Distributed Variable Generation

Substation Detail
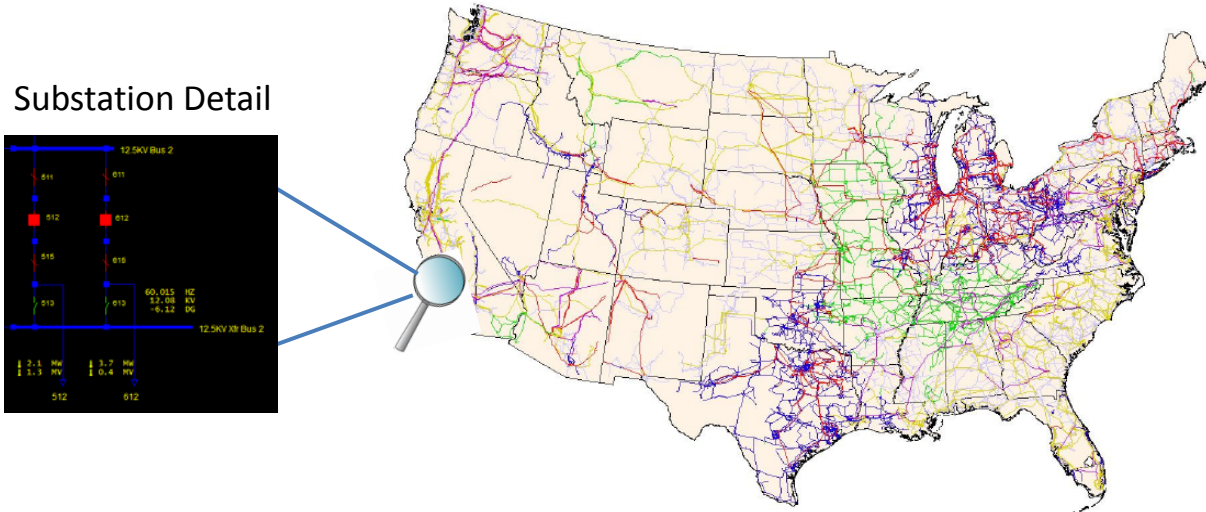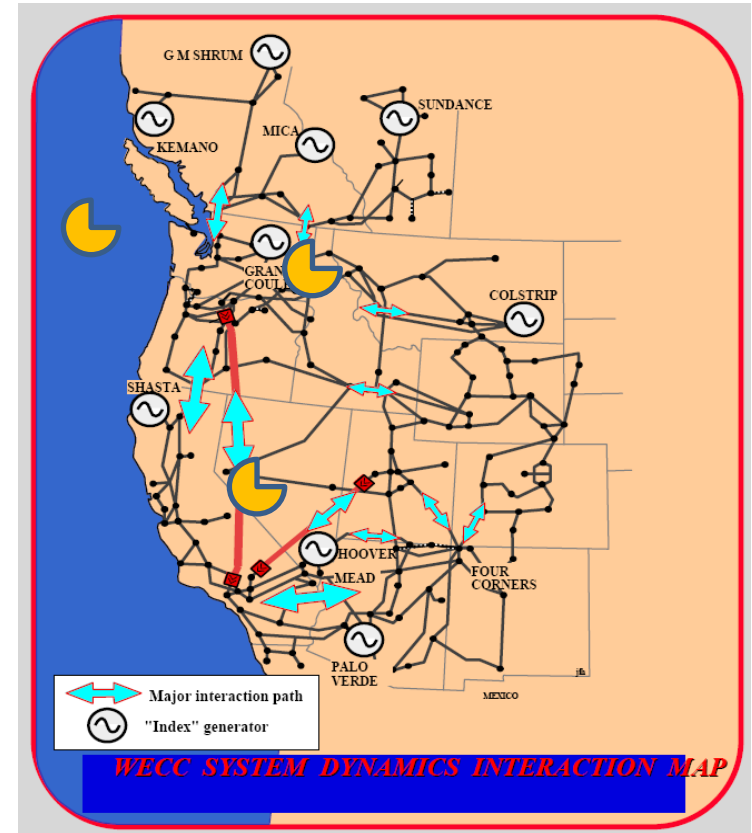

- Master interconnection models

- Includes sub-transmission and 500,000 feeder breakers.

  – 1000 GW load with 2 MW per feeder

- 10 times power flow size

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Impact of PMUs

- State and Topology Estimation at SCADA Scan Rates.

- EMS applications for Emergency and Restorative States.

- Increased transmission loading due Remedial vs. Preventative Control Actions.

- Interrupt thermal loads for 5 minutes to maintain thermal, voltage, frequency and angle stability.

- Provides time to start local CTs.

- Increased Operator Awareness of Transient Stability

WECC SYSTEM DYNAMICS INTERACTION MAP

Road Map for DOE

- Convene meetings of industry leaders.
- Fills gap on lack of forum for EMS R&D.
- Provides the perspective for impact of new technologies.
- Fund development of new Open Source applications.
- Use of DOE Laboratories for simulation based Proof of Concept Centers.

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