



## **NERC Compliance**

ATC was fully compliant with the North American Electric Reliability Council (NERC) Reliability Standards in 2006. In 2007 we continued to be committed to maintaining fully compliant status with all of the existing and newly approved NERC standard requirements.

As noted in the 2006 10-Year Assessment, ATC is registered with two of the regional reliability compliance entities, the Midwest Reliability Organization (MRO) and the ReliabilityFirst Corporation (RFC). This dual reporting arrangement was established because ATC serves customers that are members in each of these Regional Reliability Organizations.

The new mandatory NERC Reliability Standards assign accountability for specific requirements based on defined entity functions. ATC registered as the following entities - Transmission Owner, Transmission Operator, Transmission Planner and Planning Authority<sup>1</sup>. The following discussion of NERC compliance in this document will focus on ATC's Transmission Planner accountabilities. One purpose of this section is to enhance our ability to provide documentation of ATC compliance with the Transmission Planner accountabilities.

The primary Transmission Planner compliance responsibilities are system performance assessments and system modeling. The system performance assessment standards include checking for exceeded voltage criteria limits, system equipment overloads, adequate stability, cascading outages, loss of load, and firm transfer curtailments under a wide range of system operating conditions.

The Transmission Planning reliability standards call for the consideration of thirty (30) operating conditions. These conditions are grouped into four (4) categories. The requirements associated with each of the four categories are contained in four separate NERC standards:

- A. Normal conditions (Standard TPL-001-0)
- B. Single element contingencies (Standard TPL-002-0)
- C. Multiple element contingencies (Standard TPL-003-0)
- D. Extreme events (Standard TPL-004-0)

The first set of requirements (R1) in each of these standards deals with the frequency, timeframes, simulations, and conditions of the transmission system assessments. Most of the R1 requirements are still met by documentation in the 2006 10-Year Assessment (see references below).

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<sup>1</sup> NERC has since replaced the Planning Authority function with Planning Coordinator.



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Some R1 requirements are met by a combination of 2006 10-Year Assessment and 2007 Update documentation. For example, the assessments in the 2007 Update are supported by both the system-wide simulations that were used in the 2006 Assessment and subsequent project-specific simulations that considered more recent information. Together these supporting simulations were used to revise the assessment of expected system performance in the near-term (1 to 5 year) planning horizon and other system performance in the long-term (6 to 10 year) planning horizon.

The second set of requirements (R2) in each of the four standards deals with the plans that are proposed to achieve the required system performance. Most of the project plans that were noted in the 2006 Assessment remain unchanged in light of the newer assessments. However, the 2007 Update describes a number of project scope and need date changes that are required to achieve compliance based on the revised assessments.

The third set of requirements (R3) in each of the four standards covers documenting and communicating the assessment and project plans to the MRO and RFC. Both the 2006 Assessment and the 2007 Update together fulfill this requirement.

The listing of potential bulk power system reinforcements to address identified near-term and long-term planning horizon needs are provided in Tables PR-2 through PR-23.

Information regarding studies that are specific to generation interconnection requests is described in the Generation interconnections section. Any publicly available generation interconnection request details and completed study reports can be accessed through the MISO Web site at <http://oasis.midwestiso.org/documents/ATC/queue.html>.

### **Compliance Documentation in the 2006 10-Year Assessment**

The power system models are derived from cases that were provided by the Multi-Modeling Working Group (MMWG), which prepares cases for industry-wide use. Details regarding the specific system conditions and models that were used in the assessment are given in the Methodology & assumptions section. Additional explanations of the modeling methods and the frequency of system model updating are given in the Model building criteria section of the Planning criteria section.

A complete listing of the planning criteria that we apply, including those which are beyond the NERC, MRO, and RFC planning criteria, can be found in the Planning criteria section.

The system performance assessments for Category A (system normal) and Category B (single element contingencies) conditions are given in the Introduction and Reactive power analysis section.



# 10-Year Assessment

An annual report summarizing proposed additions and expansions to the transmission system to ensure electric system reliability.

# 2007

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The system performance assessments for Category C (multiple element contingencies) and Category D (extreme event) conditions are contained in the Multiple outage analysis and Reactive power analysis sections.

The compliance requirements dealing with system stability, generator stability, and voltage stability for all four Category (A, B, C, and D) conditions are dealt with in the System stability section.

Descriptions of the system performance studies that are prepared jointly with other interconnection companies, regional groups, or government bodies are given in the Regional analysis section.

### ATC's 2007 Assessment of Transmission System Performance

Given the full set of simulations ATC completed for the 2006 Assessment and the additional simulations completed to support this 2007 Update, ATC assesses its system as being compliant with NERC Standards TPL-001, 2, 3, and 4 for each year 2008 through 2012 and for the rest of the 10-year planning horizon.