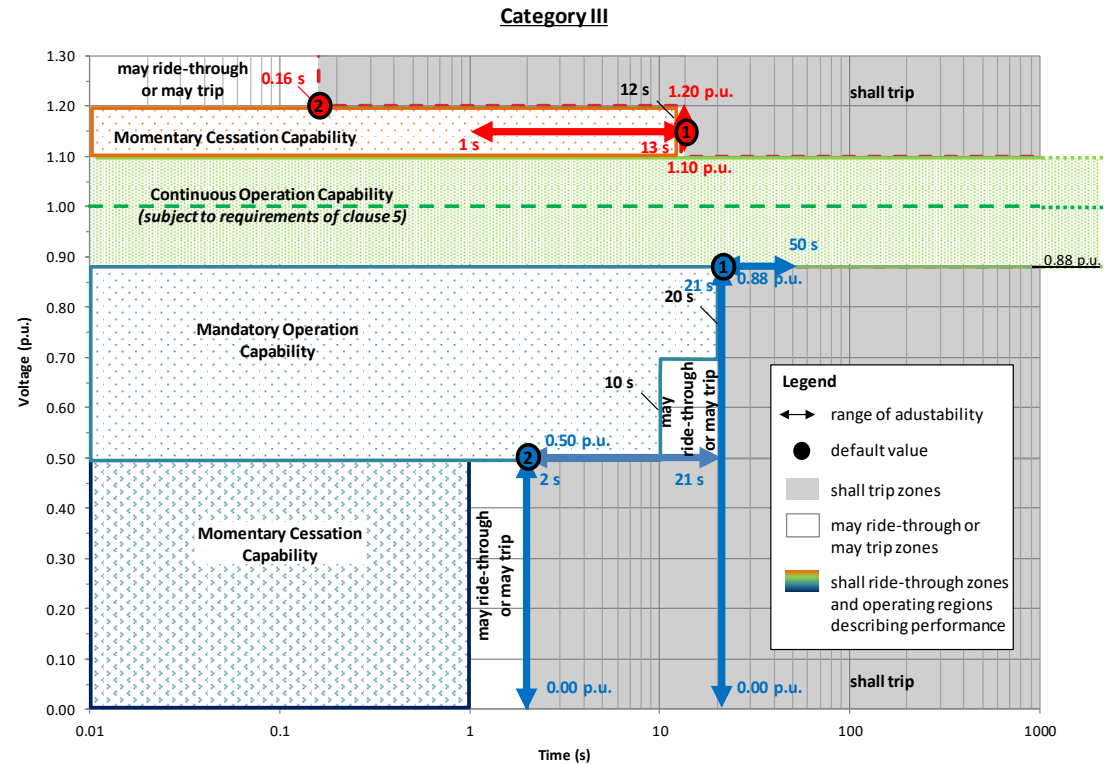


Requirements for Bulk System Reliability

IEEE 1547-2003 Requirements



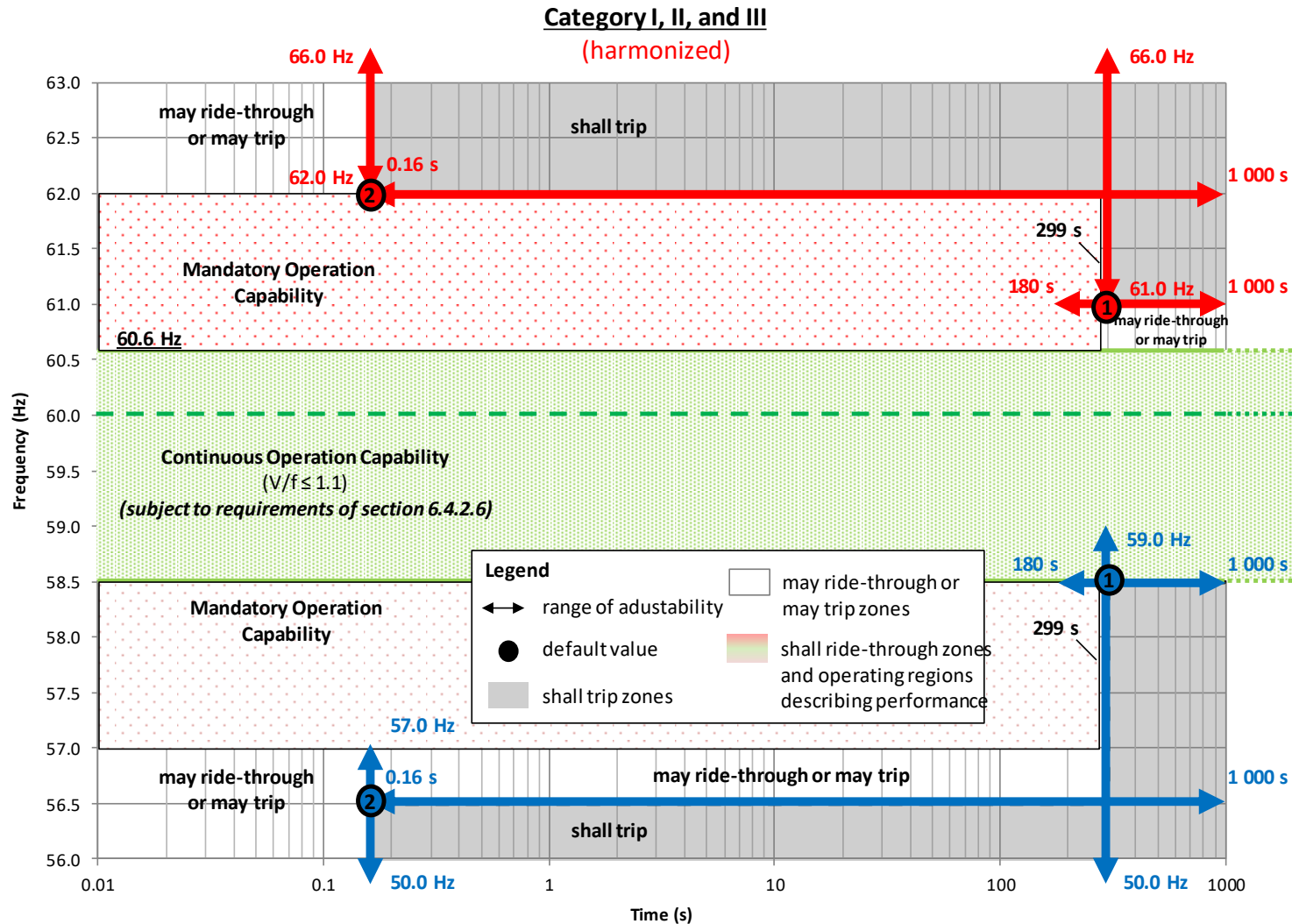
Proposed IEEE P1547 Requirements



**Voltage-ride through is now mandatory,
where it is optional in IEEE 1547-2003**

Requirements for Bulk System Reliability

Frequency Ride-Through Requirements (IEEE P1547)



Status of *IEEE 1547 Full Revision* Balloting

- **First Ballot passed >75% June 2017**
- **Over 1000 comments that must be addressed prior to next ballot**
- **Comments will be evaluated by 8 separate ballot review teams**
- **All comments are reviewed and either 1) Accepted, 2) Accepted in principle, or 3) Rejected**
- **Next ballot likely in late August 2017**

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