A. Introduction

1. Title: **Verification of Generator Gross and Net Reactive Power Capability**

2. Number: MOD-025-1

3. Purpose: To ensure accurate information on generator gross and net Reactive Power capability is available for steady-state models used to assess Bulk Electric System reliability.

4. Applicability

4.1. Regional Reliability Organization.

4.2. Generator Owner.

5. Effective Dates:

Requirement 1 and Requirement 2 — January 1, 2007

Requirement 3:

January 1, 2008 — 1st 20% compliant

January 1, 2009 — 2nd 20% compliant

January 1, 2010 — 3rd 20% compliant

January 1, 2011 — 4th 20% compliant

January 1, 2012 — 5th 20% compliant

B. Requirements

R1. The Regional Reliability Organization shall establish and maintain procedures to address verification of generator gross and net Reactive Power capability. These procedures shall include the following:

R1.1. Generating unit exemption criteria including documentation of those units that are exempt from a portion or all of these procedures.

R1.2. Criteria for reporting generating unit auxiliary loads.

R1.3. Acceptable methods for model and data verification, including any applicable conditions under which the data should be verified. Such methods can include use of commissioning data, performance tracking, engineering analysis, testing, etc.

R1.4. Periodicity and schedule of model and data verification and reporting.

R1.5. Information to be reported:

R1.5.1. Verified maximum gross and net Reactive Power capability (both lagging and leading) at Seasonal Real Power generating capabilities as reported in accordance with Reliability Standard MOD-024 Requirement 1.5.1.

R1.5.2. Verified Reactive Power limitations, such as generator terminal voltage limitations, shorted rotor turns, etc.

R1.5.3. Verified Reactive Power of auxiliary loads.

R1.5.4. Method of verification, including date and conditions.

R2. The Regional Reliability Organization shall provide its generator gross and net Reactive Power capability verification and reporting procedures, and any changes to those procedures, to the

Generator Owners, Generator Operators, Transmission Operators, Planning Authorities, and Transmission Planners affected by the procedure within 30 calendar days of the approval.

R3. The Generator Owner shall follow its Regional Reliability Organization's procedures for verifying and reporting its gross and net Reactive Power generating capability per R1.

C. Measures

M1. The Regional Reliability Organization shall have available for inspection the procedures for the verification and reporting of generator gross and net Reactive Power capability in accordance with R1.

M2. The Regional Reliability Organization shall have evidence that its procedures, and any revisions to these procedures, for verification and reporting of generator gross and net Reactive Power capability were provided to affected Generator Owners, Generator Operators, Transmission Operators, Planning Authorities, and Transmission Planners within 30 calendar days of approval.

M3. The Generator Owner shall have evidence it provided verified information of its generator gross and net Reactive Power capability, consistent with that Regional Reliability Organization's procedures.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

For Regional Reliability Organization: NERC.

For Generator Owner: Regional Reliability Organization.

1.2. Compliance Monitoring Period and Reset Timeframe

One calendar year.

1.3. Data Retention

The Regional Reliability Organization shall retain both the current and previous version of the procedures.

The Generator Owner shall retain information from the most current and prior verification.

The Compliance Monitor shall retain any audit data for three years.

1.4. Additional Compliance Information

The Regional Reliability Organization and Generator Owner shall each demonstrate compliance through self-certification or audit (periodic, as part of targeted monitoring or initiated by complaint or event), as determined by the Compliance Monitor.

2. Levels of Non-Compliance for Regional Reliability Organization:

2.1. Level 1: There shall be a level one non-compliance if either of the following conditions is present:

2.1.1 Procedures did not meet one of the following requirements: R1.1, R1.2 or R1.4.

2.1.2 No evidence that procedures were distributed as required in R2.

2.2. Level 2: Procedures did not meet two or three of the following requirements: R1.1, R1.2 or R1.4.

2.3. Level 3: Procedures did not meet R1.3.

2.4. Level 4: Procedures did not meet R1.5.1, R1.5.2, R1.5.3, or R1.5.4.

3. Levels of Non-Compliance for Generator Owner:

3.1. Level 1: Complete, verified generator data were provided for 98% or more but less than 100% of a Generator Owner's units as required by the regional procedures.

3.2. Level 2: Complete, verified generator data were provided for than 96% or more, but less than 98% of a Generator Owner's units as required by the regional procedures.

3.3. Level 3: Complete, verified generator data were provided for 94% or more, but less than 96% of a Generator Owner's units as required by the regional procedures.

3.4. Level 4: Complete, verified generator data were provided for less than 94% less of a Generator Owner's units as required by the regional procedures.

E. Regional Differences

None identified.

Version History

Version	Date	Action	Change Tracking
Version 1	12/01/05	1. Changed tabs in footer. 2. Removed comma after 2004 in "Development Steps Completed," #1. 3. Changed incorrect use of certain hyphens (-) to "en dash" (–) and "em dash (—)." 4. Added "periods" to items where appropriate. 5. Changed apostrophes to "smart" symbols. 6. Changed "Timeframe" to "Time Frame" in item D, 1.2. 7. Lower cased all instances of "regional" in section D.3.	01/20/06