

Transmission Reliability Research Review

Overview of Reliability Technology Issues and Needs Assessment

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Reliability Technology Issues and Needs Assessment

- Focus: Conduct periodic assessments to identify and define emerging issues in electric systems reliability and markets
- Program Goal: Ensure that where there is a Federal role, new issues and needs are integrated into the program's research activity areas



Reliability Technology Issues and Needs Assessment

Objective:

Communicate with stakeholders in an ongoing process of strategic program planning and outreach to prevent gaps in reliability technology R&D resulting from utility industry restructuring.

Approach:

- Identify emerging critical issues for the reliability of the U.S. interconnected electric power system
- Analyzed these issues to identify gaps in needed (or enabling) reliability technology research and development
- Prioritize and initiate planning for needed federal research and technology development



Reliability Technology Issues and Needs Assessment

- Supports National Transmission Grid Study Recommendations
- Grid Metrics
 - 3.3 DOE will develop objective standards for evaluating the performance of RTOs
 - 3.9 DOE will research and identify performance metrics and evaluate designs for pbr.
- Regional Planning and Bottlenecks
 - 2.2 DOE will develop analytic tools and models to assess national-interest bottlenecks.
 - 5.1 DOE will identify electricity system planning data and how it should be made available.
 - 5.5 DOE demonstrate the use of innovative approaches to transmission planning/siting.
 - 5.22 DOE will assess smaller Eastern and Western AC Interconnections with DC links



Reliability Technology Issues and Needs Assessment

Completed and On-Going Activities

- POST Study -- RTGRM, ACE Frequency Monitoring for NERC Reliability Coordinators
- Reliability Monitoring Technology Assessment – RTGRM
- Assessment of market performance and dysfunctions -- R&M, LAAR
- Wide area monitoring -- WECC Phasor network, EIPP
- National Transmission Grid Study
- Aug 14 Blackout – ongoing
- Grid Reliability Metrics - ongoing
- Transmission Bottlenecks - ongoing



Presentations

Grid Reliability Metrics – Jim Dyer, Electric Power Group

Transmission Bottlenecks – Joe Eto, LBNL

