

### **Standard Development Roadmap**

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### **Development Steps Completed:**

1. SAC approved SAR and standard for posting (January 11, 2007).
2. Posted for initial comment period from January 15–February 28, 2007.

#### **Proposed Action Plan and Description of Current Draft:**

This is the second draft of the proposed standard, posted for a 30-day comment period, along with the associated implementation plan from July 19–August 17, 2007.

#### **Future Development Plan:**

<b><u>Anticipated Actions</u></b>	<b><u>Anticipated Date</u></b>
<u>1. Post response to comments.</u>	<u>September 4, 2007</u>
<u>2. Post for 30-day pre-ballot review.</u>	<u>September 13– October 12, 2007</u>
<u>3. Conduct initial ballot.</u>	<u>October 15–24, 2007</u>
<u>4. Respond to comments with initial ballot.</u>	<u>October 28, 2007</u>
<u>5. Conduct recirculation ballot.</u>	<u>October 29– November 7, 2007</u>
<u>6. Post for BOT 30-day preview.</u>	<u>To be determined</u>
<u>7. BOT adoption.</u>	<u>To be determined</u>

### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

**None.**

## 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)~~bulk power system~~ are determined based on technically sound principles. A Facility Rating is essential~~one of the fundamental 'starting points'~~ for the determination of System Operating Limits~~the system operating limits~~.
4. **Applicability**
  - 4.1. Transmission Owner.
  - 4.2. Generator Owner with units in a plant directly connected to the BES and units in a plant with an aggregate > 300 MVA (gross nameplate rating) not directly connected to the BES  
~~4.2. Generator Owners that own units connected directly to the Bulk Electric System through a generator step-up transformer.~~
5. **Proposed Effective Date:** The first day of the first calendar quarter that is ~~twelve~~12 months beyond the date approved by applicable regulatory authorities.

## B. Requirements

- R1. The ~~Transmission Owner and~~ Generator Owner shall ~~each~~ have a documented methodology for determining the Facility Ratings (Facility Ratings Methodology) of its solely and jointly owned generating unit Facilities that ~~identifies~~contains all of the following ~~were considered~~criteria:  
*[Violation Risk Factor: Lower] [~~Medium~~] [~~Mitigation~~ Time Horizon: Long-term Operations Planning]*
  - R1.1. ~~The methodology used to establish the Equipment Rating for each component of the Facility~~ commissioning data.
  - ~~R1.1.~~R1.2. Performance history shall be consistent with one or rating verification accompanied by engineering analysis, more commonly accepted industry Equipment Rating standards or practices.<sup>+</sup>
  - R1.3. Ratings provided by equipment manufacturers.
  - R1.4. Ambient conditions.
  - ~~R1.2.~~The underlying assumptions, design criteria, and methods used to determine the Equipment Ratings identified in R1.1, including identification of how the following were considered:
    - ~~R1.2.1.~~R1.5. Equipment Rating standard(s) used in development of this methodology.
- R2. 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 Facilities addressed in R1) that contains all of the following: [Violation Risk Factor: Lower] [ Time Horizon: Long-term Planning]

---

<sup>+</sup>The industry Equipment Rating standard or practice used must be either a nameplate rating; an IEEE Standard; or a recognized, published industry accepted practice such as a CIGRE guideline, the Westinghouse Transmission and Distribution Handbook, or other similar document.

**R2.1.** The methodology used to establish the Ratings of the Equipment that comprises the Facility shall be consistent with one or more industry Equipment Rating standards or guidelines.<sup>2</sup>

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

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

~~R1.2.2.~~**R2.2.2.** Ratings provided by equipment manufacturers.

~~R1.2.3.~~**R2.2.3.** Ambient conditions (for particular or average conditions or as they vary in real-time).<sup>3</sup>

~~R1.2.4.~~**R2.2.4.** Operating limitations.<sup>34</sup>

~~R1.3.~~**R2.3.** A statement that a Facility Rating shall respect the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility.

~~R1.4.~~**R2.4.** The method by which the Rating (of ~~major bulk power system~~ equipment that comprises a Facility) is determined.

~~R1.4.1.~~**R2.4.1.** The scope of equipment addressed shall include, but not be limited to, ~~generators~~, transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices.

~~R1.4.2.~~**R2.4.2.** The scope of Ratings addressed shall include, as a minimum, both Normal and Emergency Ratings.

~~R2.~~**R3.** 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~~**Authorities** that have responsibility for the area in which the associated Facilities are located, within 21 calendar~~15 business~~ days of receipt of a request. [*Violation Risk Factor: Lower*] [~~Mitigation~~*Time Horizon: Operations Planning*]

~~R3.~~**R4.** If a Reliability Coordinator, Transmission Operator, Transmission Planner or Planning ~~Coordinator~~**Authority** provides written 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*]

~~R4.~~**R5.** 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, for Mitigation: Real-time Operations*]

<sup>2</sup> The industry Equipment Rating standard or practice used must be either a nameplate rating; IEEE Standards or Guides; or a recognized, published industry-accepted practice such as a CIGRE guideline, or other similar documents.

<sup>3</sup> Including temporary de-ratings of impaired equipment in accordance with good utility practice.

<sup>4</sup> ~~Including real-time operations re-ratings based on impaired equipment.~~

**R5.R6.** 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~~(~~Authority~~(ies)), Transmission Planner(s), and Transmission Operator(s) as scheduled by such requesting entities. *[Violation Risk Factor: Medium] [~~Mitigation~~-Time Horizon: Operations Planning, Same-day Operations, Real-time Operations]*

**R7.** If a Transmission Owner receives a request (from an associated Reliability Coordinator, Transmission Operator, Transmission Planner or Planning Coordinator) for identification of the most limiting Equipment that comprises a Facility and the hypothetical increase in the Facility's Rating if that most limiting Equipment that comprises that Facility were not considered in the development of that Facility Rating, the Transmission Owner shall provide the requested information within 30 calendar days,(or a later date if specified by the requester) if the Facility Rating meets all of the following criteria: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

**R7.1.** It is a thermal rating.

**R7.2.** It is not limited by a conductor rating.

**R7.3.** It can be classified as one of the following:

- An Interconnection Reliability Operating Limit
- A limitation of Total Transfer Capability
- An impediment to generation deliverability
- An impediment to service to major cities or load pockets

### C. Measures

**M1.** The Generator Owner shall have a documented Facility Ratings Methodology that considers all of the items identified in Requirement 1.1 through Requirement 1.5.

**M1.M2.** The Transmission Owner and Generator Owner shall each have a documented Facility Ratings Methodology that includes all of the items identified in Requirement ~~2~~.1 through Requirement ~~2~~.4.

**M2.M3.** 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~~~~15 business~~ days of a request in accordance with Requirement ~~3~~.2.

**M3.M4.** If the Reliability Coordinator, Transmission Operator, Transmission Planner or Planning ~~Coordinator~~~~Authority~~ 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 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~~3.

**M4.M5.** The Transmission Owner and Generator Owner shall have evidence to show or shall each be able to demonstrate that its Facility Ratings are consistent with its Facility Ratings Methodology (Requirement ~~5~~4).

**M5.M6.** The Transmission Owner's and Generator Owner's set of Facility Ratings shall include ratings for its solely and jointly owned Facilities including new Facilities, existing

Facilities, modifications to existing Facilities and re-ratings of existing Facilities. (Requirement ~~54~~)

~~M7. M6.~~ 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(Authority(ies))~~, Transmission Planner(s), and Transmission Operator(s) in accordance with Requirement ~~6.5~~.

~~M8. The Transmission Owner shall have evidence, such as a copy of a dated electronic note, or other comparable evidence to show that it provided requested information (identification of the most limiting Equipment that comprises a Facility and the hypothetical increase in the Facility's Rating if that most limiting Equipment that comprises that Facility were not considered in the development of that Facility's Rating) to its associated Reliability Coordinator(s), Planning Coordinator(s), Transmission Planner(s), and Transmission Operator(s) in accordance with Requirement 7.~~

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Monitoring Responsibility

~~Regional Entity~~

~~Electricity Reliability Organization~~

#### 1.2. Compliance Monitoring Period and Reset ~~Timeframe~~Time Frame

One or more of the following methods will be used to assess compliance:

- Self-certification (~~conducted Conducted~~ annually with submission according to schedule).~~→~~
- Spot ~~check audits (conducted Check Audits (Conducted~~ anytime with up to 30 days notice given to prepare).~~→~~
- Periodic ~~audit (conducted once Audit (Conducted one or more times~~ every three years according to schedule ~~for the Transmission Operator and once every six years according to schedule for the Generator Operator).~~~~→~~
- ~~Triggered~~ Investigations.
- ~~New Transmission Owners and Generator Owners shall each demonstrate compliance through an on-site audit conducted by the Compliance Monitor within the first year that it commences operation.~~
- Other methods as provided for in the Compliance Monitoring Enforcement Program.

The ~~Performance~~ Reset ~~Timeframe~~Period shall be ~~one month~~12 months from the last finding of noncompliance.

#### 1.3. Data Retention

~~The Generator Owner shall keep its evidence for Measures 1 through 7 for three years plus current, or since the last audit, whichever is longer.~~

~~The Transmission Owner shall keep its evidence for Measures 2 through 7 for three years plus current or since the last audit, whichever is longer.~~

~~If a Generator Owner or Transmission Owner is The Transmission Owner and Generator Owner shall each keep all superseded portions of its Facility Ratings Methodology for~~

~~three years beyond the date of the change in that methodology and shall keep all documented comments on the Facility Ratings Methodology and associated responses for five years. In addition, entities~~ found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

#### 1.4. Additional Compliance Information

The Transmission Owner and Generator Owner shall each make the following available for inspection during an on-site audit by the Compliance Monitor or within 15 business days of a request as part of an investigation ~~upon complaint~~:

1.4.1 Facility Ratings Methodology.

1.4.2 Industry Equipment Rating standards or practice(s) used for developing Equipment Ratings.

1.4.3 Superseded portions of its Facility Ratings Methodology that had been replaced, changed or revised within the past 12 months.

1.4.3.1 The Compliance Monitor may, at its determination, request some or all the previous three years of the superseded portions of the entity's Facility Ratings Methodology that had been replaced, changed or revised as part of an audit or investigation.

1.4.4 Documented comments provided by a Reliability Coordinator, Transmission Operator, Transmission Planner or Planning ~~Coordinator~~ Authority on its technical review of a Transmission Owner's or Generator Owner's Facility Ratings methodology, and the associated responses.

1.4.5 Facility Ratings.

1.4.6 Evidence that Facility Ratings were distributed.

1.4.7 Distribution schedules provided by entities that requested Facility Ratings.

## 2. Violation Severity Levels

2.1. **Lower:** There shall be a lower violation if one or more of the following conditions exists:

2.1.1 The Facility Ratings Methodology does not contain a statement that a Facility Rating shall equal the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility.

2.1.2 The Facility Ratings Methodology does not address one of the required equipment types identified in FAC-008 ~~R2R1~~.4.1.

2.1.3 No evidence of responses to a Reliability Coordinator's, Transmission Operator, Transmission Planner, or Planning ~~Coordinator's~~ Authority's comments on the Facility Ratings Methodology.

2.1.4 Not all requested Facility Ratings associated with existing Facilities were provided to the Reliability Coordinator(s), Planning ~~Coordinator~~ Authority(ies), Transmission Planner(s), and Transmission Operator(s) in accordance with their respective schedules.

2.1.5 The Facility Ratings Methodology was not made available for inspection within 22 business days of receipt of a request, but was provided within 28 calendar days of receipt.

**2.2. Moderate:** There shall be a moderate violation if one or ~~more~~**both** of the following conditions exists:

**2.2.1** The Facility Ratings Methodology is missing the assumptions used to determine Facility Ratings or does not address two of the required equipment types identified in FAC-008 ~~R2~~**R1**.4.1.

**2.2.2** Not all Facility Ratings associated with new Facilities, modifications to existing Facilities, and re-ratings of existing Facilities were provided to the Reliability Coordinator(s), Planning ~~Coordinator~~**(Authority(ies))**, Transmission Planner(s), and Transmission Operator(s) in accordance with their respective schedules.

**2.2.3** The Facility Ratings Methodology was not made available for inspection within 29 business days of receipt of a request, but was provided within 42 calendar days of receipt.

**2.3. High:** There shall be a high violation if one or ~~more~~**both** of the following conditions exists:

**2.3.1** The Facility Ratings Methodology does not address three or more of the required equipment types identified in FAC-008 ~~R2~~**R1**.4.1.

**2.3.2** Facility Ratings provided were not developed consistent with the Facility Ratings Methodology.

**2.3.3** The Facility Ratings Methodology was not made available for inspection within 42 business days of receipt of a request, but was provided within 56 calendar days of receipt.

**2.4. Severe:** There shall be a severe violation if one or ~~more~~**both** of the following conditions exists:

**2.4.1** The Facility Ratings Methodology does not address both Normal and Emergency Ratings or the Facility Ratings Methodology was not made available for inspection within 15 business days of receipt of a request.

**2.4.2** No Facility Ratings were provided to the Reliability Coordinator(s), Planning ~~Coordinator~~**(Authority(ies))**, Transmission Planner(s), or Transmission Operator(s) in accordance with their respective schedules.

**2.4.3** The Facility Ratings Methodology was not made available for inspection within 57 calendar days of receipt of a request, or was not provided for inspection at all.

**E. Regional VariencesDifferences**

None Identified

**F. Associated Documents**

**F.References**

None Identified

**Version History**

Version	Date	Action	Change Tracking
