



GE VERNOVA

Consulting Services

POSITIVE SEQUENCE LOAD FLOW (PSLF*) NODE-BREAKER

Working with Operations Models



PSLF supports node-breaker, bus-branch, and hybrid modeling of networks. The node-breaker add-on for PSLF has been integrated into the steady state and dynamic analysis sections, geomagnetic disturbance (GMD) package, contingency processing, and remedial action schemes (RAS) modeling. It has been benchmarked against several disturbances, and can be used for model validation, next day studies, and NERC BAL-003 compliance efforts. These capabilities were developed in close collaboration with the Western Electricity Coordinating Council (WECC) and several of their members.

With node-breaker modeling the following are modeled explicitly:

- Disconnects
- Links
- Circuit breakers
- Fuses
- Other switching devices

EMS labels are normally used as unique identifiers in node-breaker models, rather than bus numbers. Operations node-breaker cases also have balancing authorities and substations. The balancing authorities are similar to areas, but represent the actual balancing authority and can be populated directly from EMS data for the NERC BAL-033 activities. Substations represent a bus or a set of buses in a planning case. Substation data is readily available in operations cases and is represented as a new record/object in a node-breaker case.

For more information, contact:

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