

Notes

Project 2009-06 — Facility Ratings SDT

June 12, 2009 | 2:00 pm– 4:00 pm EDT

Dial-In Number: (866) 289-4175 | Access Code: 3107375457

Visual Access:

1. Go to <https://nerc.webex.com>
2. Find your meeting in the list and click "Join"
3. Enter your name and email address
4. Enter the meeting password: **standards**
5. Click "Join Now"

1. Administration

a. Introductions

Steve Crutchfield	Terry Crawley	Patrick Harwood (FERC)
Ron Szymczak	Chifong Thomas	Ron Losh
Paul Johnson	Bob Birch	

- #### b. NERC Anti-trust Guidelines — Mr. Crutchfield reviewed the anti-trust guidelines

2. **Finalize SAR / Standard as appropriate** — Mr. Johnson led a review of suggested revisions to R1.2 and R2, particularly as they relate to generators. The requirements were revised.
3. **Finalize responses to Stakeholder Comments on the SAR** — Mr. Johnson led a review of draft responses. These were not finalized (see action items)
4. **Summarize action items**
 - a. Mr. Millard to review VSL comments and provide responses (Q4)
 - b. Mr. Birch to provide summary responses for Q1& Q2.
 - c. Ms. Thomas to provide summary responses for Q3& Q4.
 - d. Mr. Johnson and Mr. Crawley to develop comment form for next posting by June 19th.

5. Schedule future meetings

a. TBD

6. Adjourn

Standard Authorization Request Form

Title of Proposed Standard Revisions to Facility Ratings Standards FAC-008-1 and FAC-009-1	
Request Date	December 24, 2008
<u>Revision Date</u>	<u>June 5, 2009</u>

SAR Requestor Information	SAR Type (<i>Check a box for each one that applies.</i>)
Name Paul Johnson	<input type="checkbox"/> New Standard
Primary Contact Paul Johnson, Managing Director of Transmission Operations	<input checked="" type="checkbox"/> Revision to existing Standards FAC-008-1 FAC-009-1
Telephone 614-413-2200 Fax	<input type="checkbox"/> Withdrawal of existing Standard
E-mail pbjohnson@aep.com	<input type="checkbox"/> Urgent Action

<p>Purpose</p> <p>The purpose of revising these standards is to:</p> <ol style="list-style-type: none"> 1. Ensure they are enforceable as mandatory reliability standards with financial penalties - the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear. 2. Consider applicable FERC directives from Order 693 3. Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 1) 4. Satisfy the standards procedure requirement for five-year review of the standards.
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Industry Need

As the electric reliability organization begins enforcing compliance with reliability standards under Section 215 of the Federal Power Act in the United States and applicable statutes and regulations in Canada, the industry needs a set of clear, measurable, and enforceable reliability standards. While the Federal Energy Regulatory Commission approved both FAC-008 and FAC-009 as enforceable reliability standards, the Commission also directed NERC to make modifications to FAC-008 and indicated that making these modifications should be considered a 'high' priority.

Brief Description

The revisions to these two standards will result in a single standard that is responsive to the recommended changes identified in the Standard Review Guidelines attached to this SAR and also to two of the three applicable FERC directives in Order 693.

The proposed changes to FAC-008 and FAC-009 have already been through stakeholder review and reached consensus in 2008 on all requirements except the requirement (R7) developed to meet the FERC directive in Order 693 that required identification of the most limiting component of a facility and the theoretical increase in rating if the limitation were removed. Stakeholders indicated that this requirement (R7) did not have a reliability-related benefit, and voted against the inclusion of a requirement to meet this directive. Thus, this SAR proposes the same standard that was developed and balloted in late 2008, but without the requirement (R7).

[In the first posting of this SAR, stakeholders indicated that they did not believe that FAC-008 should be applicable to Generator owners for various reasons, including the requirements being vague and burdensome. The SDT feels strongly that the standard applies to generation Owners and have revised the Generator Owner requirements for this draft Standard \(Now R1 and R2 in the current draft\) to provide greater clarity of the Generator Owner responsibilities and options for developing facility rating documentation.](#)

Detailed Description

The revisions to these two standards are shown in the proposed standard.

The proposed changes have already been through stakeholder review and reached consensus in 2008 with the exception of adding a requirement to meet the third FERC directive shown below. Stakeholders indicated that the third directive was not needed for reliability, and voted against the inclusion of a requirement to meet this directive. The first two directives have been met in the attached proposed standard.

- (1) document underlying assumptions and methods used to determine normal and emergency facility ratings;
- (2) develop facility ratings consistent with industry standards developed through an open, transparent and validated process and
- (3) for each facility, identify the limiting component and, for critical facilities, the resulting increase in rating if that component is no longer limiting.

Standards Authorization Request Form

Reliability Functions

The Standard will Apply to the Following Functions <i>(Check box for each one that applies.)</i>		
<input type="checkbox"/>	Reliability Coordinator	Ensures the reliability of the bulk transmission system within its Reliability Authority area. This is the highest Reliability Authority.
<input type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within its metered boundary and supports system frequency in real time.
<input type="checkbox"/>	Interchange Authority	Authorizes valid and balanced Interchange Schedules.
<input type="checkbox"/>	Planning Authority	Plans the Bulk Electric System.
<input type="checkbox"/>	Resource Planner	Develops a long-term (>one year) plan for the resource adequacy of specific loads within a Planning Authority area.
<input type="checkbox"/>	Transmission Planner	Develops a long-term (>one year) plan for the reliability of transmission systems within its portion of the Planning Authority area.
<input type="checkbox"/>	Transmission Service Provider	Provides transmission services to qualified market participants under applicable transmission service agreements
<input checked="" type="checkbox"/>	Transmission Owner	Owns transmission facilities.
<input type="checkbox"/>	Transmission Operator	Operates and maintains the transmission facilities, and executes switching orders.
<input type="checkbox"/>	Distribution Provider	Provides and operates the "wires" between the transmission system and the customer.
<input checked="" type="checkbox"/>	Generator Owner	Owns and maintains generation unit(s).
<input type="checkbox"/>	Generator Operator	Operates generation unit(s) and performs the functions of supplying energy and Interconnected Operations Services.
<input type="checkbox"/>	Purchasing-Selling Entity	The function of purchasing or selling energy, capacity, and all necessary Interconnected Operations Services as required.
<input type="checkbox"/>	Market Operator	Integrates energy, capacity, balancing, and transmission resources to achieve an economic, reliability-constrained dispatch.
<input type="checkbox"/>	Load-Serving Entity	Secures energy and transmission (and related generation services) to serve the end user.

Standards Authorization Request Form

Reliability and Market Interface Principles

Applicable Reliability Principles <i>(Check box for all that apply.)</i>	
<input checked="" type="checkbox"/>	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input type="checkbox"/>	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input checked="" type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
<input type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
<input type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input type="checkbox"/>	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
Does the proposed Standard comply with all of the following Market Interface Principles? <i>(Select 'yes' or 'no' from the drop-down box.)</i>	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Standards Authorization Request Form

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Differences

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

The drafting team that developed the version of FAC-008-2 that was balloted in late 2008 referenced these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6.1* and the *ERO Rules of Procedure*:

Standard Review Guidelines

Applicability

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

Purpose

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

Performance Requirements

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

Measurability

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

Technical Basis in Engineering and Operations

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

Completeness

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

Consequences for Noncompliance

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

Clear Language

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

Practicality

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

Capability Requirements versus Performance Requirements

In general, requirements for entities to have ‘capabilities’ (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to ‘maintain’ their capabilities.

Consistent Terminology

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a ‘unique’ definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Violation Risk Factors (Risk Factor)

Identify the potential reliability significance of a violation of the associated requirement. Each requirement must have an associated VRF.

A **High Risk Factor** requirement:

- (a) is one that, if violated, could directly cause or contribute to bulk power system instability, separation, or a cascading sequence of failures, or could place the bulk power system at an unacceptable risk of instability, separation, or cascading failures; or
- (b) is a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk power system instability, separation, or a cascading sequence of failures, or could place the bulk power system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

A **Medium Risk Factor** requirement:

- (a) is a requirement that, if violated, could directly affect the electrical state or the capability of the bulk power system, or the ability to effectively monitor and control the bulk power system, but is unlikely to lead to bulk power system instability, separation, or cascading failures; or
- (b) is a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly affect the electrical state or capability of the bulk power system, or the ability to effectively monitor, control, or restore the bulk power system, but is unlikely, under emergency, abnormal, or restoration conditions

anticipated by the preparations, to lead to bulk power system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

A **Lower Risk Factor** requirement is administrative in nature and:

(a) is a requirement that, if violated, would not be expected to affect the electrical state or capability of the bulk power system, or the ability to effectively monitor and control the bulk power system; or

(b) is a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to affect the electrical state or capability of the bulk power system, or the ability to effectively monitor, control, or restore the bulk power system.

Time Horizon

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

Violation Severity Levels

The drafting team should develop a set of violation severity levels that can be applied for the requirements within the standard.

The violation severity levels should be based on the following criteria:

Define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

Compliance Monitor

Replace, “Regional Reliability Organization” with “Regional Entity.”
Replace “NERC” with “ERO.”

Fill-in-the-blank Requirements

Do not include any ‘fill-in-the-blank’ requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

Requirements for Regional Reliability Organization

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

Effective Dates

Must be 1st day of 1st quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan.

Associated Documents

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, ‘Associated Documents’.

Functional Model Version 3

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

A. Introduction

1. **Title:** Facility Ratings
2. **Number:** FAC-008-2
3. **Purpose:** To ensure that Facility Ratings used in the reliable planning and operation of the Bulk Electric System (BES) are determined based on technically sound principles. A Facility Rating is essential for the determination of System Operating Limits.
4. **Applicability**
 - Transmission Owner.
 - Generator Owner.
5. **Effective Date:** The first day of the first calendar quarter that is twelve months beyond the date approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the first day of the first calendar quarter twelve months following BOT adoption.

B. Requirements

- R1. ~~Each~~The Generator Owner shall have a documented methodology for determining the Facility Ratings (~~Facility Ratings Methodology~~) of its solely and jointly owned ~~turbine-generator unit~~ Facility(ies) up to the generator terminals or the low side terminals of the step up transformer, or the high side terminal of the step up transformer (location as specified by the Generator Owner) ~~that identifies how each of the following were considered:~~ [Violation Risk Factor: ~~Lower~~Medium] [Time Horizon: Long-term Planning]
 - R1.1. The documentation shall contain at least one of the following:
 - R1.1.1. Design or construction information such as design criteria, ratings provided by equipment manufacturers, equipment drawings and/or specifications, engineering analyses, method(s) consistent with industry standards (e.g. ANSI and IEEE), or an established engineering practice having a successful implementation record.
 - R1.1.2. Operational information such as commissioning test results, performance testing or historical performance records, any of which may be supplemented by engineering analyses.~~Facility commissioning data.~~
 - ~~R1.2.~~The documentation shall be capable of demonstrating consistency with the principle that the Facility Ratings do not exceed the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility. ~~Either performance history or rating verification supplemented by engineering analysis.~~
 - ~~R1.3.~~Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications such as nameplate rating.
 - ~~R1.4.~~Ambient conditions.
 - ~~R1.5.~~R1.2. Equipment Rating industry standard(s) used in development of this methodology.
- R2. Each Generator Owner shall have a documented methodology for determining Facility Ratings (Facility Ratings Methodology) of its solely and jointly owned equipment connected between the generator terminals, or the low voltage side of the step up transformer, or the high voltage side of the transformer (consistent with location specified in R1 by the Generator Owner) and

the point of interconnection with the Transmission Owner that contains all of the following. [Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]

R2.1. The methodology used to establish the Ratings of the Equipment that comprises the Facility(ies) shall be consistent with at least one of the following:

R2.1.1. Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications such as nameplate rating.

R2.1.2. One or more industry standards developed through an open process such as Institute of Electrical and Electronic Engineers (IEEE) or International Council on Large Electric Systems (CIGRE).

R2.1.3. A practice that has been verified by testing or engineering analysis.

R2.2. The underlying assumptions, design criteria, and methods used to determine the Equipment Ratings identified in R2.1 including identification of how each of the following were considered:

R2.2.1. Equipment Rating standard(s) used in development of this methodology.

R2.2.2. Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications.

R2.2.3. Ambient conditions (for particular or average conditions or as they vary in real-time).

R2.2.4. Operating limitations.¹

R2.3. A statement that a Facility Rating shall respect the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility.

R2.4. The scope of equipment addressed shall include, but not limited to, conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices.

~~R2.~~R3. Each~~The~~ Transmission Owner ~~and Generator Owner~~ shall each have a documented methodology for determining Facility Ratings (Facility Ratings Methodology) of its solely and jointly owned Facilities (except for those generating unit Facilities addressed in R1) that contains all of the following: [Violation Risk Factor: ~~Medium~~Lower] [Time Horizon: Long-term Planning]

~~R2.1.~~R3.1. The methodology used to establish the Ratings of the Equipment that comprises the Facility shall be consistent with at least one of the following:

~~R2.1.1.~~R3.1.1. Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications such as nameplate rating.

~~R2.1.2.~~R3.1.2. One or more industry standards developed through an open process such as Institute of Electrical and Electronics Engineers (IEEE) or International Council on Large Electric Systems (CIGRE).

~~R2.1.3.~~A practice that has been verified by testing or engineering analysis.

¹ Such as temporary de-ratings of impaired equipment in accordance with good utility practice.

R3.1.3.

~~R2.2.~~R3.2. The underlying assumptions, design criteria, and methods used to determine the Equipment Ratings identified in R2.1 including identification of how each of the following were considered:

~~R2.2.1.~~R3.2.1. Equipment Rating standard(s) used in development of this methodology.

~~R2.2.2.~~R3.2.2. Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications.

~~R2.2.3.~~R3.2.3. Ambient conditions (for particular or average conditions or as they vary in real-time).

~~R2.2.4.~~R3.2.4. Operating limitations.²

~~R2.3.~~R3.3. A statement that a Facility Rating shall respect the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility.

~~R2.4.~~R3.4. The process by which the Rating of equipment that comprises a Facility is determined.

~~R2.4.1.~~R3.4.1. The scope of equipment addressed shall include, but not be limited to, transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices.

~~R2.4.2.~~R3.4.2. The scope of Ratings addressed shall include, as a minimum, both Normal and Emergency Ratings.

~~R3.~~R4. The Transmission Owner and Generator Owner shall each make its Facility Ratings Methodology available for inspection and technical review by those Reliability Coordinators, Transmission Operators, Transmission Planners and Planning Coordinators that have responsibility for the area in which the associated Facilities are located, within 21 calendar days of receipt of a request. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

~~R4.~~R5. If a Reliability Coordinator, Transmission Operator, Transmission Planner or Planning Coordinator provides documented comments on its technical review of a Transmission Owner's or Generator Owner's Facility Ratings Methodology, the Transmission Owner or Generator Owner shall provide a response to that commenting entity within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to the Facility Ratings Methodology and, if no change will be made to that Facility Ratings Methodology, the reason why. *[Violation Risk Factor: Lower] [Mitigation Time Horizon: Operations Planning]*

~~R5.~~R6. The Transmission Owner and Generator Owner shall each have Facility Ratings for its solely and jointly owned Facilities that are consistent with the associated Facility Ratings Methodology. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-day Operations, Real-time Operations]*

~~R6.~~R7. The Transmission Owner and Generator Owner shall each provide Facility Ratings for its solely and jointly owned Facilities that are existing Facilities, new Facilities, modifications to existing Facilities and re-ratings of existing Facilities to its associated Reliability Coordinator(s), Planning Coordinator(s), Transmission Planner(s), and

² Such as temporary de-ratings of impaired equipment in accordance with good utility practice.

Transmission Operator(s) as scheduled by such requesting entities. [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning, Same-day Operations, Real-time Operations*]

C. Measures

M1. ~~Each~~The Generator Owner shall have a documented ~~Facility Ratings Methodology~~ that shows how ~~the Facility Ratings were determined as identified in each of the items identified in Requirement 1.1 through Requirement 1.5 were considered.~~

M2. Each Generator Owner shall have a documented Facility Ratings Methodology that includes all of the items identified in Requirement 2.1 through Requirement 2.4.

~~M2.M3.~~ EachThe Transmission Owner ~~and Generator Owner~~ shall each have a documented Facility Ratings Methodology that includes all of the items identified in Requirement ~~3~~2.1 through Requirement ~~3~~2.4.

~~M3.M4.~~ The Transmission Owner and Generator Owner shall each have evidence, such as a copy of a dated electronic note, or other comparable evidence to show that it made its Facility Ratings Methodology available for inspection within 21 calendar days of a request in accordance with Requirement 3.

~~M4.M5.~~ If the Reliability Coordinator, Transmission Operator, Transmission Planner or Planning Coordinator provides documented comments on its technical review of a Transmission Owner's or Generator Owner's Facility Ratings Methodology, the Transmission Owner or Generator Owner shall have evidence, (such as a copy of a dated electronic or hard copy note, or other comparable evidence from the Transmission Owner or Generator Owner addressed to the commenter that includes the response to the comment,) that it provided a response to that commenting entity in accordance with Requirement 4.

~~M5.M6.~~ The Transmission Owner and Generator Owner shall have evidence to show that its Facility Ratings are consistent with its Facility Ratings Methodology (Requirement 5).

~~M6.M7.~~ The Transmission Owner and Generator Owner shall each have evidence, such as a copy of a dated electronic note, or other comparable evidence to show that it provided its Facility Ratings to its associated Reliability Coordinator(s), Planning Coordinator(s), Transmission Planner(s), and Transmission Operator(s) in accordance with Requirement 6.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Timeframe

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

- Self-Certifications
- Spot Checking
- Compliance Audits

- Self-Reporting
- Compliance Violation Investigations
- Complaints

1.4. Data Retention

The Generator Owner shall keep its current documentation, ~~in force Facility Rating Methodology~~ (for R1) and any modifications to the methodology that were in force since last compliance audit period for Measure 1 and Measure 65.

The Transmission Owner ~~and Generator Owner~~ shall keep its current, in force Facility Ratings Methodology (for R32) and any modifications to the methodology that were in force since the last compliance audit for Measure 32 and Measure 65.

The Transmission Owner and Generator Owner shall keep its current, in force Facility Ratings and any changes to those ratings for three calendar years for Measure 65.

The Generator Owner and Transmission Owner shall each keep evidence for Measure 43, Measure 54, and Measure 76 for three calendar years.

If a Generator Owner or Transmission Owner is found non-compliant, it shall keep information related to the non-compliance until found compliant.

The Compliance Enforcement Authority shall keep the last audit and all subsequent compliance records.

1.5. Additional Compliance Information

None

Standard FAC-008-2 — Facility Ratings
Violation Severity Levels

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	<p>The Generator Owner's Facility Ratings Methodology documentation for generating unit Facilities, does not <u>contain at least one item from R1.1.1 or R1.1.2 identify how ambient conditions were considered.</u> (R1.4)</p>	<p>The Generator Owner's Facility Ratings Methodology for generating unit Facilities, is missing identification of how both of the following were considered:</p> <p>Ratings provided by equipment manufacturers (R1.3) Equipment Rating standard(s) (R1.5) <u>N/A</u></p>	<p>The Generator Owner's <u>documentation failed to include the rationale for ensuring that Facility Ratings do not exceed the most limiting Equipment Rating.</u> Facility Ratings Methodology for generating unit Facilities, is missing identification of how both of the following were considered:</p> <p><u>Facility commissioning data.</u> (R1.1) Performance history or rating verification accompanied by engineering analysis. (R1.2)</p>	<p>The Generator Owner <u>do</u> have documentation for determining Facility Ratings Methodology for generating unit Facilities does not identify how and the following were considered:</p> <p><u>Facility commissioning data.</u> (R1.1) Performance history or rating verification accompanied by engineering analysis. (R1.2) Ratings provided by equipment manufacturers. (R1.3) Ambient conditions. (R1.4) Equipment Rating standard(s). (R1.5)</p>
R2	<p>The Generator Owner's Facility Rating Methodology addresses all of its solely and jointly owned facilities, but is missing one of the following:</p> <p><u>Does not identify how it considered ratings from equipment manufacturers specifications</u> (R2.2.2) <u>OR</u> <u>The scope of equipment type addressed is missing one of the following: transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices.</u> (R2.4.1) <u>OR</u> <u>The methodology document is missing a statement that a Facility Rating shall respect the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility.</u> (R2.3)</p>	<p>The Generator Owner's Facility Rating Methodology does not address one of the following sub-requirements: <u>R2.2.1, R2.2.3, R2.2.4.</u></p> <p><u>OR</u></p> <p><u>The scope of equipment addressed is missing two of the following equipment types: transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt.</u> (R2.4.1) <u>OR</u> <u>The methodology does not identify whether it is consistent with the methods identified in R2.1.1, R2.1.2, or R2.1.3.</u></p>	<p>The Generator Owner's Facility Rating Methodology does not address two of the following sub-requirements: <u>R2.2.1, R2.2.3, R2.2.4.</u></p> <p><u>OR</u></p> <p><u>The scope of equipment addressed is missing more than two of the following equipment types: transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices.</u> (R2.4.1) <u>OR</u> <u>The methodology is missing the process for determining either normal or emergency ratings.</u> (R2.4.2)</p>	<p>The Generator Owner has <u>no</u> documentation for determining Facility Ratings Methodology for generating unit Facilities. (R2)</p>

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R32	<p>The Transmission Owner's or Generator Owner's Facility Rating Methodology addresses all of its solely and jointly owned facilities, but is missing one of the following: Does not identify how it considered ratings from equipment manufacturers specifications (R32.2.2) OR The scope of equipment type addressed is missing one of the following: transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices. (R32.4.1) OR The methodology document is missing a statement that a Facility Rating shall respect the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility. (R32.3)</p>	<p>The Transmission Owner's or Generator Owner's Facility Rating Methodology does not address one of the following sub-requirements: R32.2.1, R32.2.3, R32.2.4. OR The scope of equipment addressed is missing two of the following equipment types: transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt. (R32.4.1) OR The methodology does not identify whether it is consistent with the methods identified in R32.1.1, R32.1.2, or R32.1.3.</p>	<p>The Transmission Owner's or Generator Owner's Facility Rating Methodology does not address two of the following sub-requirements: R32.2.1, R32.2.3, R32.2.4. OR The scope of equipment addressed is missing more than two of the following equipment types: transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices. (R32.4.1) OR The methodology is missing the process for determining either normal or emergency ratings. (R32.4.2)</p>	<p>The Transmission Owner or Generator Owner has no Facility Rating Methodology. (R32.4.3)</p>
R43	<p>The Transmission Owner or Generator Owner made its methodology available to requesting entities for inspection, but within a time period that was greater than 21 calendar days but less than or equal to 30 calendar days of receipt of a request - (R43)</p>	<p>The Transmission Owner or Generator Owner did not make its methodology available to one of its requesting Transmission Planners or its Planning Coordinators. (R43) OR The Transmission Owner or Generator Owner made its methodology available for inspection, but within a time period that was greater than 30 calendar days but less than or equal to 45 calendar days of receipt of a request</p>	<p>The Transmission Owner or Generator Owner did not make its methodology available to one of its requesting Reliability Coordinators or its Transmission Operators. (R43) The Transmission Owner or Generator Owner made its methodology available for inspection, but within a time period that was greater than 45 calendar days but less than or equal to 60 calendar days of receipt of a request</p>	<p>The Transmission Owner or Generator Owner received requests, but did not make its Facility Ratings Methodology available to any of the requesting entities for inspection within 60 calendar days of receipt of a request. (R43)</p>

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R54	<p>The Transmission Owner or Generator Owner provided a complete response to comments on its Facility Ratings Methodology, but the response was provided more than 45 days but less than 90 days after the comments were received. (R54)</p>	<p>The Transmission Owner or Generator Owner provided an on-time response to comments on its Facility Ratings Methodology but the response was missing one of the following: An indication of whether changes will be made OR If no change will be made, the reason why no change will be made. (R54)</p>	<p>The Transmission Owner or Generator Owner provided a response to comments on its Facility Ratings Methodology, but the response was provided more than 45 days but less than 90 days after the comments were received, and the response was missing one of the following: An indication of whether changes will be made OR If no change will be made, the reason why no change will be made. (R54)</p>	<p>The Transmission Owner or Generator Owner did not provide any response to comments on its Facility Ratings Methodology within 90 calendar days. (R54)</p>
R65 R76	<p>The Transmission Owner or Generator Owner developed Facility Ratings and at least one rating, but less than 5%, of the ratings reviewed were inconsistent with the associated Facility Rating Methodology. (R65)</p> <p>The Transmission Owner or Generator Owner provided all of its Facility Ratings to all of the requesting entities but missed meeting one or more of the schedules by up to, but less than, 15 calendar days. (R76)</p>	<p>The Transmission Owner or Generator Owner developed Facility Ratings but 5% or more, but less than 10% of the ratings reviewed were inconsistent with the associated Facility Rating Methodology. (R65)</p> <p>The Transmission Owner or Generator Owner provided all of its Facility Ratings on schedule to all but one of the requesting entities but the Facility Ratings provided to one of the required entities were incomplete.</p> <p>OR</p> <p>The Transmission Owner or Generator Owner provided all of its Facility Ratings to all of the requesting entities but missed meeting one or more of the schedules by 15 calendar days or more but less than 30 calendar days. (R76)</p>	<p>The Transmission Owner or Generator Owner developed Facility Ratings but 10% or more, but less than 15% of the ratings reviewed were inconsistent with the associated Facility Rating Methodology. (R65)</p> <p>The Transmission Owner or Generator Owner provided some Facility Ratings on schedule to all of the requesting entities but the Facility Ratings provided to the following entities were incomplete:</p> <ul style="list-style-type: none"> – Planning Coordinators and Transmission Planners, or – Reliability Coordinators and Transmission Operators <p>OR</p> <p>The Transmission Owner or Generator Owner provided all of its Facility Ratings to all of the requesting entities but missed meeting one or more of the schedules by 30 calendar days or more but less than 45 calendar days. (R76)</p>	<p>The Transmission Owner or Generator Owner developed Facility Ratings but 15% or more of the ratings reviewed were inconsistent with the associated Facility Rating Methodology. (R65)</p> <p>The Transmission Owner or Generator Owner did not provide any of its Facility Ratings to the following:</p> <ul style="list-style-type: none"> – Planning Coordinators and Transmission Planners – Reliability Coordinators and Transmission Operators <p>OR</p> <p>The Transmission Owner or Generator Owner provided all of its Facility Ratings to all of the requesting entities but missed meeting one or more of the schedules by 45 calendar days or more. (R76)</p>