

Agenda

Facility Ratings – Project 2006-09

April 4, 2008 | 3–4 p.m.

Dial-in Number: 1(732)694-2061 | **Conference Code:** 1208040408

WebEx link: <https://nerc.webex.com/nerc/j.php?ED=104346527&UID=0>

WebEx meeting number: 717 801 519 | **Meeting Password:** standard

1. Introduction (Attachment 1)

The chair, Paul Johnson will welcome everyone to the meeting and review the agenda. The purpose of the meeting is to finalize all documents in preparation for final posting as soon as possible.

2. Antitrust Guidelines (Attachment 2)

The coordinator, Maureen Long will answer any questions about the Antitrust Guidelines.

3. Review of comments on Requirements and Measures (Attachment 3)

The team will review the summary of team comments on Requirement 1, Requirement 2, Measure 1, and Measure 5.

4. Review of comments on Violation Severity Levels (Attachment 4)

The team will review the summary of team comments on Violation Severity Levels.

5. Next Actions (Attachment 5)

FERC staff has asked to review the modifications made to the standard to address the directives in Order 693. At this point, the meeting hasn't been scheduled. We will delay posting the final version of the standard until after we have received feedback on the conforming changes made to the standard.

Facility Ratings - Standard Drafting Team

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Attachment 1 – Drafting Team Roster
Facility Ratings April 4, 2008 Conference Call Meeting

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Antitrust Compliance Guidelines

I. General

It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC's antitrust compliance policy is implicated in any situation should consult NERC's General Counsel immediately.

II. Prohibited Activities

Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference calls and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.

- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.
- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

III. Activities That Are Permitted

From time to time decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.
- Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

R1. The Generator Owner shall have a documented methodology for determining the Facility Ratings (Facility Ratings Methodology) of its solely and jointly owned **generating unit Facilities** that identifies how each of the following were considered: [*Violation Risk Factor: Medium*] [*Time Horizon: Long-term Planning*] (Vlad – **generating unit Facility seems to be a new term. Other documents typically differentiate between generating units and generating facilities.**)

R1.1. Facility commissioning data.

R1.2. Performance history or rating verification accompanied by engineering analysis.

R1.3. Ratings provided by equipment manufacturers. (Vlad – **this is almost but not exactly the same as R2.2.2**)

R1.4. Ambient conditions.

R1.5. Equipment Rating standard(s) used in development of this methodology.

Vlad - R2 requires consistency with one of three things – equipment rating standards, nameplate ratings or validated practices – why a difference for R1?

Vlad - Should R1 require inclusion of a statement that a Facility Rating shall respect the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility?

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: Medium*] [*Time Horizon: Long-term Planning*]

R2.1. 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. Nameplate rating.

R2.1.2. One or more industry Equipment Rating standards or guidelines¹.

R2.1.3. Validated practice(s)²

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 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.³

¹ Examples of industry Equipment Rating standards or guidelines include but are not limited to those published by ANSI, IEC, NEMA, IEEE or other similar organizations.

² To be valid, a practice must be verified by testing or engineering analysis.

³ **Including temporary de-ratings of impaired equipment in accordance with good utility practice. (Vlad - Should FAC 008 deal at all with temporary de-ratings?)**

- 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 method** by which the Rating of equipment that comprises a Facility is determined. **(unclear)**
 - R2.4.1.** 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.** The scope of Ratings addressed shall include, as a minimum, both Normal and Emergency Ratings.

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

Vlad - It seems that in practice a Generator Owner would base their methodology only on few of the listed items. What to do with those items that were not considered? To state "not applicable"?

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

Vlad - This sounds as related to verification of capabilities, supposedly covered by MOD 24, 25.

For the first requirement's VSLs, the original proposal was to treat all of the sub-requirements as though they are of equal weight – both Bob and Keith questioned this – and Bob provided an alternate set of VSLs. Keith questioned how we could assess whether the methodology addressed jointly owned facilities –and Bob's proposal is silent on that issue.

- R1.** The Generator Owner shall have a documented methodology for determining the Facility Ratings (Facility Ratings Methodology) of its solely and jointly owned generating unit Facilities that identifies how each of the following were considered: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*
- R1.1.** Facility commissioning data.
 - R1.2.** Performance history or rating verification accompanied by engineering analysis.
 - R1.3.** Ratings provided by equipment manufacturers.
 - R1.4.** Ambient conditions.
 - R1.5.** Equipment Rating standard(s) used in development of this methodology.

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1.	The Generator Owner's Facility Ratings Methodology for generating unit Facilities addresses all of its solely and jointly owned facilities, but does not identify how Facility address one of the five sub-requirements (R1.1 through R1.5). commissioning data was considered. (R1.1)	The Generator Owner's Facility Ratings Methodology for generating unit Facilities addresses all of its solely and jointly owned facilities, but does not address one two of the five following sub-requirements (R1.1 through R1.5). R1.2, R1.3, R1.4, R1.5. (R1) OR The Generator Owner's Facility Ratings Methodology for generating unit Facilities does not address some of its jointly owned Facilities. [h1]	The Generator Owner's Facility Ratings Methodology for generating unit Facilities addresses all of its solely and jointly owned Facilities, but does not address two three of the five following sub-requirements (R1.1 through R1.5). : R1.2, R1.3, R1.4, R1.5. (R1). OR The Generator Owner's Facility Ratings Methodology for generating unit Facilities does not address some of its solely owned Facilities.	The Generator Owner has no Facility Ratings Methodology for generating unit Facilities. (R1)

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1 Bob M	The Generator Owner’s Facility Ratings Methodology for generating unit Facilities, does not identify how ambient conditions were considered. (R1.4)	The Generator Owner’s Facility Ratings Methodology for generating unit Facilities, does not identify how either of the following were considered: Ratings provided by equipment manufacturers (R1.3) Equipment Rating standard(s) (R1.5)	<p>OR</p> <p>The Generator Owner’s Facility Ratings Methodology for generating unit Facilities does not address its jointly owned Facilities and does not have agreement with the other Generator Owner(s) to address the Facility Ratings Methodology of such jointly owned Facilities.^[h2]</p> <p>The Generator Owner’s Facility Ratings Methodology for generating unit Facilities, does not identify how either of the following were considered: Facility commissioning data. (R1.1) Facility Performance history or rating verification accompanied by engineering analysis. (R1.2)</p>	The Generator Owner’s Facility Ratings Methodology for generating unit Facilities, does not identify how any of the following were considered: Facility commissioning data. (R1.1) R1.2. 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)

~~R2.~~

Keith questioned the application of a Lower VSL to failure to include a statement indicating that the Facility Rating shall respect the most limiting applicable Equipment Rating of the individual equipment that comprises the Facility.

Bob did not have any issues with the proposed VSLs.

- 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: Medium*] [*Time Horizon: Long-term Planning*]
- R2.1.** 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.** Nameplate rating.
 - R2.1.2.** One or more industry Equipment Rating standards or guidelines¹.
 - R2.1.3.** Validated practice(s)²
 - 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 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.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.

¹ Examples of industry Equipment Rating standards or guidelines include but are not limited to those published by ANSI, IEC, NEMA, IEEE or other similar organizations.

² To be valid, a practice must be verified by testing or engineering analysis.

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

- R2.4.** The method by which the Rating of equipment that comprises a Facility is determined.
 - R2.4.1.** 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.** The scope of Ratings addressed shall include, as a minimum, both Normal and Emergency Ratings.

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R2.	<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 (R2.2.2) 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. (R2.4.1) 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. (R2.3)</p>	<p>The Transmission Owner’s or Generator Owner’s Facility Rating Methodology does not address one of the following sub-requirements: R2.2.1, R2.2.3, R2.2.4. (R2) 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. (R2.4.1) OR The methodology does not identify whether it is consistent with the methods identified in R2.1.1, R2.1.2, or R2.1.3 OR The methodology is missing the process for determining either normal or emergency ratings</p>	<p>The Transmission Owner’s or Generator Owner’s Facility Rating Methodology does not address two of the following sub-requirements: R2.2.1, R2.2.3, R2.2.4. (R2) OR The methodology is missing a statement that a Facility Rating shall does not respect the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility. OR The scope of equipment addressed is missing three more than two of the following equipment types: transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices. (R2.4.1) OR The methodology is missing the process for determining both either normal and or emergency</p>	<p>The Transmission Owner or Generator Owner has no Facility Rating Methodology. (R2)</p>

Attachment 4 – Team Comments on VSLs
Facility Ratings April 4, 2008 Conference Call Meeting

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
	(R2)		ratings. (R2.4.2)	

R3:

Keith questioned whether it is appropriate to pre-judge that it is more important to distribute to some entities and suggested that if there isn't a difference in importance, we should default to the "Missing one of xx" approach.

Bob did not have any issues with the proposed VSLs.

~~R3.~~

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 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]*

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R3.	The Transmission Owner or Generator Owner is non-compliant with respect to one or more minor details (e.g., the methodology was made its methodology available for inspection, but not within a time period that was greater than 21 calendar days but less than 45 calendar days of receipt of a request -). (R3)	The Transmission Owner or Generator Owner is non-compliant with respect to one significant element within the requirement (e.g., the did not make its methodology was not made available to either the its Transmission Planners or its Planning Coordinators but was did make it made available to the real-time operating personnel its Reliability Coordinators and Transmission Operators). (R3)	The Transmission Owner or Generator Owner is non-compliant with respect to more than one significant element within the requirement (e.g., did not make its the methodology was not made available for to any either its Transmission Planners or Planning Coordinators of the planning personnel to inspect OR The Transmission Owner or Generator Owner or was made its methodology available to just a subset of the operating personnel some but not all of its Reliability Coordinators and Transmission Operators. (R3)	The Transmission Owner or Generator Owner did not make its Facility Ratings Methodology available to any of the required entities. (R3) ^[h4]

Keith questioned the origin of the “60 days.” He proposed expanding the items to get a High VSL by using the idea of providing comments to “ALL” requestors vs missing one or more.

Bob proposed an alternate set of VSLs.

R4. 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]*

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4.	<p>The Transmission Owner or Generator Owner provided a response to comments on its Facility Ratings Methodology, but was non-compliant with respect to one minor detail (e.g. the response was provided but not within a time period that was greater than 45 calendar days) within the requirement but less than 60 calendar days. (R4)</p> <p>Bob M: late but response indicated whether or not changes were made and why</p>	<p>The Transmission Owner or Generator Owner provided a response to comments on its Facility Ratings Methodology, is non-compliant with respect to one significant element (e.g., the response but the response did not indicate why a change will not be made to the methodology) within the requirement. (R4)</p> <p>Bob M: responded late and did not state whether or not changes were made OR provide an explanation</p>	<p>Bob M: responded on time but did not state whether or not changes were made OR provide an explanation</p>	<p>The Transmission Owner or Generator Owner did not provide any response to comments on its Facility Rating Methodology. (R4)^[h5]</p> <p>Bob M: no response</p>

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4 – Bob M	The Transmission Owner or Generator Owner provided a complete response to comments on its Facility Ratings Methodology, but the response was late.	The Transmission Owner or Generator Owner provided a response to comments on its Facility Ratings Methodology within 30 calendar days, but the response was missing one of the following: An indication of whether changes were made An explanation to support the decision made	The Transmission Owner or Generator Owner provided a response to comments on its Facility Ratings Methodology, but the response was late and was missing one of the following: An indication of whether changes were made An explanation to support the decision made	The Transmission Owner or Generator Owner did not provide any response to comments on its Facility Ratings Methodology. Note – this is difficult to measure – may be better to put some end time frame such as did not provide any response within 60 calendar days.)

R5:

Keith did not have any comments on this set of VSLs.

The VSLs that are there need some help to remove the remaining generic language highlighted in blue – Bob had some suggestions, but I wasn’t able to translate them with confidence, so we will try to do this during the meeting.

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, Real-time Operations]*

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R5.	The Transmission Owner or Generator Owner developed Facility Ratings for all its solely owned and jointly owned Facilities, but the ratings weren’t consistent with the associated Facility Rating Methodology in one minor area. (R5)	The Transmission Owner or Generator Owner developed Facility Ratings for most, but not all of its solely and jointly owned Facilities following the associated Facility Ratings Methodology OR The Transmission Owner or Generator Owner developed Facility Ratings for all its solely and jointly owned Facilities but failed to follow the associated Facility Ratings Methodology in one significant area. (R5)	The Transmission Owner or Generator Owner developed Facility Ratings following the associated Facility Ratings Methodology but failed to develop any Facility Ratings for a significant number of its solely and jointly owned Facilities Bob M: - add it did not matter if the ratings were or were not consistent with methodology OR The Transmission Owner or Generator Owner has developed Facility Ratings for all its solely owned and jointly owned Facilities, but failed to follow the associated Facility Ratings Methodology in more than one significant area. (R5)	The Transmission Owner or Generator Owner has failed to demonstrate that it developed any Facility Ratings using its Facility Rating Methodology. (R5) Bob M: - add it did not matter if the ratings were or were not consistent with methodology

Keith did not have any comments on this set of VSLs.
 Bob had some suggestions and I tried to translate these into another set of VSLs for your consideration.

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

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R6.	<p>The Transmission Owner or Generator Owner provided its Facility Ratings to all of the requesting entities but missed meeting one or more of the schedules by up to 15 calendar days. (R6)</p> <p>Bob M: Provided all ratings but missed one or more of the schedules by up to 15 calendar days</p>	<p>The Transmission Owner or Generator Owner provided its Facility Ratings to all but one of the requesting entities. (R6)</p> <p>Bob M: Only provided some ratings to one of the 4 entities (Note that for most entities the distribution involves more than 4 entities)</p>	<p>The Transmission Owner or Generator Owner provided its Facility Ratings to all but two of the requesting entities. (R6)</p> <p>Bob M: Only provided some ratings to either the PCs and TPs OR the RCs and TOPs</p>	<p>The Transmission Owner or Generator Owner has failed to provide its Facility Ratings to more than two of the requesting entities within 30 calendar days of the associated schedules. (R6)</p> <p>Bob M: - No ratings were provided to either the PCs and TPs OR the RCs and TOPs</p>
R6 Bob M	<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 15 calendar days. (R6)</p>	<p>The Transmission Owner or Generator Owner provided Facility Ratings to all of the requesting entities but the Facility Ratings provided to one of the required entities were incomplete. (R6)</p>	<p>The Transmission Owner or Generator Owner provided some Facility Ratings to all of the requesting entities but the Facility Ratings provided to the following entities were incomplete: – Planning Coordinators and</p>	<p>The Transmission Owner or Generator Owner did not provide its Facility Ratings to any of the following entities: – Planning Coordinators – Transmission Planners – Reliability Coordinators – Transmission Operators</p>

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
			Transmission Planners, or – Reliability Coordinators and Transmission Operators (R6)	(R6)

R7.

Keith indicated that the difference is between Moderate and High was unclear and proposed tying the difference between these two to the number of requests that were not addressed. There may be an issue with receiving only one request.

Bob had some suggestions and I tried to translate these into another set of VSLs for your consideration.

Can we add the word, “or” to the first dash in R7 where highlighted in yellow?

R7. If a Reliability Coordinator, Transmission Operator, Transmission Planner, or Planning Coordinator requests:

- Identification of the most limiting Equipment that comprises a Facility, **or**
- 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

then 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 criteria in the table below: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

If the Facility Rating meets both of the following:	And the requester provides evidence that the Facility Rating is at least one of the following:
<ul style="list-style-type: none"> – It is a thermal rating – It is limited by equipment other than the conductor 	<ul style="list-style-type: none"> – Used to develop 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

R #	Lower VSL	Moderate VSL	High VSL _[h6]	Severe VSL
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R #	Lower VSL	Moderate VSL	High VSL ^[h6]	Severe VSL
R7.	<p>The Transmission Owner is non-compliant in the reporting reported of the required information with respect to one minor detail within the requirement (e.g. the information was provided but in a time period that was greater than within 360 calendar days, but was not provided within less than 360 calendar days). (R7)</p> <p>Bob M: Late but complete</p>	<p>The Transmission owner Owner is non-compliant in the reporting of required information with respect to one significant element within the requirement. failed to provide one of the following:</p> <ul style="list-style-type: none"> - Identification of the most limiting Equipment that comprises a Facility - 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 <p>Bob M: On time but incomplete</p> <p>(R7)</p>	<p>The Transmission owner received a valid request for the following information but failed to provide one of the following:</p> <ul style="list-style-type: none"> - Identification of the most limiting Equipment that comprises a Facility - 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 <p>Bob M: Late and incomplete</p>	<p>The Transmission Owner did not provide any of the requested information. is reporting is non-compliant with all the elements of the requirement. (R7)</p> <p>Bob M: No response.</p>
R7	<p>The Transmission Owner reported all of the required information but in a time period that was greater than 30 calendar days, but less than 60 calendar days. (R7)</p>	<p>The Transmission Owner responded to the request within 30 calendar days, but the response was incomplete. (R7)</p>	<p>The Transmission Owner responded to the request in a time period that was greater than 30 calendar days, but less than 60 calendar days AND The response was incomplete. (R7)</p>	<p>The Transmission Owner did not provide any response. (Note – this is difficult to measure – may be better to put some end time frame such as did not proved any response within 60 calendar days.)</p>

Standard Development Roadmap for FAC-008 (Project 2006-09)

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. SC approved SAR and standard for posting (January 11, 2007).
2. Posted for initial comment period from January 15 – February 28, 2007.
3. Second draft posted for comment from July 19 – August 17, 2007

Proposed Action Plan and Description of Current Draft:

This is the third draft of the proposed standard, posted for a 30-day comment period, along with the associated implementation plan from April 21 – May 20, 2008.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Post response to comments.	May 26, 2008
2. Post for 30-day pre-ballot review	May 30 – June 30, 2008
3. Conduct initial ballot	June 30 – July 9, 2008
4. Respond to comments with initial ballot	July 11, 2008
5. Conduct recirculation ballot	July 14 – 23, 2008
6. Post for BOT 30-day preview	To be determined
7. BOT adoption	July 29, 2008

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.
3. [Second draft posted for comment from July 19 – August 17, 2007](#)

Proposed Action Plan and Description of Current Draft:

This is the ~~second~~-~~third~~ draft of the proposed standard, posted for a 30-day comment period, along with the associated implementation plan from ~~July 19 – August 17, 2007~~ December 10 – January 8, 2007.

Future Development Plan:

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

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) are determined based on technically sound principles. A Facility Rating is essential for the determination of System Operating Limits.
4. **Applicability**
 - 4.1. Transmission Owner.
 - 4.2. Generator Owner. ~~s 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~~
5. **Proposed 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, first day of first calendar quarter twelve months following BOT adoption.~~

B. Requirements

- R1. The Generator Owner shall have a documented methodology for determining the Facility Ratings (Facility Ratings Methodology) of its solely and jointly owned generating unit Facilities that identifies **how each** of the following were considered: [*Violation Risk Factor: ~~Lower~~ Medium*] [*Time Horizon: Long-term Planning*]
 - R1.1. Facility commissioning data.
 - R1.2. Performance history or rating verification accompanied by engineering analysis.
 - R1.3. Ratings provided by equipment manufacturers.
 - R1.4. Ambient conditions.
 - 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~~ Medium*] [*Time Horizon: Long-term Planning*]
 - R2.1. 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. Nameplate rating.
 - R2.1.2. ~~one~~ One or more industry Equipment Rating standards or guidelines¹.
 - R2.1.3. Validated practice(s)^{2,3}

¹ Examples of industry Equipment Rating standards or guidelines include but are not limited to those published by ANSI, IEC, NEMA, IEEE or other similar organizations.

² To be valid, a practice must be 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~~**obtained from** equipment manufacturers ~~specifications~~.
 - R2.2.3.** Ambient conditions (for particular or average conditions or as they vary in real-time).
 - R2.2.4.** Operating limitations.⁴
- 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 method by which the Rating ~~(of equipment that comprises a Facility)~~ is determined.
- R2.4.1.** 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.** The scope of Ratings addressed shall include, as a minimum, both Normal and Emergency Ratings.
- 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 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.** If a Reliability Coordinator, Transmission Operator, Transmission Planner or Planning Coordinator provides ~~written~~**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.** 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.** 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

³ ~~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.~~

⁴ Including temporary de-ratings of impaired equipment in accordance with good utility practice.

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

R7. If a Reliability Coordinator, Transmission Operator, Transmission Planner, or Planning Coordinator requests:

R8. ~~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.~~

then 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 in the table below: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

If the Facility Rating meets both of the following:	And the requester provides evidence that the Facility Rating is at least one of the following:
<ul style="list-style-type: none"> - It is a thermal rating - It is limited by equipment other than the conductor 	<ul style="list-style-type: none"> - Used to develop 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

~~R6.1. It is a thermal rating.~~

~~R6.2. It is not limited by a conductor rating.~~

~~R6.3. 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 shows how each of the ~~considers all of the~~ items identified in Requirement 1.1 through Requirement 1.5 were considered.

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.

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 days of a request in accordance with Requirement 3.

- M4.** 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.** The Transmission Owner and Generator Owner shall have evidence to show or shall be able to demonstrate that its Facility Ratings are consistent with its Facility Ratings Methodology (Requirement 5).
- 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 ~~5~~**6**)
- 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.
- M8.** The Transmission Owner shall each 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~~ Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Timeframe

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

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

- ~~- Self-Certifications (conducted annually with submission according to schedule).~~
- ~~- Spot Cchecking audits (conducted anytime with up to 30 days notice given to prepare).~~
- ~~- Periodic-Compliance aAudits (conducted once every three years according to schedule for the Transmission Operator and once every six years according to schedule for the Generator Operator).~~
- Self-Reporting
- Compliance Violation Investigations-

- ~~–Other methods as provided for in the Compliance Monitoring Enforcement Program.~~
- ~~– The Reset Timeframe shall be one month from the last finding of noncompliance.~~**Complaints**

1.3.1.4. Data Retention

The Generator Owner shall keep its current, 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 5.

The Transmission Owner and Generator Owner shall keep its current, in force Facility Ratings Methodology (for R2) and any modifications to the methodology that were in force since the last compliance audit for Measure 2 and Measure 5.

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 5 and Measure 6.

~~evidence for Measures 1 through 7 for three years plus current, or since the last audit, whichever is longer.~~The Generator Owner and Transmission Owner shall each keep evidence for Measure 3, Measure 4, Measure 7, and Measure 8 for three calendar years.

~~The Transmission Owner and 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 found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4.1.5. Additional Compliance Information

None

~~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:~~

~~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 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~~

~~2.1.2—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.~~

~~2.1.3The Facility Ratings Methodology does not address one of the required equipment types identified in FAC-008 R2.4.1.~~

~~2.1.4No evidence of responses to a Reliability Coordinator’s, Transmission Operator, Transmission Planner, or Planning Coordinator’s comments on the Facility Ratings Methodology.~~

~~2.1.5Not all requested Facility Ratings associated with existing Facilities were provided to the Reliability Coordinator(s), Planning Coordinator(s), Transmission Planner(s), and Transmission Operator(s) in accordance with their respective schedules.~~

~~2.1.6The 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 of the following conditions exists:~~

~~2.2.1~~

~~2.2.2—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 R2.4.1.~~

~~2.2.3Not 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(s), Transmission Planner(s), and Transmission Operator(s) in accordance with their respective schedules.~~

~~2.2.4The 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 of the following conditions exists:~~

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

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

~~2.3.3The 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 of the following conditions exists:~~

~~2.4.1~~

~~2.4.2 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.~~

~~2.4.3 No Facility Ratings were provided to the Reliability Coordinator(s), Planning Coordinator(s), Transmission Planner(s), or Transmission Operator(s) in accordance with their respective schedules.~~

~~2.4.4 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 Variances

None Identified

F. Associated Documents

None Identified

Version History

Version	Date	Action	Change Tracking
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