

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Section 141.300  
FERC Form No. 715  
Annual Transmission Planning and Evaluation Report

Westar Energy  
March 30, 2009

**Part 4: Transmission Planning Reliability Criteria**

Westar Energy follows both the North American Electric Reliability Corporation (NERC) *Reliability Standards* and the Southwest Power Pool (SPP) *Criteria*.

*NERC Reliability Standards* are available at the NERC web site at <http://www.nerc.com/page.php?cid=2|20>.

*Southwest Power Pool Criteria* are available at the SPP web site at <http://www.spp.org/section.asp?group=215&pageID=27>.

Westar Energy also follows internal System Planning Policies, which establish transmission equipment ratings and system voltage limits that are more stringent than SPP *Criteria*. Two of these internal System Planning Policies are enclosed: No. 0300 - Planning Standard on System Voltage; and No. 0602 - Rating of Transmission Equipment.

Westar Energy does not perform calculations to determine Available Transmission Capability for sale of transmission service. Westar Energy is a Network Integration Transmission Service customer under the Open Access Transmission Tariff for service offered by Southwest Power Pool. All requests for transmission service or for interconnection must be directed to SPP.

**WESTAR ENERGY  
TRANSMISSION PLANNING POLICY**

No. 0300

Issued Date: August 22, 2008

Superseded Date: March10, 2008

SUBJECT: Transmission Planning Standard on System Voltage

Westar Energy's standard is to maintain the electric transmission system voltage in the range of +/- 5 percent of nominal during both steady state and post-contingency conditions on all 230 kV and higher voltage buses.

Westar Energy's standard is to maintain the electric transmission system voltage in the range of +5 percent/- 7 percent of nominal during both steady state and post-contingency conditions on all load serving buses of less than 230 kV.

These criteria shall be used when performing Tariff studies.

Voltage at the Wolf Creek 345 kV switchyard shall be maintained between 98.5 percent of nominal and 103.0 percent of nominal under all conditions. These voltage limits shall be monitored in all Transmission Planning studies. These voltage limits shall not be changed without the express written consent of the Wolf Creek Nuclear Operating Corporation.

Additional voltage limitations are contained in the Westar Energy Facility Connection Requirements publicly posted on the Westar Energy web site.

**WESTAR ENERGY**  
**SYSTEM PLANNING POLICY**

No. 0602  
Issued Date: March 10, 2008  
Superseded Date: September 17, 2007

SUBJECT: Rating of Transmission Equipment

Westar Energy follows Southwest Power Pool Criteria 12.2 for rating of transmission equipment. Under this criterion, the following guidelines are used in the development of transmission ratings:

1. Normal rating on transmission transformers shall be set to the maximum allowable manufacturer name plate rating with the emergency ratings set to 110% of the normal rating. These ratings may be increased based upon evaluation of field testing, operational history of the unit, and real time monitoring of oil temperatures.
2. Conductor normal and emergency ratings shall be set to the manufacturer's "book rating". These ratings may be increased using parameters defined in Westar Energy' "Calculation Of Conductor Ratings" document, only after evaluations determine that conductor temperatures of 90 and 100 degrees C will not violate sag limits. Evaluations shall take into account line routing in determining acceptable wind speed to be used in the re-rating of conductors. At a minimum, wind speed shall be defaulted to the manufacturer's defined 2 ft/s at a 90-degree angle.
3. Underground cable normal and emergency ratings shall be set to the manufacturer's book rating.
4. Switches and breakers normal and emergency ratings shall be set to the nameplate rating of the device.
5. Wave traps, current transformers and relays normal and emergency ratings shall be set to the manufacturer's nameplate ratings. Air-cooled wave traps that are not the epoxy encapsulated type shall have their emergency ratings set to 110% of the normal nameplate rating.
6. Short term emergency ratings shall only be established on a case-by-case basis on equipment subjected to overload following a contingency condition. These ratings shall be based upon a complete evaluation of the capability of the respective equipment to withstand short-term overloads. They are only put into effect following the development of a Transmission

Operating Directive that would maintain the loading on the respective equipment within applicable ratings.

Transmission Operating Directives are used by Westar Energy to mitigate overloads following a contingency event. These Operating Directives encompass such actions as generation redispatch and/or transmission system reconfiguration.

7. The composite rating on a terminal-to-terminal basis of transmission facilities shall be set to the most limiting equipment. Transmission facility ratings shall be updated as equipment is replaced and communicated to Transmission and Interconnected System Operations and to the Southwest Power Pool when such upgraded facilities are placed in service.