

Regional Transmission Adequacy Guidelines (RRG Briefing)

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Principles for TASC Consideration

- Assure a safe and reliable transmission system by meeting the minimum reliability criteria established by NERC and WECC;
- Supplement the minimum reliability criteria established by NERC and WECC with cost effective (commercially prudent) investment guidelines;
- Balance transmission system investments with physical, economic, and environmental considerations;
- Promote coordinated, efficient operation, expansion and enhancement of transmission, and non-wires solution;

**Note: Draft Principles set by TASC (Principles not approved yet)
(TASC: Transmission Adequacy Steering Committee)**

Principles for TASC Consideration (contd.)

- Coordinate efforts with regional resource adequacy standards guidelines development process;
- The guidelines will be developed by applying single-utility transmission planning concept to maximize and coordinate efficient operation and expansion of the transmission grid, and for possible application to and potential adoption by the Pacific Northwest Region as defined by the Northwest Power Pool footprint; and
- Guidelines should adhere to FERC Open-Access Policy.

**Note: Draft Principles set by TASC (Principles not approved yet)
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Update

- Benchmarking completed to help establish:
 - ◆ The baseline for understanding current application of N-1 and N-2 criteria
 - ◆ Differentiate load service with transfer related problems
 - ◆ For N-2 benchmarking (Load Service) and N-1-1 (Robustness Issue) Benchmarking
- Technical Work group met to review and use benchmarking data to further assess and develop guidelines.

Preview Benchmarking

- Load (N-2)
 - ◆ Olympic Peninsula
 - ◆ SW Oregon Coast
 - ◆ Snohomish System
- Load and Transfer (N-2)
 - ◆ So Oregon
- Deeper Contingency (N-1-1)
 - ◆ Puget Sound
 - ◆ Redmond Area
 - ◆ Eugene Area
- AESO Adequacy Standards

Next Steps (Steering Committee)

- Steering Committee conference call (June 28)
 - ◆ To affirm process clarification of developing guidelines
 - ◆ To approve proposed principles
 - ◆ To review benchmarking data

Next Steps (Technical Workgroup)

- Develop Strawman proposal for Regional Transmission Adequacy Guidelines
 - ◆ Supplemental to WECC and NERC Standards
 - ◆ Addresses Physical and Economic of the transmission system
- Technical Workgroup meeting July 12 to discuss straw-proposal

**Note: Guidelines to meet Principles set by TASC (Principles not approved yet)
(TASC: Transmission Adequacy Steering Committee)**

Proposed Methodology

- When, What, Why, and Who
- Consider what we need in the guidelines (Parts)
 - ◆ LOLP
 - ◆ Outage Probability
 - ◆ Acceptable level of congestion
 - ◆ Cost/Benefit Analysis
 - ◆ Others (Performance Metrics)

Potential Elements of a Transmission Adequacy Guidelines

Reliability Standards

- NERC, WECC and Utility standards*
 - Explicit performance criteria such as LOLP
 - Probabilistic criteria
 - Robustness tests
 - Extreme event tests
- *: WECC standards are more restrictive than NERC and utility standards

Economic Indicators

- Societal benefit/cost analysis of reliability – Value of load loss
- Acceptable levels of congestion
- Definition of least cost solutions
- Price volatility and tolerance
- Assurance level for maintaining ATC across flowgates (Alternate: Availability of transmission capacity – Availability evaluation)

Potential Elements of a Transmission Adequacy Guidelines

Expansion & Pricing Policy

- Drivers
 - Generation
 - Load
 - Transfers into, out of and through the region
 - Flexibility
- Financial
 - pricing expansion
 - Advance financing requirements or other risk management tools

Other Objectives

- Development of renewable
- Resource diversity
- Economic development
- Seasonal products

Possible Solutions

- Amounts and obligations for RAS (or special protection scheme)
- Re-dispatch (mechanisms)
- Curtailment strategies
- Non-Wires Solutions
- Changes to maintenance practices to provide for more flexibility
- Better load forecast mechanisms
- Investigate and incorporate new technologies
- Locational Marginal Pricing (LMP) – Requires formation of an Independent Transmission Operator
- Computer tools to assess state of the transmission system in real-time
- Operational Practice
- Demand Side Management

Next Steps (June and July)

- June 3 – Technical Workgroup Meeting
 - ◆ Completed benchmarking
- June 23 – Sub-Team Meeting (TW)
 - ◆ Discuss Strawman proposal
- June 28 – Steering Committee Meeting (Conference Call)
 - ◆ Approval of Principles and Timeline
- June 30 - Next sub-team meeting
 - ◆ Develop Strawman proposal (Available to the group by July 1st Week)
- July 12 – Technical Workgroup Meeting (PDX Conference Center)