

Disturbance Monitoring Technical Paper

Author Goes Here (if applicable)

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Applicability to Transmission Facilities 200 kV and Above

Rationale for Transmission Level

In developing the Disturbance data requirements the SDT decided to focus on transmission voltage levels of 200 kV and above generators 500 MVA and above and generating stations 1500 MVA and above based on expected impact to the interconnected system. It is the team's strong belief that application of requirements below these values will require significant additional resources, while adding little value. The team recommends that requirements, if any, below these thresholds should be based on local needs to be identified by Regional Entities, while working with respective Transmission Owners and Generator Owners.

Impact to the Grid Below 200 kV

INSERT examples of past events below 200kV that did not significantly impact the grid.

Applicability to Generator Facilities 500 MVA and above

Rationale for 500 MVA Level

In developing the Disturbance data requirements the SDT decided to focus on transmission voltage levels of 200 kV and above generators 500 MVA and above and generating stations 1500 MVA and above based on expected impact to the interconnected system. It is the team's strong belief that application of requirements below these values will require significant additional resources, while adding little value. The team recommends that requirements, if any, below these thresholds should be based on local needs to be identified by Regional Entities, while working with respective Transmission Owners and Generator Owners.

Impact to the Grid Below 500 MVA

INSERT examples of past events below 500 MVA that did not significantly impact the grid.

Number of Elements at a Substation

Definition of Substation Used in Standard

The standard drafting team used the following IEEE definition to be used in this standard: Substation - As defined by the IEEE C2-2002, (National Electric Safety Code) “An enclosed assemblage of equipment , e.g. switches, circuit breakers, buses and transformers, under control of qualified persons , through which electric energy is passed for the purpose of switching or modifying its characteristics.” As an example, if at a given location, there are three (3) 500 kV lines and four (4) 230 kV lines along with a 500-230 kV transformer, this is one substation with 7 lines above 200 kV.

Criterion Used for Locations

The criterion used by SDT in selecting locations for monitoring/recording Disturbance data is based on minimum number of elements (lines, transformers, etc.) or minimum amount of generation at the location. This approach facilitates the measurement of compliance to the requirements.

Data Selected to Analyze an Event

Rationale for Selected Data

Insert blurb about why the particular data was selected and if other data is available why collecting this other data is not needed to analyze the event.

Sequence of events, faults, dynamic disturbances

For each type of data (sequence of events, faults, dynamic disturbances) the requirements are arranged as follows:

- a. Locations for recording or having a process to derive: 1) sequence of events; 2) faults; and 3) dynamic disturbance recording data;
- b. Equipment to be monitored at above locations;
- c. Specific quantities to be monitored for above equipment; and
- d. Technical parameters to ensure adequate data to analyze a Disturbance