

WECC and NERC Approaches to Resource Adequacy



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Overview



- NERC and WECC both produce resource adequacy reports
 - same basic data from utilities
 - WECC PSA looks at specific Western issues and approaches
 - Both rely on WECC-developed planning margins
- Use and components of WECC planning margin in PSA
- Scenario based vs. probabilistic adequacy planning
- Data issues

Uses of the PSA Planning Margins

- Information only
- Not intended to supplant any state, provincial, or utility adopted planning margins
- Intended to provide
 - Overview information to WECC Board, members and others
 - Information about other areas in WECC to planners and regulators
 - Planning margin information to NERC for their reports

Planning Margin Components in PSA

- Contingency reserve - based on NERC and WECC operating requirements ~6%
- Regulating reserve - based on NERC and WECC operating requirements - affected by VG penetration in BA - basic ~ 1-2 % plus VG effect
- Additional reserve for extended forced outages
 - Supplementary reserve to rebuild contingency reserves if necessary - recognizes western market ~ 2.5%
- Reserve for 1-in-10 weather effects (basic load is 1-in-2)
 - Varies by BA, ~ 3% WECC average

Scenario vs. Probabilistic Planning

- WECC PSA uses margin to cover some uncertainties (e.g., forced outages, 1-in-10 weather)
 - Scenarios to illuminate other uncertainties (e.g., extreme temperature excursions like July 24, 2006)
- NERC expected to require probabilistic planning in next several years.
 - WECC Board Resource Policy Issues Committee also interested

Data Issues

- PSA and NERC reports use utility-supplied data
 - Questions were raised about consistency of this data with IRPs and state/provincial resource policies
 - Resolution should lie with utilities and regulators, not WECC
- EE/DSM data
 - Will be increasing interest in forecast breaking out EE/DSM
 - NERC and WECC
- Wind/Solar data
 - Historical experience – BA specific
 - NREL data – WECC US wide, detailed, synthetic data