

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

DER Data Collection Guideline

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RELIABILITY | ACCOUNTABILITY



- Data Collection Guideline has been through two rounds of comment from DER Subgroup
- Data Collection Guideline has been forwarded NATF for comment
 - Comments should be back by December ERSWG meeting
- No concerns with approach so far
- Most comments are addressing
 - Actual data collected
 - Conclusion, or what to do (Mark Ahlstrom deserves special recognition)
 - Tabularize data request – Working on this
 - Perhaps some diagrams might be useful – Thinking about this
 - How can entities be “convinced” to provide data?
 - NERC has purview over BES and Registered Entities
 - Need to ask non-jurisdictionals as part of interconnection agreements

- DER Report definition of Distributed Energy Resources
- Any resource on the distribution system that produces electricity and is not otherwise included in the formal NERC definition of the Bulk Electric System.
 - Residential rooftop solar
 - Microgrids
 - Cogeneration projects
 - Any other resource

- Data Collection guideline should:
 - Guide entities in what data to collect
 - Guide entities in why they might need the data
 - Guide entities in who probably has the data
 - Get entities thinking about the issue
 - Specific purposes are better done in another guideline
 - LMTF modeling guidelines are good example – detailed use of data
 - Data collection guideline should complement these efforts

- Adequate knowledge of DER can become necessary to the reliable operation of the BPS as DER penetration increases and becomes a more significant energy resource
 - Balancing Authorities – NERC Reliability Entity
 - Distribution Operators – Industry Term
 - Distribution Planners – Industry Term
 - Distribution System Protection Engineers – Industry Term
 - Transmission Operators – NERC Reliability Entity
 - Transmission Planners – NERC Reliability Entity
- Non-NERC entities require the data to plan and operate distribution systems
- T-D interface has traditionally flowed T to D (load)

- DER is connected to distribution
 - By definition, it is not Bulk Electric System (BES)
- Each distribution facility is
 - Located in a Balancing Authority
 - Connected to a Transmission Operator
- Each Transmission facility is
 - Located in a Planning Coordinator Area
 - Operated by a Transmission Operator
- Each of these entities (BA, TOP, PC) needs to be clear as to what data is required from distribution entities
- Data requirements overlap quite a bit for entities

- What data should be requested?
 - Distribution load at each transmission load bus (not netted with DER)
 - DER at each transmission load bus
 - DER voltage and frequency tripping points
 - DER protection settings that would trip the DER (such as multiple faults, etc)
 - Type of DER (inverter, synchronous machine, induction machine, fuel type, rating, etc)
 - Voltage control capabilities and settings
 - Frequency control capabilities and settings
 - Islanding capability including reconnection requirements
 - Fault response characteristics
 - Isolation schemes
 - Aggregation with other resources controlled from a single entity
- Data Collection Guideline sorts this by functional group

- The approach seems to be correct
- Guidelines should be:
 - Specific enough to be useful
 - General enough to be flexible
 - Help not hinder reliability
- Update OC and PC on Guideline in December
- Take OC and PC comments in first quarter 2018
- Move towards OC and PC approval for 45-day posting for comment in March 2018?
- If this is a good approach, then...



Questions and Answers

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