

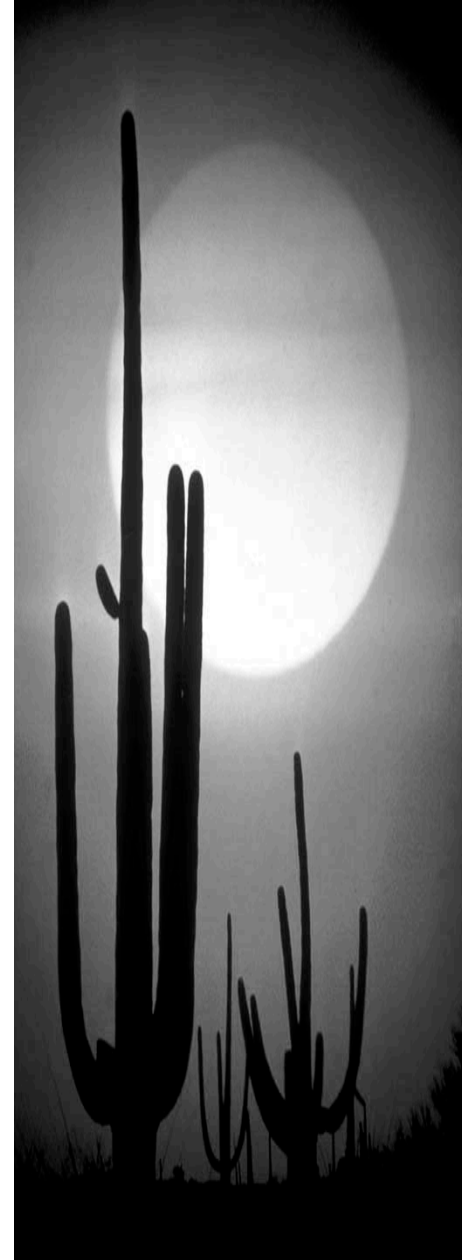
Performance Standards Issues

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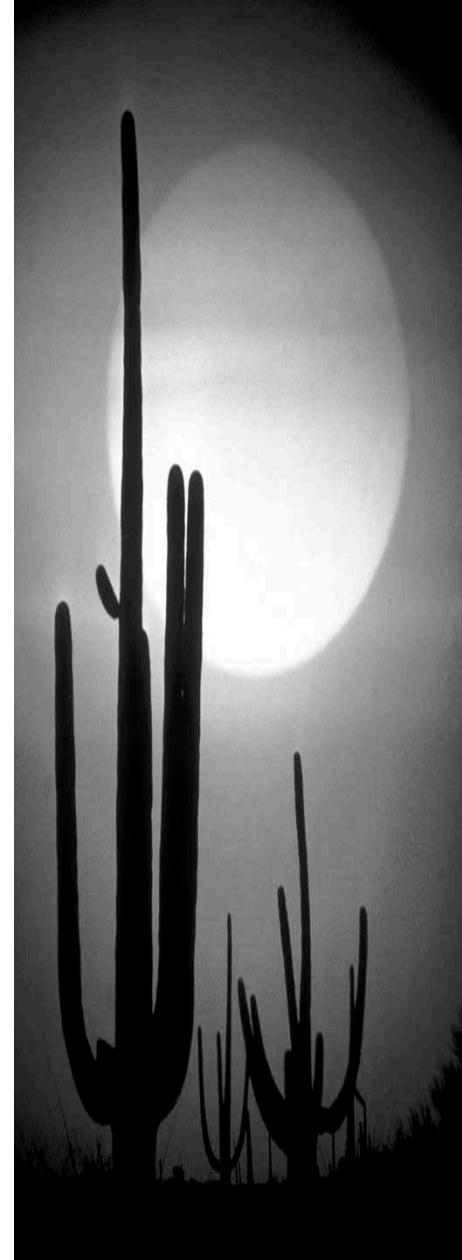
Regulatory Entities

- FERC
 - Energy Policy Act of 2005
- NERC
 - Designated Electric Reliability Organization (ERO)
- WECC
 - Regional Reliability Council



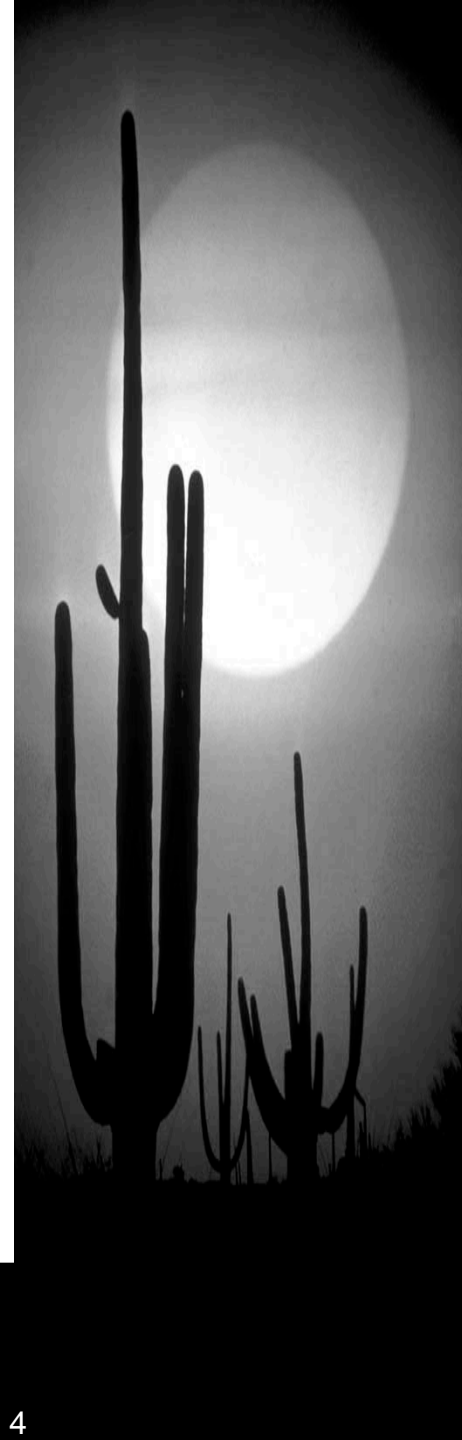
NERC Reliability Standards

- The first set of enforceable standards was filed with FERC on April 4, 2006.
- On March 15, 2007, FERC approved 83 of the 102 proposed standards.
- Those 83 standards become mandatory and enforceable in the U.S. on June 18, 2007.
- The remaining standards are still being reviewed by FERC.



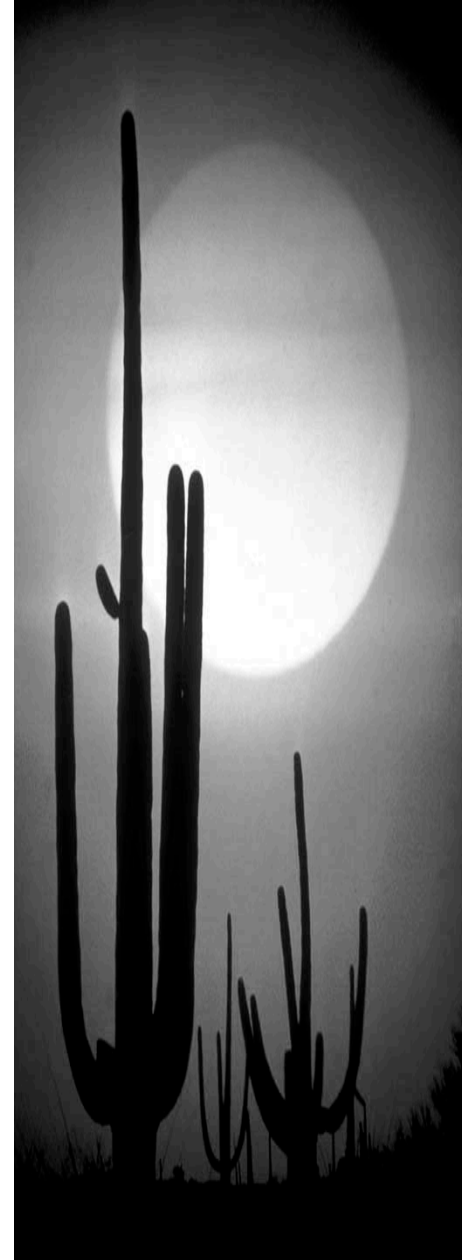
Types of Standards

- Resource and Demand Balancing (BAL) – 6 stds
- Communications (COM) – 2 stds
- Critical Infrastructure Protection (CIP) – 9 stds
- Emergency Preparedness and Operations (EOP) – 9 stds
- Facilities Design, Connections, and Maintenance (FAC) – 14 stds



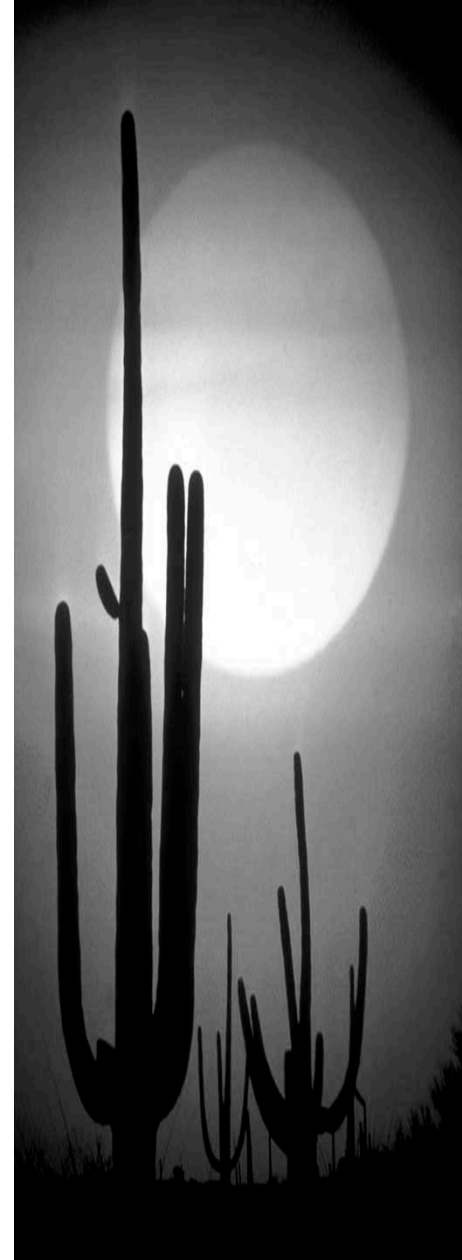
Types of Standards (cont.)

- Interchange Scheduling and Coordination (INT) – 10 stds
- Interconnection Reliability Operations and Coordination (IRO) – 16 stds
- Modeling, Data and Analysis (MOD) - 30 stds
- Nuclear (NUC) – 1 std



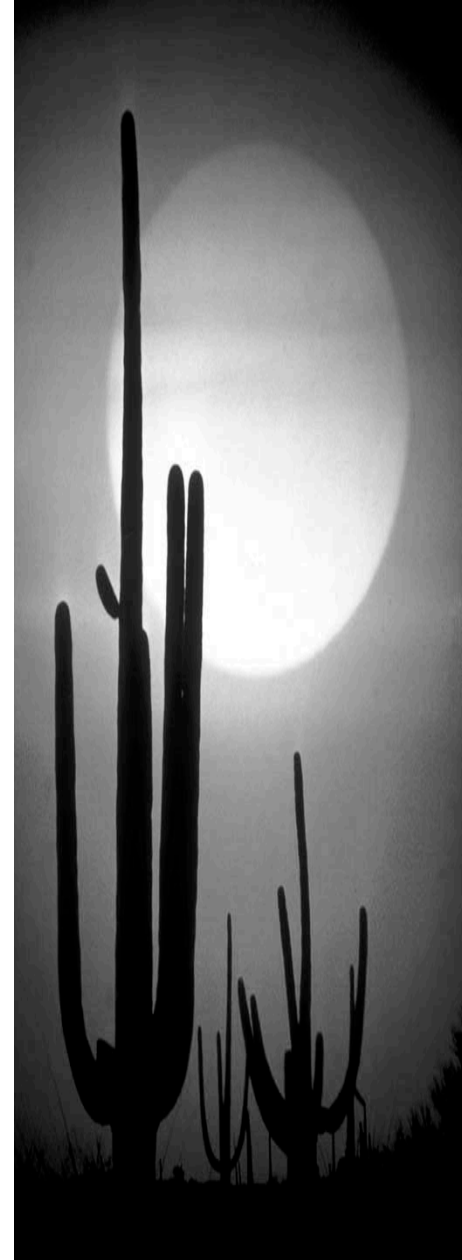
Types of Standards (cont.)

- Personnel Performance, Training, and Qualifications (PER) – 5 stds
- Protection and Controls (PRC) – 23 stds
- Transmission Operations (TOP) – 8 stds
- Transmission Planning (TPL) – 6 stds
- Voltage and Reactive (VAR) – 2 stds



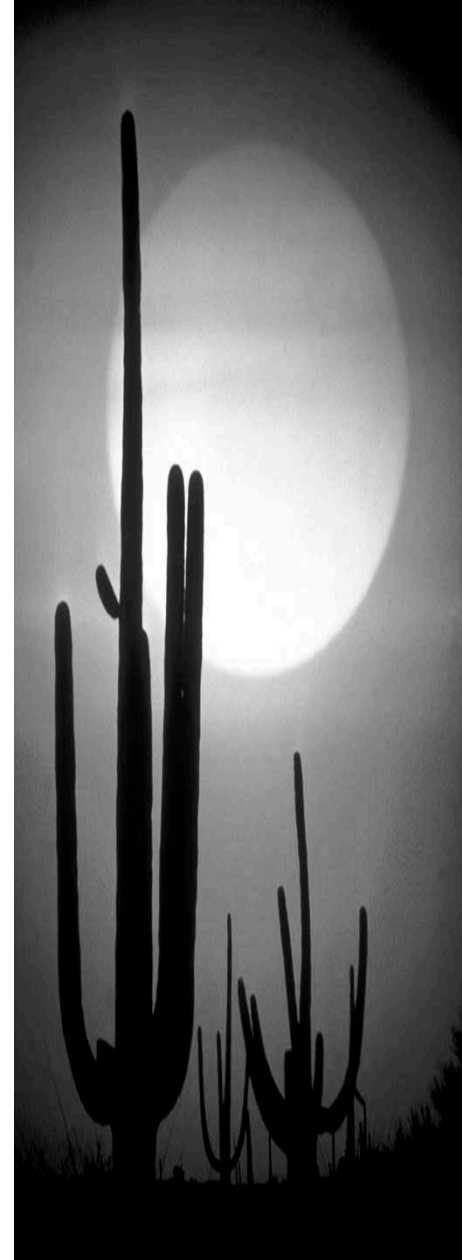
Compliance & Enforcement

- NERC & RRO enforce compliance through
 - monitoring
 - audits
 - investigations
 - financial penalties
- Potential violations of reliability standards are identified through:
 - Self-reporting by owners, operators and users of the bulk power system, of specific incidents and events
 - Information provided in periodic reports:
 - Annual Compliance Reports
 - Regional Audit Reports
 - Vegetation Management Reports
 - Information received by NERC from other industry participants
 - Audits and other monitoring programs conducted by NERC or the Regional Entities
 - Investigations by NERC or the Regional Entities



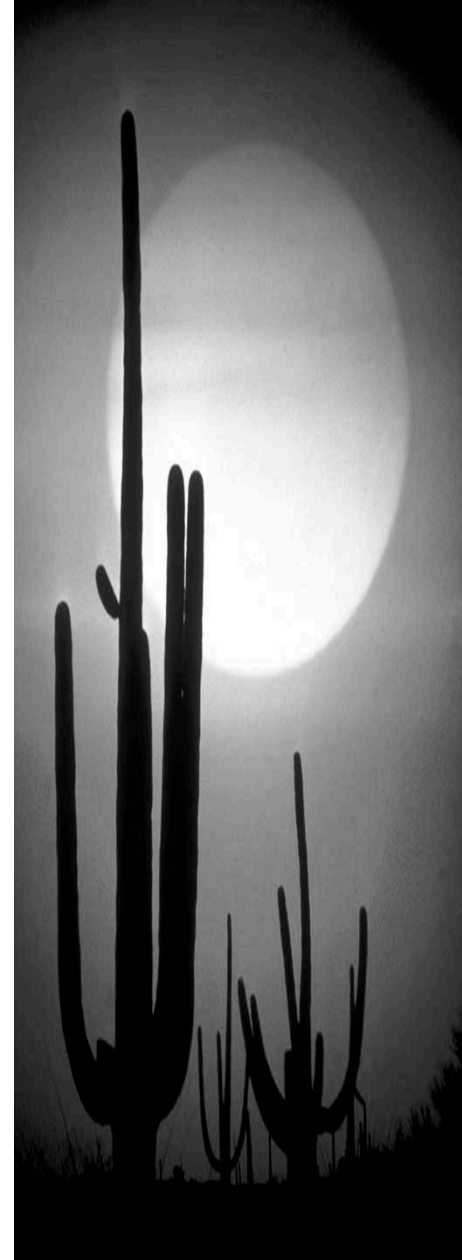
Readiness Evaluations

- NERC visits every reliability coordinator, balancing authority, transmission operator and other relevant organization once every three years to evaluate their ability, or “readiness”, to comply with NERC Reliability Standards.
- These evaluations are conducted by teams of industry volunteers and NERC staff.
- In conjunction with these readiness evaluations, NERC promotes operational excellence by identifying opportunities for improvement, as well as Examples of Excellence, that will help the individual company and the industry as a whole.



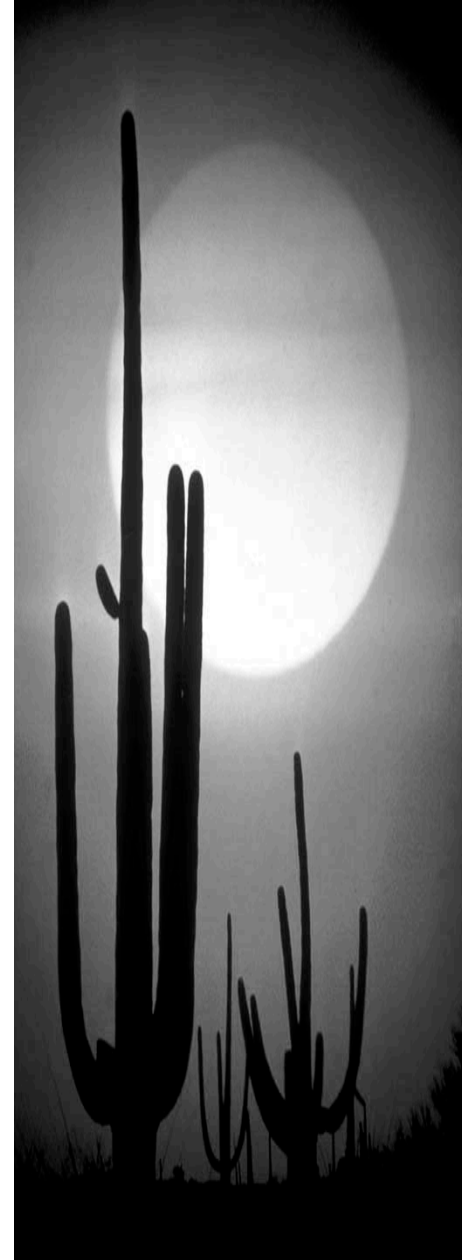
Top NERC Violations Since 6/2008

- CIP-001, Sabotage Reporting – 52
- PRC-005, Transmission and Generation Protection System Maintenance and Testing – 19
- FAC-008, Facility Ratings Methodology – 18
- FAC-009, Establish and Communicate Facility Ratings – 12
- PER-002, Operating Personnel Training – 9



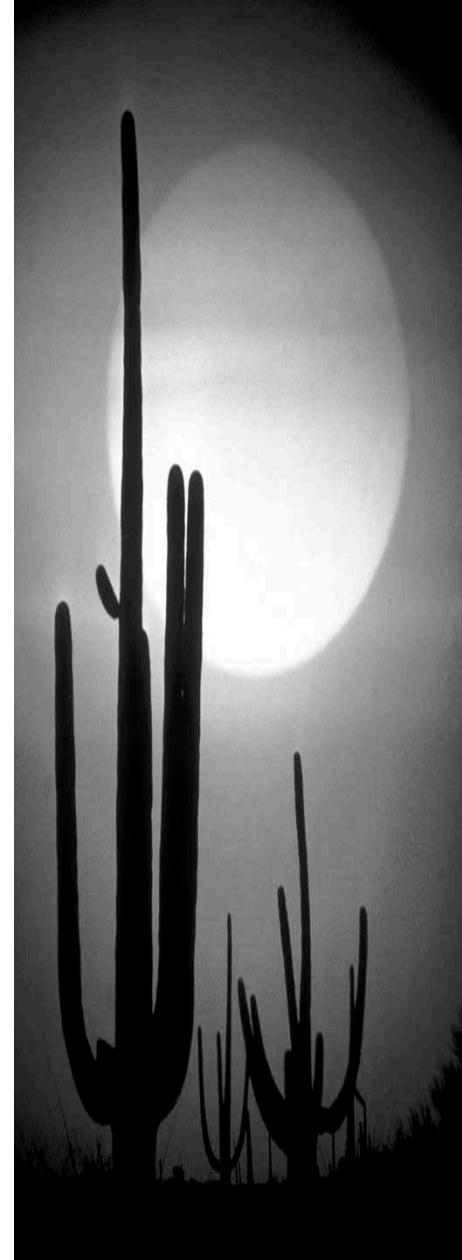
Top NERC Violations Since 6/2008 (cont.)

- IRO-004, Reliability Coordination – 6
- FAC-003, Transmission Vegetation Management Program – 4
- EOP-001, Emergency Operations Planning – 3
- FAC-001, Facility Connection Requirements – 3
- PRC-004, Analysis and Mitigation of Transmission and Generation Protection System Misoperations - 3



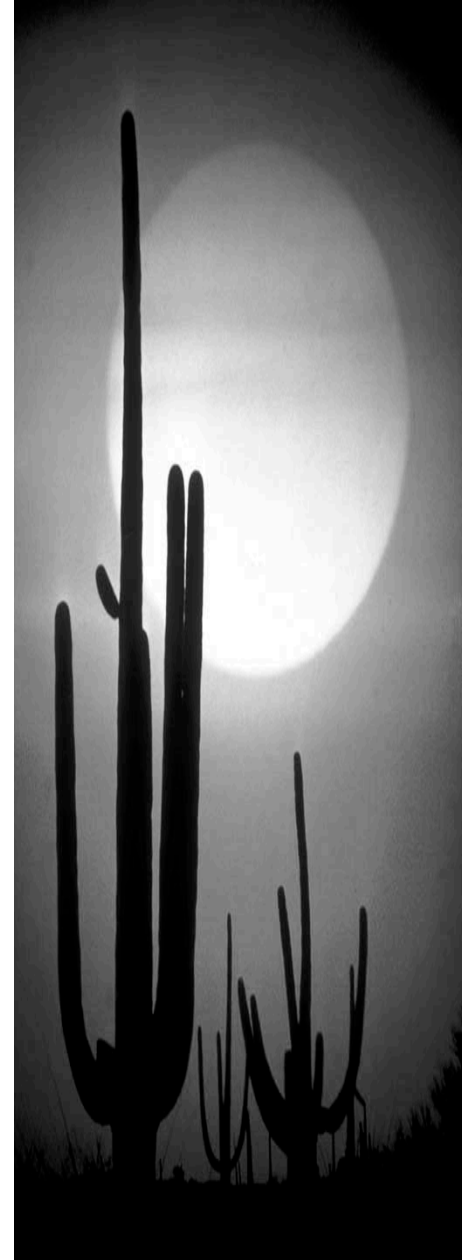
NERC Violations Since 6/2008

- 10 fines to date
- Largest fine - \$250,000 (FP&L)



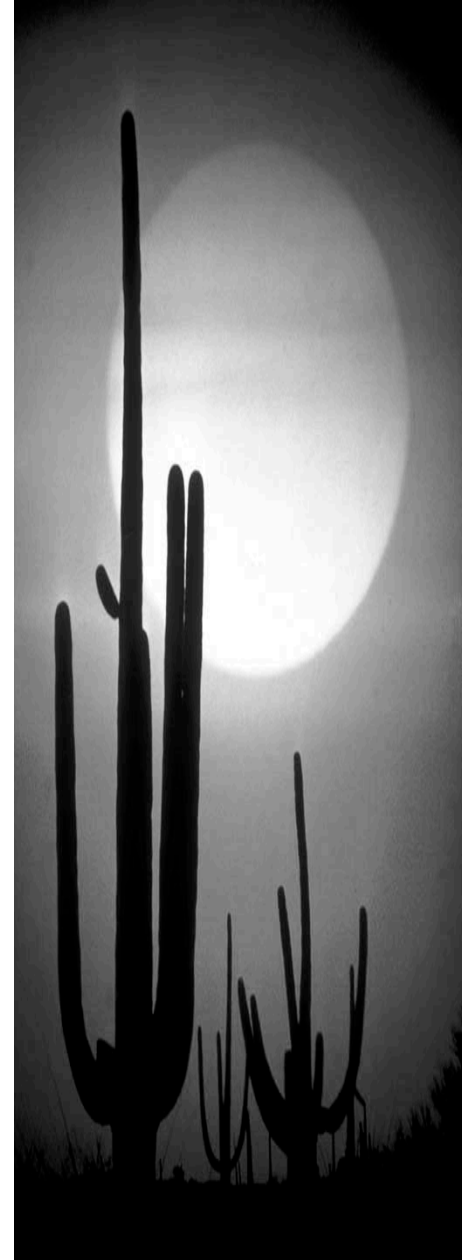
Bulk Electric System (NERC Definition)

- The electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.



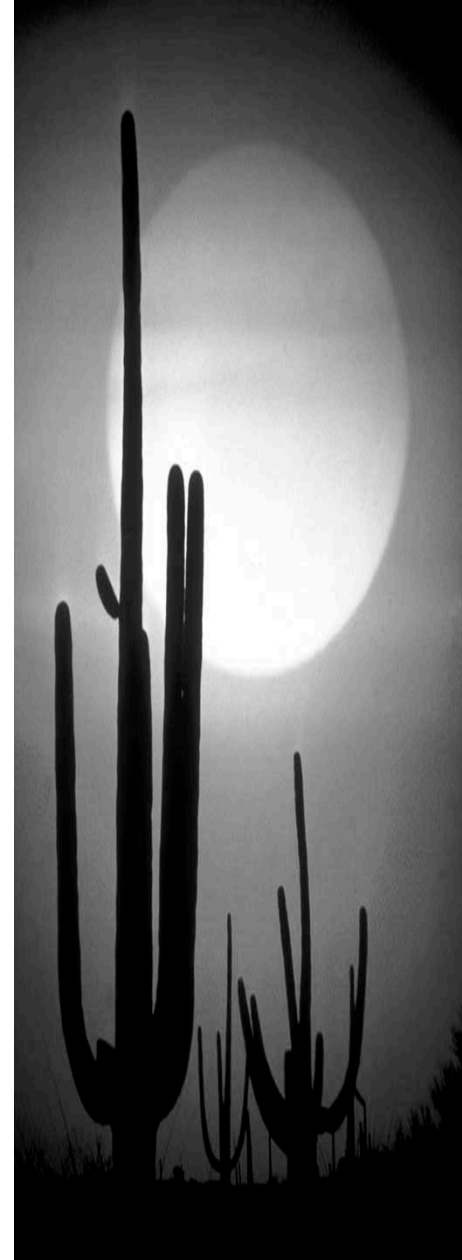
Bulk Electric System (WECC 9 Part Test)

- The system element is listed in the definition of a Transfer Path.
- An (N-1) outage of the system element necessitates a reduction in a Transfer Path's limit on actual power flow.
- Measurements of the system element's electrical parameters (e.g. MW, MVAR, amperes, frequency or volts) are included in either a System Operating Limit or an Interconnection Reliability Operating Limit being monitored by the Reliability Coordinator.
- An (N-1) outage of the system element is included in the list of outages used by a Reliability Coordinator in real-time contingency analysis.
- Planned outages of the system element are coordinated with neighboring transmission providers. As examples, the elements identified in the Northwest Power Pool Coordinated Outage System list of Significant Facilities for Outage Coordination in Section H Appendix B.



Bulk Electric System (WECC 9 Part Test) (cont.)

- The system element is either directly involved in supplying off-site station service to nuclear power plants, or its loss causes station service problems that require corrective actions.
- The system element is listed in the "WECC-Wide Key Facility List - Transmission" table in Appendix A of the WECC Regional Reliability Plan.
- The system element's status or electrical parameters are incorporated into a remedial action scheme described in the WECC Operating Procedures.
- The system element is identified by that region's Reliability Coordinator as being part of the "Bulk Electric System".



Bulk Electric System Task Force

- Very aggressive schedule
- Kicked off early April
- First draft early may
- Operating Committee vote early October
- Board vote early December

