

**Individual or group. (46 Responses)**  
**Name (31 Responses)**  
**Organization (31 Responses)**  
**Group Name (15 Responses)**  
**Lead Contact (15 Responses)**  
**Question 1 (44 Responses)**  
**Question 1 Comments (46 Responses)**  
**Question 2 (35 Responses)**  
**Question 2 Comments (46 Responses)**  
**Question 3 (37 Responses)**  
**Question 3 Comments (46 Responses)**  
**Question 4 (34 Responses)**  
**Question 4 Comments (46 Responses)**  
**Question 5 (0 Responses)**  
**Question 5 Comments (46 Responses)**

Group
Imperial Irrigation District
Jesus Sammy Alcaraz
Yes
IID has submitted a NO vote with comments during the ballot period. Provided is IID justification for the NO vote: We agree the R8 requirement addresses the Commission's directive, however we are seeking only clarification of the standard's language that, if addressed will enable the vote to be changed to Affirmative. In order to minimize ambiguity we ask the Drafting Team to consider making the request apply ONLY to a Facility whose Thermal Rating has system impacts as identified through the following comment: 8.2. Within 30 calendar days (or a later date if specified by the requester), for any requested Facility whose Thermal Rating causes the Facility to be the Limiting Element and that the requester has identified as having an impact on their system affecting an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.1. Identity of the existing next most limiting equipment of the Facility 8.2.2. The Equipment's Thermal Rating for the next most limiting Component identified in Requirement R8, Part 8.2.1.
Individual
Jonathan Appelbaum
United Illuminating Company
Yes
R8.2 "... for any requested Facility with a Thermal Rating that the requester has identified as having an Interconnection Reliability Operating Limit. limiting Total Transfer Capability. impeding generator

deliverability, or impeding service to a major city or load pocket:" "Major City" is an undefined term. It is akin to terms like Bulk Power System, and Integrated. Everyone has an opinion on what it means. What are the properties utilized to identify a municipality as a "Major City". These properties/attributes should be in an attachment. Does 8.2 refer to any load pocket or only Major Load Pockets. How is a Major Load Pocket determined? These properties/attributes should be in an attachment.

Group

Northeast Power Coordinating Council

Guy Zito

No

8.2 should be deleted. What it requires goes beyond what is mandated in the FERC Directive. However, regarding the language in 8.2, major city, and load pocket must be defined. Those terms are vague, and subject to interpretation. 8.1.2 should be revised to read: Identity of the most limiting equipment of the Facilities applicable to each individual Normal and Emergency rating required to be provided.

Individual

Nathaniel Larson

New Harquahala Generating Co.

Yes

Yes

Yes

Yes

Individual

Dan Roethemeyer

Dynegy Inc.

Yes

We agree proposed R8 addresses the FERC directive; however, by including GO in R8, R7 and R8 seem redundant with respect to the GO. Suggest deleting R7 or include "subject to R1" after Generator Owner in R7. Also, R8 requires a TO to provide information to itself. Suggest deleting TO as a recipient from itself.

Yes

We agree; however, similar to our comment in #1 above, M8 requires a TO to provide information to itself.

Yes

Individual

Thad Ness

American Electric Power

Yes

See response to Question 5.
No
The Violation Risk Factor for 8.2 is the same as that required for 8.1. The real-time reliability need for the data required in 8.2 is questionable, at best. Since this data need not be supplied prior to 30 days after requested, it is inconsistent with a VRF of "Medium". Rather for 8.2 it should be "Lower".
Yes
M8 is consistent with R8, but this consistency should not be confused with the reliability need for the data related to R8.2, which is questionable.
Yes
The data required in R8.1.1 (Facility rating(s)) is essential to operate the BES reliably in real-time. However, the identification of that equipment in R8.1.2 has limited value in real time operation. Although consistent with the FERC Orders referenced with the related SAR, the identification of the "next most" limiting equipment, and the associated equipment rating is not useful in real-time operation, and could – if misunderstood – be detrimental to the reliability of the BES. Knowledge only of the rating of the "next most limiting equipment" alone is insufficient to be useful in real-time operation. To be useful other information, such as the time for which the next most limiting equipment might govern the Facility Rating rather than the most limiting equipment, must be known. However, if that time information was provided, that knowledge effectively assigns a 'short term' rating to the Facility in question. If that were the objective of the FERC Orders, then greater clarity and understanding and potential usefulness could have been achieved by simply requiring a short term rating (i.e. a 1-hour rating for a Facility that meets the definition contained in the preamble to R8.2). In the planning horizon, all the rating of equipment that comprises a Facility will be known, or become known, as a natural part of the planning process. Therefore, a Requirement calling for this information is at best, of minimal value. Despite these stated reservations, the SDT has provided the most benign method to respond to the FERC Orders.
Individual
Robert Casey
Georgia Transmission Corporation
Yes
A. The follow comment uses the Comment form example definitions and Diagram 1 labeling from the Reliability Objective Discussion section – labeling of point (E2) and (E3) was added to Diagram 1 for clarity. We believe that the intent of the Directive's requirement, as clarified in the September 16, 2010 Order, is to identify situations where an increased short term or emergency rating of equipment 3 could result in equipment 2 becoming the limiting component in the short term. In that case the identity of both equipments and their ratings, (E3) continuous rating and (E2) shorter term rating, would seem to meet the Directive's clarified requirement. In cases where the limiting equipment's continuous rating is equal to its emergency rating (equipment 3 blue curve is a straight line) there would not be a need to specify a second component. The "Reliability Objective Discussion" and R 8.2.2 goes much further by suggesting that four data points are required being the continuous and emergency ratings for limiting and next most limiting equipment. B. The R8 requirement does reflect the Directive however we believe that item (3) and item (4) are undefined terms.
Individual
Jack Stamper
Clark Public Utilities
Yes

Yes
Yes
Yes
Please add a Version History box to the bottom of this proposed standard clearly stating that it is a complete revision, absorbing facility rating requirements from FAC-008-01, FAC-009-01, FAC-008-2. There is a similar occurrence in the proposed PRC-005-2 revision. This provides a confirmation of the retirement of these other standards and leaves no room for doubt.
Individual
John Bee
Exelon
Yes
Although Requirement R8 addresses the FERC directive, this proposed requirement appears to provide no reliability benefit. The current standard requires that all ratings "shall respect the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility". The proposed Requirement R8 specifies that if requested, a new facility rating based on the second most limiting component be provided even though an existing facility rating based on the most limiting component already exists. If the transmission system is operated utilizing the facility rating based on the second most limiting component, operators could exceed the equipment rating of the first most limiting component and damage that piece of equipment as its rating capability would be exceeded. If the facility rating based on the second most limiting component is intended to be used by operations support staff so they could evaluate the need for a shorter duration rating for a future planned event, it still would have no value. If a shorter duration rating needs to be established, then simply knowing the rating of the second most limiting component of an existing rating is meaningless because it is based on a different duration. When determining a facility rating all component ratings comprising the facility must be considered based on the planned rating duration, not just the second most limiting component. Thus the confusion and possible reliability harm caused by providing a facility rating based on the second most limiting component shows that knowing the second most limiting component for the current ratings has no value.
Yes
Yes
Yes
Individual
John Bee
Exelon - 2
Yes
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it still would have no value. If a shorter duration rating needs to be established, then simply knowing the rating of the second most limiting component of an existing rating is meaningless because it is based on a different duration. When determining a facility rating all component ratings comprising the facility must be considered based on the planned rating duration, not just the second most limiting component. Thus the confusion and possible reliability harm caused by providing a facility rating based on the second most limiting component shows that knowing the second most limiting component for the current ratings has no value.

Yes

Yes

Yes

Individual

Edvina Uzunovic

The Valley Group, a Nexans company

Yes

In December 2010, NERC Smart Grid Task Force published Report "Reliability Considerations from the Integration of Smart Grid", and in it, there is an excerpt on "Integration of Smart Grid Technology into the Bulk Power System", Section 3, page 12. In this excerpt, it is stated that Smart Grid provides the ability to create an overarching, coordinated and hierarchical approach to automation, control and effectiveness. Among examples of smart grid technologies, Dynamic Thermal Circuit Rating (DTCR) devices were numbered. Although the objective of NERC Project 2009-06 is to identify the limiting component(s) and next limiting component(s) for all critical facilities, and not about Smart Grid integration; however, it should be beneficial to state a need for smart grid technologies integration, especially DTCR devices, into this NERC project. While the paramount importance is to maintain the reliability and integrity of the bulk power system, it is of equal importance to introduce reliability and economic benefits that Smart Grid technologies are bringing. Careful planning, coordination, and possibly review of the current Facility Rating Methodologies should be encouraged and introduced at present time. Static transmission line ratings, and static ratings of power system equipment in general, belong to past practices, and entities should be encouraged to embrace Smart Grid into their systems.

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Group

Dominion

Louis Slade

Yes
Yes
Yes
Yes
Group
SPP Reliability Standards Development
Jonathan Hayes
No
The order mentions that the increase in rating also should be provided along with the second most limiting element rating.
Yes
Yes
Yes
Individual
Ed Davis
Entergy Services, Inc
Comments: We recommend that radially operated transmission facilities be excluded from this standard and that be accomplished with an exclusion in the Applicability section: 4.1. Transmission Owner (radially operated transmission facilities excluded) 4.2. Generator Owner (radially operated transmission facilities excluded)
Individual
Kirit Shah
Ameren
No
The clarification from the Commission seems to require the additional rating and limiting equipment only for the specific facilities related to 1) IROL, 2) TTC, 3) generation deliverability, or 4) transmission service to municipals or load pockets. Therefore, if this must be included, we believe that Requirement R8.1.2 should be removed from R8.1 and included in R8.2.
No
Ratings (normal and emergency) should be provided by the requested date. The limiting equipment of the facility rating should be made available upon request, as needed for reliability concerns. The second limit and the corresponding limiting equipment should also be made available upon request, as needed for reliability concerns.
Yes
The implementation plan as proposed would be acceptable if the requirements of the proposed standard would be modified, as discussed in items 1 and 3 above and below in item 5.

We would agree to provide limited additional rating information for reliability needs, but most of the reasons identified by the FERC and the SDT are not for reliability. We agree that an IROL is a reliability need and additional rating and equipment information may be appropriate for discussion to formulate corrective plans to mitigate IROLs. However, we are not convinced that we need a standard to provide that information as it can be readily obtained through existing planning and operating channels, upon request. We are in favor of increased situational awareness and providing operators with information that they need to maintain system reliability, but we are also aware that too much information may be overwhelming, and all ratings data for all equipment is not needed for system operation. We have discussed these proposed additional requirements with our Transmission Operations and Operations Planning personnel, and we all agree that this additional ratings information is not needed to maintain or increase situational awareness or to develop effective Operating Plans or Planning Assessments prior to real-time operations. We do not see a need to provide second limit information in the operating horizon to address TTC calculations, generator deliverability concerns, or transmission service to load pockets. Limits to TTC may not be a reliability concern unless the incremental transfer capability is negative or a very low value. Generator deliverability and available transmission services are market products, and processes and procedures are in place for market participants to address those issues. Low values of either quantity indicate congestion concerns between the generators and the LSEs rather than reliability issues. In addition, from our perspective, system upgrades to allow the second limits to become the most limiting facilities typically cannot be completed in the operating horizon. Therefore, we do not believe that second limits need to be provided in the operating horizon. We listened to the NERC Webinar presented by the SDT and appreciated the opportunity to submit questions, but we were not convinced that there is a reliability need for all the reasons given. It appears that the SDT is still attempting to build a case to support the FERC directives to provide the additional ratings information. However, we view this proposal as a repackaged version of an earlier proposal. The industry has voiced its opinion on the need for the additional rating information on several occasions now, and each time the industry has overwhelmingly said "No, these requirements are not needed to maintain reliability". We see no reason to change our earlier position, and therefore cannot support the latest proposed revisions to FAC-008. Below are additional reasons why the most limiting equipment and the second most limiting equipment and ratings should not be provided, except upon request: 1. There is no need to provide the most limiting equipment information for all facilities as the overwhelming majority of these facilities would rarely result in an IROL or SOL. 2. The Reliability Coordinator, Transmission Operator, and Planning Coordinator need to honor the existing ratings that are in place, and not worry about the second limits. The revised standard PRC-023 should eliminate relay limits as the first or second limits for nearly all facilities, so the concern for the system falling apart for single contingency events should be significantly reduced. 3. Providing this second limit information would be another record keeping nightmare for the Reliability Coordinator, Transmission Operator, and Planning Coordinator, as some of these entities can barely manage the ratings information that they presently have. 4. When IROL or SOL are identified, this should encourage discussion between the Reliability Coordinator, Transmission Operator, and Planning Coordinator and the local transmission owner or local transmission operator. These entities should work together to understand the System requirements and develop mitigation, if needed. Providing this additional rating information to entities prior to its request and without the benefits of discussion encourages operating decisions to be made unilaterally.

Group

Pacific Northwest Small Public Power Utility Comment Group

Steve Alexanderson

No

The SDT stated in the recent webinar that they did not consider R7 and R8 to be onerous. Data requests would be infrequent and for specific facilities. The comment group disagrees, since every audit consists of a full data request for all actively monitored standards. Affected entities may be expected to provide the data for every facility at each audit. Please add language to the two requirements indicating that data requests are only for operating the interconnected BES reliably, and not for compliance assessment.

Please see <a href="http://www.nerc.com/filez/enforcement/FinalFiled_ANOP_NOC-505.pdf">http://www.nerc.com/filez/enforcement/FinalFiled_ANOP_NOC-505.pdf</a> for an example of how FAC-009-1 R1 and R2 (to be replaced by FAC-008-3 R6 and R7) for an example of how these regulations are being applied improperly to radially operated local distribution systems. Suggest "4.1. Transmission Owner (radially operated facilities excluded)."
Group
PacifiCorp
Sandra Shaffer
Yes
PacifiCorp acknowledges that proposed Requirement R8 addresses the FERC directive in Paragraph 756. However, the Standards Drafting Team carried over from Order 693 some ambiguous language that may require clarification. Paragraph 756 directs that NERC include language requiring entities to identify the next most limiting component for facilities for which the thermal rating causes an impediment to service to "major cities or load pockets." Requirement R8.2 necessarily contains this requirement as directed by the Commission. It is unclear to PacifiCorp what the Standards Drafting Team would define as a "major" city. Also, it is unclear whether the term "major" is intended to apply to load pockets as well and, if so, what is considered a "major" load pocket. Regardless of whether "major" applies to load pockets, further clarification also is needed regarding what is meant by the term "load pocket." PacifiCorp requests modification of Requirement R8 to clarify this element.
Yes
Yes
Yes
PacifiCorp does not believe that the proposed Implementation Plan, which provides for a 12-month period before FAC-008-03 becomes effective, allows for sufficient time for entities to update their Facility Rating Methodology and their associated Facility Ratings. The Implementation Plan for this standard should be tied to the implementation of the NERC Alert for FAC-008. The Implementation Plan should reflect that the effective date for compliance with this standard is 12 months after the close of the activities required under that NERC Alert (currently scheduled for December 31, 2013). While PacifiCorp understands that the NERC Alert is not equivalent to a mandatory Reliability Standard, it nonetheless imposes significant compliance and operational burdens on registered entities and, only after the close of those activities responsive to the NERC Alert, can entities properly comply with the modifications in FAC-008-3 directed by the Commission.
Under FAC-008-3 Requirement R8, each Transmission Owner and Generator Owner (subject to Requirement R2) shall provide certain information, including facility ratings information, to the listed registered entities. The information to be provided includes, according to the proposed Requirement R8, information related to "solely and jointly owned Facilities that are existing Facilities, new Facilities, modifications to existing Facilities and re-ratings of existing Facilities)." The requirement for all Transmission Owners and Generator Owners to submit data for jointly owned facilities will mostly likely result in the following: 1) duplicative information being submitted by joint-owners of the same Facilities; and 2) while only one joint owner is likely to have responsibility for developing facility ratings, other joint owners may become liable under this requirement for activities over which they do not have clear authority to perform. Requirement R8, as written, is relatively clear and unambiguous and PacifiCorp agrees with what appears to be the intent of the requirement (i.e. that there are no gaps in facilities ratings that occur due to joint-ownership arrangements). However, due to ambiguity as to which entity or entities to which the requirement may be applicable, the standard may not be enforced effectively or equitably. PacifiCorp suggests that, to resolve this issue, the standard should require that an entity that jointly-owns Facilities designate a single registered entity as responsible for the provision of the required information.
Group
Bonneville Power Administration
Denise Koehn
No

We believe we understand the intent of the requirement, but do not believe that it is adequately communicated. Therefore, we are suggesting alternative language for R8.2 and R8.2.2 that if included would allow us to vote yes during the next ballot. Revised language: 8.2 Within 30 calendar days (or a later date if specified by the requesting entity), for any requested Facility that has equipment with a Thermal Rating that limits the requesting entity's Facility by creating an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.2. The Thermal Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1.

Yes

Yes

Yes

There are several additional edits needed to the current draft of FAC-008-3 that would remove confusion or increase understanding. These are as follows: In A.5 - Define the acronym BOT In B.R8 and B.R3 - International Council on Large Electric Systems (CIGRE) should be replaced with International Electrotechnical Commission (IEC) or removed and left with IEEE only as an example. Although CIGRE performs studies and provides recommendations the standards are developed in IEC. In M4 – (Revise) Each Transmission Owner shall... (to) Each Transmission or Generator Owner shall... and remove the second sentence which is a repetitive statement already covered by the first sentence. There is a mixed use of reference to requirements as R(number) or just a number. For consistency: In M4 – Change ... accordance to Requirement 4 to ... accordance to Requirement R4 In M5 – Change ... accordance to Requirement 5 to ... accordance to Requirement R5 IN M6 – Change ... R2 and R3 (Requirement 6) to ... R2 and R3 and R6

Individual

David Thorne

Pepco Holdings Inc

No

Although the proposed R8 contains the "words" from the FERC directives, the requirement does not directly increase reliability in real time, may cause operational confusion and is more appropriately addressed in the long term planning function not in the Operations Planning time horizon. For either the 1st limiting component or the next, both should be by request only. If the entity needs it let them request. In many cases the entity will never use the component data in operations. The actual piece of equipment that limits a facilities rating does not enter into operators decisions made in the operational time frame. The system limits are either an IROL or an SOL. Other procedures call for the operators to monitor the normal ratings and the contingency limits (or IROLs or SOLs) and take actions prior the flows reaching those limits. If the limits are violated due to a multiple facility trip there is a specified time frame to correct the violation. Use of the "next" most limiting piece of equipment is not practical or appropriate in real time operations. The requirement uses terms that are not defined: deliverability, major city and load pocket. Although that is the words used by FERC in Order 693, they do not conform to existing terminology and methodology in operating the BES. Maybe the situations when a request could be made for the second limit/rating ought to be any IROL, SOL or BES facility limitation.

No

The time horizon for supplying the limiting component should be in the planning horizon.

No

The measure should take into account if the requesting entity does not require the limiting components or the next limiting rating.

Yes

Individual

Joe Petaski

Manitoba Hydro
No
It is unclear which facilities the additional thermal rating information will be required for. FERC asked for additional thermal rating information only for those facilities for which thermal ratings cause the following: (1) an IROL; (2) a limitation of TTC; (3) an impediment to generation deliverability or (4) an impediment to service to major cities or load pockets. It is open to interpretation whether a facility is actually an impediment to generator deliverability or an impediment to load serving: -Should one perform n-1 analysis and determine whether a thermal limit is violated? Or is n-2 analysis necessary? -Is a radial feed to a generator an impediment to delivery? -What constitutes a major city or load pocket? One would assume at least 300 MW to be consistent with some other NERC reporting requirements. Requirement R8 should be rewritten to clarify which facilities this additional thermal rating information will be required for. Perhaps making it a bright line standard (for example facilities greater than 300 kV) would be a simpler approach.
No
The VRF should be Lower. Requirement 8.2 only requires the entity to provide information, and this information is the next most limiting element not the most limiting element.
Yes
Yes
Given the wide range in assumptions in short time overload, NERC should provide guidance for model building and assessments. NERC should outline the ratings to include (eg. should each entity have 15 minute, 30 minute, 1 hour, 4 hour, 8 hour, etc. ratings?) and should suggest how these ratings are documented, communicated and used. Also, the industry has previously rejected the requirement to identify the next most limiting facility based on the fact that it was not a reliability need, but commercially driven want. In its explanation as to why the next most limiting element is required FERC and the SDT have failed to show a reliability need. In Diagram 1 of the Unofficial Comment Form, it is obvious that if a transmission owner provides a continuous and a shorter term rating, the continuous rating of the facility is based on Equipment 3 and the shorter term rating is based on Equipment 2. There is no need to provide two continuous and two shorter term ratings from a reliability perspective.
Individual
Patricia Robertson
BC Hydro and Power Authority
No
We recognize that NERC is under a time constraint to file a revised standard with FERC, but we believe that the proposed language of parts 8.2 and 8.2.2 is ambiguous and does not make clear the intent of the proposed Requirement 8, which we believe is that the requesting party must demonstrate an impact on their system for ONLY a thermal limit of a Facility on another's system. Because of this ambiguity and the potential for misunderstanding of Requirement 8, and in spite of the time constraint NERC is faced with, we are voting NO on the current version of the standard. However, we have provided proposed alternative language for parts 8.2 and 8.2.2, which we believe clarifies the intent, while not changing the actual requirements. We believe this proposed language is clarifying in nature and not a substantive change. Therefore a recirculation ballot, rather than another successive ballot could be conducted. If this language, or similar clarifying language, is adopted by the drafting team we would vote in the affirmative for the proposed standard in a recirculation ballot. 8.2 Within 30 calendar days (or a later date if specified by the requester), for any requested Facility that has equipment with a Thermal Rating that limits the Requester's Facility by creating an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.2. The equipment's Thermal Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1.
Yes

Individual
Andrew Pusztai
American Transmission Company, LLC
Yes
ATC proposes revising the wording of Requirement R8 to more carefully refer to the Thermal Ratings of the requested Facilities: (see changes below) R8.1 . . . R8.1.1 Thermal Ratings for the requested Facilities R8.1.2 Identify the limiting equipment associated with the Thermal Ratings of the requested Facilities R8.2 . . . R8.2.1 Next Thermal Ratings for the requested Facilities beyond the most limiting equipment R8.2.2 Identify the limiting equipment associated with the next Thermal Ratings of the requested Facilities These revisions are proposed by ATC because a Thermal Rating for a Facility could be based on more than one piece or type of equipment. For example, a Facility could have two switches with the same rating or two different items (breaker and relay) with the same rating. Conversely, the piece or type of equipment associated with the Thermal Rating and the next Thermal Rating could be one single item. For example, the equipment could be the line conductor, but different sections of the line conductor could have different ratings due to different ground clearances, wind exposure, or conductor types.
Yes
ATC agrees, however, believes the Violation Risk Factor for requirement 8 should be changed to "Low" and the Time Horizon for requirement 8 should be "Planning". Information pertaining to a second limit is informational because an operator at the desk cannot act on this information without obtaining additional information or technical support. Furthermore, the fact that the information must be specifically requested validates a lower risk level.
Yes
Yes
Individual
Brian Jacoby
BGE
Yes
No comment.
No comment.
Individual
Darrin Adams
East Kentucky Power Cooperative
Yes
Yes
No
EKPC does not believe that the identity of the limiting equipment is necessary to provide a reliable BES. Therefore, this information should not be required in R8 or M8.

Yes
It is not clear how requiring identification of the most limiting component and the second most limiting component results in a more reliable system. The identity of these components may vary over a range of ambient temperatures and network topology conditions. It would be nearly impossible to capture this information in a static published document for all possible system operating conditions. Furthermore, the time and effort involved in identifying and documenting the increase in Facility Ratings based on the second most limiting component outweighs the benefits of knowing this information. From a reliability perspective, demonstrating that Facility Ratings do not exceed the rating of the most limiting component per Requirement 1.2 is sufficient. The system will be operated using these Facility Ratings to maintain system reliability. Some entities might be interested in the second most limiting component in order to know how much the rating can be increased. But this is more of an economic evaluation when developing a specific project rather than a reliability issue, and therefore should not be a requirement included in a Reliability Standard. Another issue with Requirement 8 is that the terms "most limiting equipment" and "next most limiting equipment" are not well defined, particularly when taken in conjunction with paragraph 76 of FERC's September 16, 2010 Order. The example given in that paragraph seems to indicate that the most limiting equipment is the component that is limiting for normal conditions, whereas the next most limiting equipment is the component that is limiting for contingency conditions. This does not appear to be the intent of Requirement 8. Clarifying language is necessary to eliminate the confusion.
Group
Southern Company Transmission
JT Wood
No
The R8 requirement does reflect the Directive however we believe that item (3) should be limited to generators who have firm transmission service. We also have concerns over the undefined terms used in item (4) "major cities" and "load pockets". Also see question 5 comments. Proposed change 8.2.1. If a Facility has a shorter term rating higher than its continuous rating such that another piece of equipment in the Facility would become the most limiting in the shorter term then the identity of the existing next most limiting equipment of the Facility 8.2.2. If the condition in 8.2.1 exists then provide the Equipment Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1. Otherwise indicate to the requestor that the limit provided in 8.1 applies.
Yes
Yes
Yes
The follow comment uses the Comment form example definitions and Diagram 1 labeling from the Reliability Objective Discussion section – labeling of point (E2) and (E3) was added to Diagram 1 for clarity. We believe that the intent of the Directive's requirement, as clarified in the September 16, 2010 Order, is to identify situations where an increased short term or emergency rating of equipment 3 could result in equipment 2 becoming the limiting component in the short term. In that case the identity of both equipments and their ratings, (E3) continuous rating and (E2) shorter term rating, would seem to meet the Directive's clarified requirement. In cases where the limiting equipment's continuous rating is equal to its emergency rating (equipment 3 blue curve is a straight line) there would not be a need to specify a second component. The "Reliability Objective Discussion" and R 8.2.2 goes much further by suggesting that four data points are required being the continuous and emergency ratings for limiting and next most limiting equipment.
Individual
Tony Kroskey
Brazos Electric Power Cooperative
No
See response to Question 5.

From a reliability perspective, demonstrating that facility ratings do not exceed the rating of the most limiting component per Requirement 1.2 is sufficient. Even though the SDT has developed what some may consider a reasonable compromise by requiring identification of the second most limiting component, it is not clear how this results in a more reliable system. Some entities might be interested in the second most limiting component in order to know how much the rating can be increased. But this is more of an economic evaluation when developing a specific project rather than a reliability issue. The proposed standard lacks clarity. For example, part of the purpose from FERC 693 was to 'identify the limiting component(s) and define the increase in rating based on the next limiting component(s) for all critical facilities'. How does the proposed requirement give an entity guidance on how to detail the increase and what are considered 'all critical facilities'? Is simply having it in the MLSE sufficient?
Individual
Jim Keller
We Energies
No
R8 applies only to Generator Owners subject to R2, that is, those who own the GSU and high-voltage leads to the transmission interconnection point. This Requirement needs to be clarified to indicate whether it applies only to the equipment between the GSU and the transmission interconnection point, or if it applies to all the equipment between the generator and the interconnection point.
Yes
Yes
We maintain that the changes based on the FERC directive should not be applied to Generator Owners. The connection from the generator to the transmission system is a radial connection which by its nature does not significantly impact the power transfer capability across the Bulk Electric System. The effort and cost for Generator Owners to be subject to these additional requirements is not accompanied by an increase in reliability, and is therefore not justified.
Individual
Claudiu Cadar
GDS Associates
Yes
a. We do agree that the proposed requirement R8 addresses FERC directive from Order 693, Paragraph 756, however we disagree with the language used within the requirement in several instances as follows: • The applicability to the GO should not be stated in parenthesis. We suggest rewording such as "Each Transmission Owner and Generator Owner shall provide [...]" • The information provided by the GO and TO is based upon their own process and schedule and may not coordinate with the request from the RC, TP, etc. FR SDT explained that "If one party declines to agree to a schedule, then both parties could be in violation of the requirement. If a requesting entity imposes unreasonable schedules for obtaining the ratings, the responding entity should have recourse through NERC and/or FERC", however we believe that rather to pile up the entities found noncompliant due to the schedule incompatibility, the standard shall be adjusted to permit reasonable timeframes. • It is unclear why two most limiting pieces of equipment must be identified. If a Generator or Transmission Owner must notify and provide its Facility Ratings for new or re-rated facilities as required in R7 what purpose does the second limiting factor have?
No
a. Development of a percentage based Violation Severity Level seems arbitrary and capricious. There is no assistance provided in understanding what constitutes a required Rating information submittal. Smaller projects with less equipment will be penalized greater. b. We do not see how the percentages on which the responsible entities have missed to provide the required information to the requesting

entities can be estimated. c. We can agree on the proposed number of days used in the VSLs criteria, but not if the schedule is entirely decided by the requesting entity.

No

a. The applicability to the GO should not be stated in parenthesis. We suggest rewording such as "Each Transmission Owner and Generator Owner shall have [...]"

Yes

a. Title • The title of proposed version 3 of the standard states simply "Facility Rating" while the current FAC-008-1 is defined as the "Facility Rating Methodology". We agree on this if there is a reason to combine the two FAC-008 and FAC-009 altogether, otherwise the title should be kept the same. b. Requirement R1 • While it is indicated that the line of demarcation between generation facilities and transmission facilities is the step up transformer, the equipment after the generator step up transformer is usually considered, and rightfully so, a generator lead. The unilateral assertion that equipment after the generator step up transformer be considered transmission type equipment is incorrect. This sets up a situation where all Generator Owners would be seen as a Transmission Owners, which is not proper. • The main step-up transformer is not an appropriate reference in the standard. Although FR SDT have previously agreed that "the main step up transformer may not be the point of interconnection", and explained that the R1 and R2 should be considered together as "R1 relates to the electrical rating of the generator and R2 relates to transmission type equipment (if owned by the GO) from the end point in R1 to the point of interconnection", this would not support the main purpose of the standard as to be generally applicable on all and any of the various generation facility topologies. While in R1 the GO is required to have "documentation for determining the Facility Ratings", R2 requires the GO to have "a documented methodology for determining Facility Ratings (Facility Rating Methodology)". In other words R1 it seems to require the actual Facility Ratings along with the premises related to how these were determined including the methodology, while R2 requires only the methodology. FR SDT's justification is in contradiction with the language used. We suggest rewording both requirements R1 and R2 as to reference only the point of interconnection and not some specific equipment. • Why is nameplate rating left out of the first bullet in R1.1 but included in the first bullet of R2.1? Is this an indication that nameplate data is not a valid rating methodology? Are the rating methodologies not left to the entity to determine? • What is meant by engineering analyses? This term is very broad and can be interpreted multiple ways. Would this not add confusion to the Audit process as different Regions interpret engineering analyses in different ways? Could this not bring about unequal enforcement? c. Requirement R2 • While R1 references ANSI and IEEE, requirement R2 references IEEE and CIGRE standards. Even though, as explained by the FR SDT, "ANSI/IEEE/GIGRE, etc, are examples and are meant to provide flexibility" the language of the standard should not be ambiguous or to reflect a selective and impartial approach. We suggest that any reference to technical standards to be provided such as "[...] industry standards (e.g. Institute of Electrical and Electronic Engineers (IEEE) standard / International Council on Large Electric Systems (CIGRE) standards / American National standard Institute (ANSI) standards, etc.)". • Why isn't the verbiage in Requirement 2.1 first bullet carried throughout the document (R2.2.2 & R3.2.2)? • Second bullet on R2.1 would detail the acronym for IEEE while the first reference of these standards in R1.1 is inadvertently missing this. Generally, the acronyms are explained at their first use in the text of the document. Please see also prior comment and correct the language accordingly. • What determines the average temperature at 2.2.3? How many years of data must be analyzed to provide an average? How are unusual events or variations handled? • We assume that the details pertaining the ambient conditions at 2.2.3 are meant to widen and clarify to which extent these should be considered, however we believe that the statement "[...] as they vary in real-time)" would rather confuse the GO as they may figure the likelihood of a dynamic approach. We suggest rephrasing such as "Ambient conditions (as considered by the Generator Owner based upon local conditions or / and industry standards)" • Although the footnote 1 is to serve as an example for what type of operating limitations to be considered, we believe that this can generate confusion. For instance the GO can understand that is required to consider various operating limits determined by any equipment temporarily taken out of service. While we believe that FR SDT has not envisioned this approach, we suggest deleting the word "temporary" from the footnote. • We consider that the language used at 2.4 is not the best choice. We suggest rephrasing this as follows: "2.4. The process by which the Rating of equipment that comprises a Facility is determined reflecting all of the following: 2.4.1. The equipment addressed including, but not be limited by the conductors,

transformers, relay protective devices, terminal equipment, series and shunt compensation devices, etc. 2.4.2. The corresponding equipment Rating characterized at a minimum, by its Normal and Emergency Ratings (or Continuous / Shorter Term Ratings)" d. Requirement R3 • See R1, R2 comment pertaining the standards reference. • See R2 comment pertaining the ambient conditions • See R2 comment pertaining the operating limitations • We consider that the language used at 3.4 is not the best choice. See comment and suggested changes at 2.4 e. Requirement R4 • Not sure why the GO is required to make available the documentation for determining the Facility Ratings along with the methodology, while the TO is required to provide only the methodology. • The number of calendar days (21) to provide information is unusual. Most Standards have a period of 30 or 45 calendar days. Should there be consistency amongst all Standards? Would the change from 15 to 21 to 30 impact reliability? f. Requirement R5, R6, R7, R8 • It seem that there is some overlap in between this standard and FAC-009-1

Individual

Bill Middaugh

Tri-State G&T

Yes

No

There is room for confusion where the VSLs for R7 and R8 use the phrase "missed meeting the schedules." Depending on the intent, it should perhaps be changed to "missed meeting one or more schedules" or "missed meeting all of the schedules" in each of the VSLs.

Yes

Yes

None

Group

Luminant Power

Mike Laney

Yes

Yes

Yes

Yes

Luminant agrees that the Facility Rating standard should be revised and thanks the Standard Drafting Team (SDT) for their work and the opportunity to comment. The standard appears to be written to be more applicable to transmission owners and associated equipment and not to that of Generation Owners (GO). Luminant is concerned that the draft standard is not always clear as to what ratings are expected from GOs, and offers the following comments for consideration by the SDT. Requirement R1 is not clear what Ratings documentation has to be developed by the GO. The standard should only apply to the generating unit output capability, and then the equipment from the generator leads to the Point of Interconnection (POI). The requirements should not apply to the individual components that make up the generating unit such as boiler components, feedwater systems, condensate systems, environmental controls, etc. Getting into the details and systems that compose a generation unit would not provide any substantial benefit to the rating of the unit. Requirement R2.4 seems to imply the scope from the generating leads out to the POI, but it needs to be specifically clarified in the standard. Requirement R1 should contain a provision where the rating of a generating unit can be based upon a regulatory or legal limit to unit output. R1.2 appears unnecessary as the prime R1 requirement implies an accurate overall rating. Requirement R2.2 is confusing as to how it applies in relation to R2.1, in particular if the GO uses OEM information to rate the equipment. The footnote on

2.2.4, Operating limitations should be removed. Other NERC standards require unit conditions such as temporary deratings or unit capability changes to be reported to the BA or TOP in a timely manner. Requirement R2 has a Time Horizon of Long Term Planning, and temporary derates do not appear to fit that criteria. Requirement 2.4.2 requests both the normal and emergency rating for equipment from the MPT to the POI. While that may be needed and modeled for some situations, it is not necessary for all facilities. For example, at a generating facility where the lines, breakers, buswork and other electrical components from the MPT to the POI were designed and constructed well in excess of the output capability of the generating unit (and there is no transmission thru flow), the connections may not all be modeled to that level of detail. Luminant suggests the following language revision for 2.4.2: "The scope of the Ratings addressed shall include as a minimum both Normal and Emergency Ratings, where applicable and when requested by the Planning Authority or Planning Coordinator". Requirement R7 needs a boundary on the timeframe for a response. The way the current requirement is written, a requesting entity to send a notice to a TO or GO that they are scheduled to provide information one day later. Luminant suggests the language be modified as follows: "...as scheduled by such requesting entities, but not sooner than 30 calendar days from the date of a specific request". Requirement R8 seems to imply that the applicable GO equipment is that in R2, it is not explicit. In a generating plant, there is a wide variety of equipment that may have a thermal rating. It appears the intent was to address Thermal Ratings for transmission type equipment only. Please clarify that for the GO, R8 only applies to GO equipment from the MPT to the POI. Requirement 8.1 (similar to R7) needs a boundary on the timeframe for a response. Luminant suggests the language be modified as follows: "As scheduled by the requesting entities, but not sooner than 30 calendar days from the date of a specific request". Requirements 8.2.1 and 8.2.2 could be combined as follows: "The identity and Equipment Rating of the next most limiting equipment of the Facility". The Requirement R8 proposed changes have an applicability to Generator Owners, however the SAR Applicability Section only has the Transmission Owner box checked.

Group

Southern Company Generation (SCG) Technical Services

Bill Shultz

No

The R8 requirement does reflect the Directive however we believe that item (3) should be limited to generation having firm transmission service. Proposed change: 8.2.1. If a Facility has a shorter term rating higher than its continuous rating such that another piece of equipment in the Facility would become the most limiting in the shorter term then the identity of the existing next most limiting equipment of the Facility 8.2.2. If the condition in 8.2.1 exists then provide the Equipment Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1. Otherwise indicate to the requestor that the limit provided in 8.1 applies.

Yes

Yes

Yes

The following comment uses the Comment form example definitions and Diagram 1 from the Reliability Objective Discussion section: We believe that the intent of the Directive's requirement, as clarified in the September 16, 2010 Order, is to identify situations where an increased short term or emergency rating of Equipment 3 could result in Equipment 2 becoming the limiting component in the short term. In that case the identity of both equipments and their ratings, the Equipment 3 continuous rating and the Equipment 2 shorter term rating, would seem to meet the Directive's clarified requirement. In cases where the limiting equipment's continuous rating is equal to its emergency rating (Equipment 3 blue curve is a straight line) there would not be a need to specify a second component. The "Reliability Objective Discussion" and R 8.2.2 goes much further by suggesting that four data points (two for Equipment 3 and two for Equipment 2) are required being the continuous and emergency ratings for limiting and next most limiting equipment.

Individual

Rex Roehl

Indeck Energy Services
No
The FERC order addresses limiting elements for different time periods, continuous versus short term. R8 is drafted based upon the diagram in the printed comment form which misses FERC's point. At either the continuous duty period (eg 24 hours) or at the emergency (eg 4 hour) duty period, the limiting element will always limit the equipment. The FERC order identifies the difference between the E3 limiting in the continuous duty period and E2 in the emergency duty period. And if the duty period was further modified, such as to 15 minute duty period, then a different element such as E1 might be limiting. R8 doesn't grasp FERC's issue. An IROL or other analysis would seem to be for a different period than what some TO's or GO's would rate their facilities at based upon R2. R8 should define in the Request to the TO or GO, what duty period is relevant for the particular condition that is being analyzed (eg 15 minutes or 4 hours) and request a rating for that duty period.
No
The VSL's are focused on a TO with numerous ratings to provide. A GO might only have one. The GO violation would always be Severe. The number of ratings not provided should be an "either or" with the percentage, such as: Lower VSL: The responsible entity failed to provide more than 5 Ratings or provided less than 100%, but not less than 95% of the required Rating information to all of the requesting entities. Moderate VSL: The responsible entity failed to provide more than 10 Ratings or provided less than 100%, but not less than 90% of the required Rating information to all of the requesting entities. High VSL: The responsible entity failed to provide up to 15 Ratings or provided less than 100%, but not less than 85% of the required Rating information to all of the requesting entities. Lower VSL: The responsible entity failed to provide up to 20 Ratings or provided less than 85% of the required Rating information to all of the requesting entities.
No
M8 fails to indicate that the TO or GO only need evidence of responding to specific requests.
Group
Public Service Enterprise Group
Mikhail Flakovich
No
Comment #1 PSEG suggest numbering the 4 scenarios in section 8.2, similar to how it was numbered in the FERC paragraph 756. Also, the FERC paragraph used the word "causing" but the standard used the word "having". Therefore it would read as: "Within 30 calendar days (or a later date if specified by the requester), for any requested Facility with a Thermal Rating that the requester has identified as causing one of the following 1. An Interconnection Reliability Operating Limit (IROL); 2. A limitation of Total Transfer Capability, 3. Impeding generator deliverability, or; 4. Impeding service to a major city or load pocket." Comment #2: Would the requesting entity be allowed to ask for this data at each of the registered entity's facilities at the same time, or would it only be one facility at a time?
Yes
Yes
Yes
N/A
Individual
Michael Schiavone
Niagara Mohawk (National Grid Company)
Yes
While we agree R8 meets the FERC Directive, we believe there are things that can still be done to improve the requirement. 1. Eliminate requirement R 8.2 (reproduced below). There is a lot of ambiguity in the term "major city or load pocket" and hence the proposal to completely eliminate the

requirement. 2. For R 8.1.2 "identity of the most limiting equipment of the Facilities" RSC believes this would be applicable to each individual Normal and Emergency rating, and be required to be provided. We believe this proposed revision may have gone beyond the intent of the FERC Directive.

No

The selection of 100% to 95%, and 95% to 90%, etc, seems arbitrary and not based on a reliability reason. It is T hard to understand how one would classify whether the information provided would fall into those percentage categories and would then cause the risk to move from low to severe.

Yes

Yes

1) We feel it is most appropriate that the requesting party as proposed needs to have a legitimate reliability reason for requesting the information and they would be limited to the particular functional entities noted in the requirement as drafted. 2) National Grid already provides responsible parties (including the appropriate Reliability Coordinator, Planning Coordinator, and Transmision Operators) with ratings of shorter terms than continuous, as well as ambient based ratings, which can and do get applied to handle certain type of scenarios presented in the webinar. National Grid believes that there is no special request needed for these parties to obtain such ratings, nor is there a need to ignore any equipment in development of such ratings. Moreover, ignoring existing equipment raises question of what potential reliability impacts would come along with this approach. 3) The treatment of multiple instances of same sized equipment (like several 800A disconnect switches in a circuit), is left unclear. In the webinar, one NERC response said to lump them all together and go to next higher limit. Another said to indicate such was the case that several pieces of equipment impose same limit. It was apparent that the only recourse would be to include language in each entity's ratings methodology should address how this is handled. It is suggested that this issue be addressed in the standard otherwise it will likely need to be addressed in a CAN or Interpretation Request. 4) Description of how this info would be used implied that ops planner might exceed the most limiting element rating and go to next most so long as it was not a closely following relay limit that could put circuit at risk of pulling out. It is not clear to us how a system could be operated in excess of equipment ratings for the appropriate duration. The fact that we establish Short Time E emergency (STE) and Long Time Emergency (LTE) ratings higher than normal ratings that get applied in emergency situations for shorter than normal continuous timeframes seemed to be ignored.

Individual

Saurabh Saksena

National Grid

Yes

While we agree R8 meets the FERC Directive, we believe there are things that can still be done to improve the requirement. 1. Eliminate requirement R 8.2 (reproduced below). There is a lot of ambiguity in the term "major city or load pocket" and hence the proposal to completely eliminate the requirement. 2. For R 8.1.2 "identity of the most limiting equipment of the Facilities" National Grid believes this would be applicable to each individual Normal and Emergency rating, and be required to be provided. We believe this proposed revision may have gone beyond the intent of the FERC Directive.

No

The selection of 100% to 95%, and 95% to 90%, etc, seems arbitrary and not based on a reliability reason. It is hard to understand how one would classify whether the information provided would fall into those percentage categories and would then cause the risk to move from low to severe.

Yes

Yes

1) National Grid feels it is most appropriate that the requesting party as proposed needs to have a legitimate reliability reason for requesting the information and they would be limited to the particular functional entities noted in the requirement as drafted. 2) National Grid already provides responsible

parties (including the appropriate Reliability Coordinator, Planning Coordinator, and Transmission Operators) with ratings of shorter terms than continuous, as well as ambient based ratings, which can and do get applied to handle certain type of scenarios presented in the webinar. National Grid believes that there is no special request needed for these parties to obtain such ratings, nor is there a need to ignore any equipment in development of such ratings. Moreover, ignoring existing equipment raises question of what potential reliability impacts would come along with this approach. 3) The treatment of multiple instances of same sized equipment (like several 800A disconnect switches in a circuit), is left unclear. In the webinar, one NERC response said to lump them all together and go to next higher limit. Another said to indicate such was the case that several pieces of equipment impose same limit. It was apparent that the only recourse would be to include language in each entity's ratings methodology should address how this is handled. It is suggested that this issue be addressed in the standard otherwise it will likely need to be addressed in a CAN or Interpretation Request. 4) Description of how this info would be used implied that ops planner might exceed the most limiting element rating and go to next most so long as it was not a closely following relay limit that could put circuit at risk of pulling out. It is not clear to us how a system could be operated in excess of equipment ratings for the appropriate duration. The fact that we establish Short Time Emergency (STE) and Long Time Emergency (LTE) ratings higher than normal ratings that get applied in emergency situations for shorter than normal continuous timeframes seemed to be ignored.

Group

SRP

Cynthia Oder

No

The language of requirement R8.2 seems to allow a utility to wait until a request is received to prepare the information. However, if a neighboring utility asked for bulk electric system data, the 30 calendar day time limit would not be enough.

Yes

Yes

No

NERC does not specify how to handle the common situation where several switches and breakers in a substation bay have the same rating. Do you pick one 3000 Amp breaker, and the 3000 Amp switch next to it is "second most limiting," or do you group all of the 3000 Amp devices as most limiting? When clearance to ground limits a line rating in a certain span, the next upgrade could be a nearby span, and could only be slightly higher. Such results would not provide a good gauge of the cost of a meaningful increase in the line rating. An increase in one line rating wouldn't necessarily add to an IROL (Interconnection Reliability Operating Limit) or TTC (Total Transfer Capability). Extensive power flow, stability and voltage studies are usually needed to know that.

A significant amount of staff time would be required to comply with the proposed "next most limiting element" requirement. It's not clear that the information would be of value to FERC or NERC. In many cases the administrative burden on the utilities would only provide trivial or self-evident results.

Individual

RoLynda Shumpert

South Carolina Electric and Gas

Yes

Yes

Yes

Yes

Individual
Dennis Sismaet
Seattle City Light
No
<p>We recognize that NERC is under a time constraint to file a revised standard with FERC, but we believe that the proposed language of parts 8.2 and 8.2.2 is ambiguous and does not make clear the intent of the proposed Requirement 8, which we believe is that the requesting party must demonstrate an impact on their system for ONLY a thermal limit of a Facility on another's system. Because of this ambiguity and the potential for misunderstanding of Requirement 8, and in spite of the time constraint NERC is faced with, we are voting NO on the current version of the standard. However, we have provided proposed alternative language for parts 8.2 and 8.2.2, which we believe clarifies the intent, while not changing the actual requirements. We believe this proposed language is clarifying in nature and not a substantive change. Therefore a recirculation ballot, rather than another successive ballot could be conducted. If this language, or similar clarifying language, is adopted by the drafting team we would vote in the affirmative for the proposed standard in a recirculation ballot.</p> <p>8.2 Within 30 calendar days (or a later date if specified by the requester), for any requested Facility that has equipment with a Thermal Rating that limits the Requester's Facility by creating an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.2. The equipment's Thermal Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1</p>
No
<p>We recognize that NERC is under a time constraint to file a revised standard with FERC, but we believe that the proposed language of parts 8.2 and 8.2.2 is ambiguous and does not make clear the intent of the proposed Requirement 8, which we believe is that the requesting party must demonstrate an impact on their system for ONLY a thermal limit of a Facility on another's system. Because of this ambiguity and the potential for misunderstanding of Requirement 8, and in spite of the time constraint NERC is faced with, we are voting NO on the current version of the standard. However, we have provided proposed alternative language for parts 8.2 and 8.2.2, which we believe clarifies the intent, while not changing the actual requirements. We believe this proposed language is clarifying in nature and not a substantive change. Therefore a recirculation ballot, rather than another successive ballot could be conducted. If this language, or similar clarifying language, is adopted by the drafting team we would vote in the affirmative for the proposed standard in a recirculation ballot.</p> <p>8.2 Within 30 calendar days (or a later date if specified by the requester), for any requested Facility that has equipment with a Thermal Rating that limits the Requester's Facility by creating an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.2. The equipment's Thermal Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1</p>
No
<p>We recognize that NERC is under a time constraint to file a revised standard with FERC, but we believe that the proposed language of parts 8.2 and 8.2.2 is ambiguous and does not make clear the intent of the proposed Requirement 8, which we believe is that the requesting party must demonstrate an impact on their system for ONLY a thermal limit of a Facility on another's system. Because of this ambiguity and the potential for misunderstanding of Requirement 8, and in spite of the time constraint NERC is faced with, we are voting NO on the current version of the standard. However, we have provided proposed alternative language for parts 8.2 and 8.2.2, which we believe clarifies the intent, while not changing the actual requirements. We believe this proposed language is clarifying in nature and not a substantive change. Therefore a recirculation ballot, rather than another successive ballot could be conducted. If this language, or similar clarifying language, is adopted by the drafting team we would vote in the affirmative for the proposed standard in a recirculation ballot.</p> <p>8.2 Within 30 calendar days (or a later date if specified by the requester), for any requested Facility that has equipment with a Thermal Rating that limits the Requester's Facility by creating an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.2. The equipment's Thermal Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1</p>
No
<p>We recognize that NERC is under a time constraint to file a revised standard with FERC, but we</p>

believe that the proposed language of parts 8.2 and 8.2.2 is ambiguous and does not make clear the intent of the proposed Requirement 8, which we believe is that the requesting party must demonstrate an impact on their system for ONLY a thermal limit of a Facility on another's system. Because of this ambiguity and the potential for misunderstanding of Requirement 8, and in spite of the time constraint NERC is faced with, we are voting NO on the current version of the standard. However, we have provided proposed alternative language for parts 8.2 and 8.2.2, which we believe clarifies the intent, while not changing the actual requirements. We believe this proposed language is clarifying in nature and not a substantive change. Therefore a recirculation ballot, rather than another successive ballot could be conducted. If this language, or similar clarifying language, is adopted by the drafting team we would vote in the affirmative for the proposed standard in a recirculation ballot. 8.2 Within 30 calendar days (or a later date if specified by the requester), for any requested Facility that has equipment with a Thermal Rating that limits the Requester's Facility by creating an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.2. The equipment's Thermal Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1

Individual

Jason L. Marshall

ACES Power Marketing

Yes

While it likely will satisfy the FERC directive, proposed Requirement R8 is ambiguous, leaves much room for interpretation, and causes some confusion. For instance, when would an IROL be expected to have a thermal limit? Violations of IROLs by definition can expose a widespread area to cascading outages, uncontrolled separation or instability. When does exceeding a thermal limit ever do this? Since TTCs fluctuate based on system conditions, what studies would the limiting TTC target? Studies used to support posting ATCs/AFCs? Near-term seasonal assessment studies? Long-term transmission planning studies? Many TSPs have automated tools that recalculate TTC every hour for the next 168 hours. It would not make sense to use these hourly TTCs as they change too rapidly but we are left wandering what the drafting team had in mind. What does impeding generator deliverability and impeding service to a major city or load pocket mean? We assume that the drafting team means limits deliverability or service. Impede is a poor choice of words as all lines have impedance and, thus, impede service and deliverability. Use of a major city or load pocket is ambiguous and should be avoided. What constitutes a major city? The top 10 largest cities by population in the U.S.? The top 100 largest cities? What constitutes a large load pocket? 100 MW of load, 200 MW of load? By using ambiguous terms, there will surely be unequal enforcement of the requirement for several years until those details are worked out in the audit and enforcement processes. Now is the time to resolve these ambiguities.

Group

NERC Standards Review Subcommittee

Bruce Wertz

Yes

No

We agree that the "Medium" rating for R8.1 is correct since it is due immediately. However, the VRF for R8.2 should be "Lower" since the data is not required immediately for real-time operations.

Yes

Yes

The FERC directive may be too prescriptive in requiring a second limiting element and its facility

rating. What might be useful in real-time operations would be a short-term rating of a facility (i.e. one hour rating) that may be already supplied in R2, which requires normal and emergency ratings.

Group

MISO Standards Collaborators

Marie Knox

Yes

We propose revising the wording of Requirement R8 to more carefully refer to the Thermal Ratings of the requested Facilities: (see changes below) R8.1 . . . R8.1.1 Thermal Ratings for the requested Facilities R8.1.2 Identify the limiting equipment associated with the Thermal Ratings of the requested Facilities R8.2 . . . R8.2.1 Next Thermal Ratings for the requested Facilities beyond the most limiting equipment R8.2.2 Identify the limiting equipment associated with the next Thermal Ratings of the requested Facilities These revisions are proposed because a Thermal Rating for a Facility could be based on more than one piece or type of equipment. For example, a Facility could have two switches with the same rating or two different items (breaker and relay) with the same rating. Conversely, the piece or type of equipment associated with the Thermal Rating and the next Thermal Rating could be one single item. For example, the equipment could be the line conductor, but different sections of the line conductor could have different ratings due to different ground clearances, wind exposure, or conductor types. For R8.2, we have four areas of concern for the second most limiting piece of equipment of a Facility. These four items are, "Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket" and they are the exact words that the commission used in FERC Order 693, paragraph 756. The SDT should apply the "equally efficient and effective" rule of thumb and clarify what "impeding service to a major city or load pocket" means. Furthermore paragraph 771 states that "... (3) for each facility, identify the limiting component and, for critical facilities, the resulting increase in rating if that component is no longer limiting". The Commission uses the word "critical facilities". We recommend that the SDT rewrite R8.2 to read; 8.2 Within 30 calendar days (or a later date if specified by the requester), for any requested critical Facility with a Thermal Rating that the requester has identified as having an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket . Entities have a list of these "critical facilities" and this will ensure that Facility Ratings are used in the reliable planning and operation of the Bulk Electric System.

Yes

We agree, however, the Violation Risk Factor for requirement 8 should be changed to "Low" and the Time Horizon for requirement 8 should be "Planning". Information pertaining to a second limit is informational because an operator at the desk cannot act on this information without obtaining additional information or technical support. Furthermore, the fact that the information must be specifically requested validates a lower risk level.

Yes

Yes

The MISO has some concern with the implementation of the FAC-008-3 standard because it does not benefit or enhance reliability.

Individual

Armin Klusman

CenterPoint Energy

R8.1.2 requires Transmission Owners and applicable Generator Owners to provide the "Identity of the most limiting equipment of the Facilities (as scheduled by the requesting entities)". The identification of the most limiting equipment of the Facilities is not part of the typical planning process; that is, this information is not submitted for the development of steady-state planning models. In addition,

commercially available power system planning software programs do not accept such data. CenterPoint Energy recommends that the identification of the most limiting equipment of the Facilities be provided only upon request and within 30 days of a request. This will result in R8.1: "Facility Ratings as scheduled by the requesting entity", R8.2: "Identity of the most limiting equipment of the Facilities as requested within 30 days (or a later date if specified by the requester)", and R8.3: "Within 30 calendar days (or a later date if specified by the requester), for any requested Facility with a Thermal Rating that the requester has identified as having an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.3.1. Identity of the existing next most limiting equipment of the Facility 8.3.2. The Equipment Rating for the next most limiting equipment identified in Requirement R8, Part 8.3.1."

Individual

Terri Pyle

Oklahoma Municipal Power Authority

Yes

Yes

Yes

Yes

Individual

B. Vijayraghavan

Pacific Gas & electric Comapny

No

Please consider following revisions: 8.2 Within 30 calendar days (or a later date if specified by the requester), for any requested Facility that has equipment with a Thermal Rating that limits USE OF the Requester's FacilitIES by creating an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.1. Identity of the existing next most limiting equipment of the Facility 8.2.2. The equipment's Thermal Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1.

Yes

Individual

Alice Ireland

Xcel Energy

No

Xcel Energy does not believe that the proposed Requirement 8 meets the intent of Paragraph 756 of Order 693, nor is it related to reliability. We believe FERC's directive was focused on the "prior identification of this second limiting component" in order to allow entities an opportunity to take mitigating actions that may help avoid events that could lead to cascading. This would indicate to us that FERC wanted to see a planning requirement, which would then potentially lead to maintenance and operational subsequent actions. As drafted, the requirement does not encourage proactive planning-related activities. In practice, planning entities may request this information and perform such proactive assessments. But, there is no requirement for them to do so, as we believe FERC had intended. Furthermore, from a system operations perspective, there is no reliability benefit gained from knowing the 2nd most limiting element and its rating. The 1st most limiting factor must be

respected and the system must be operated in a manner that doesn't violate that limit. Knowledge of the 2nd most limiting factor, or any other limiting factor, does not affect the operation of the system. If the intent of this requirement was to focus on the planning of the BES, it is misguided and could lead to erroneous assumptions. In paragraph 76 of its September 16, 2010 Order Denying Rehearing, FERC recognizes that facility ratings can change under different operating conditions. Indeed, the discussion centers around the fact that different equipment can use different time periods to determine the ratings, i.e. 4 hour, 8 hour, or ½ hour). The standard only asks for an ambiguous next most limiting element. On the Xcel Energy systems, there are 4 ratings that are considered; summer normal, summer emergency, winter normal and winter emergency. It is not unusual for different pieces of equipment to be the limiting (or 2nd most limiting) element depending upon the rating under investigation. To determine the increase in a facility rating if the most limiting element is no longer in place, one would need to investigate all four ratings. In order to come up with a meaningful increase in a facility's rating, a more detailed study would be required, and simply identifying the 2nd most limiting element and that element's rating may not give an accurate picture of the system. Therefore, the requestor would also need to identify the time period that is under investigation (summer, winter, normal, continuous, emergency or short-term), and would require information around how the requested rating was developed. In addition, further consideration is needed regarding the term "next most limiting element." For instance, if your facility contains 3 CTs that all have the same equipment rating, does the "next most limiting element" mean the second of 3 CTs (in this example)? Or, does it mean the element after any and all equipment that currently limits the rating of the facility? Another example could be a jumper and a switch, both with the same equipment rating. Does the "next most limiting element" mean the switch (assuming the jumper was listed as the most limiting element)? Obviously, if multiple pieces of equipment have the same rating, then providing another piece of equipment with the same rating doesn't provide any new information. However, only providing the equipment with the next highest rating could seriously understate the work involved in getting to that higher rating. There could be multiple pieces of equipment that must be replaced to get to a higher rating. Likewise, further consideration and refinement is needed for the terms "major city" and "load pocket". Depending upon the perspective of the various parties involved, what constitutes a major city or load pocket could greatly vary. Additionally, there could be a city or load pocket on a radial line that has no effect whatsoever on the BES. Instead, we recommend defining a "major city" or "load pocket" in quantitative terms such as a certain population or megawatts, as is the case in EOP-004-1.

Yes

No

Yes

As explained in the response to question 1 above, if the purpose of Requirement 8 is to aid in the operation of the BES, it does not accomplish this, since the most limiting element must be respected. Knowledge of a higher rating (from the next most limiting element) could give an operator a false sense that the system could be operated at a higher limit. If the purpose of Requirement 8 is to aid in planning, there is a lot of additional information that would be required. In order to determine a new facility rating assuming the current most limiting factor is not present, then a study period longer than the proposed 30 days may be required. There are many factors that would need to be considered in making this determination. With that said, Xcel Energy feels that this type of planning analysis is already occurring and minimal increase in reliability would be gained by such a requirement. Transmission Planners are already tasked with developing plans to serve projected loads at various generation/load patterns. To properly do this, information must already be evaluated with area utilities on increasing ratings when needed. If the real goal is to determine what would need to be done to bring a facility up to a higher rating, the requesting entity should identify a target loading level (MVA) for the analysis in their request to the entity that owns the equipment. This study would be based on a requested loading level (MVA), as one could not derive this from the next limiting element. The proposed requirement also presupposes that all limitations are thermal in nature. For some northern entities, while the most limiting factor may be equipment, the next most limiting factor in the ability to move power may be a presidential permit. Likewise, for a generating facility, the next most limiting factor may be a piece of equipment in the balance of the plant (boiler, turbine, etc.).

The requirement does not seem to recognize this. Finally, Xcel Energy believes the requirement should more clearly define who can request the "next most limiting element". While the requirement clearly states who the information must be provided to, it does not seem to limit who can request that information. Limiting who can request this information would help keep this requirement more focused on reliability, and may prevent market participants from making requests that are not focused on reliability. Xcel Energy proposes the following modification to R8.1 and R8.2: 8.1. As scheduled by the requesting entities (associated Reliability Coordinator(s), Planning Coordinator(s), Transmission Planner(s), Transmission Owner(s) and Transmission Operator(s)) 8.1.1. Facility Ratings 8.1.2. Identity of the most limiting equipment of the Facilities 8.2. Within 30 calendar days (or a later date if specified by a requesting entity), for any requested Facility with a Thermal Rating that the requester has identified as having an Interconnection Reliability Operating Limit, limiting Total Transfer Capability, impeding generator deliverability, or impeding service to a major city or load pocket: 8.2.1. Identity of the existing next most limiting equipment of the Facility 8.2.2. The Equipment Rating for the next most limiting equipment identified in Requirement R8, Part 8.2.1.

Group

IRC Standards Review Committee

Greg Campoli

No

Requirement 8.2 goes beyond what is mandated in the FERC Directive. Knowledge of these additional ratings is currently required through a collection of data in other IRO/TOP/TPL Standards. In addition Requirement 8.2 introduces the terms major city, and load pocket. These terms are not defined and would be subject to interpretation. This would result in a request for interpretation or a compliance application notice. If the requirement is retained, 8.1.2 should be revised to read: Identity of the most limiting equipment of the Facilities applicable to each individual Normal and Emergency rating required to be provided. However, as stated, this is a redundant requirement.

FAC-008-2, R8 is redundant with respect IRO-010 R1 that requires the RC to ask for needed data; and R3 requires TOs and GOs to provide that facility data. It is not clear the purpose of R8.2.1, it appears to be ambiguous and lacks transparency. There is no identification of who defines a "major city" much less what constitutes a "major city". Similarly there is no identification of who defines a "load pocket" much less what constitutes a "load pocket". FAC-008 R8 could further reduces reliability because if the requirement were effected it would allow 30 days response time to reporting such data. NERC Standards MOD-012 & 013 also provides that such data is exchanged and coordinated among all entities. Unlike the IRO standards that require identification of data and the time frame to submit the data, the FAC-008 requires the request to be completed within 30 days. Waiting 30 days for data that is needed in the next day's operation adversely impacts real time operations. Requirement R8 and its sub-parts to supply the second most limiting element for a piece of equipment serve no purpose. IRO-008 requires the RC to assess its area both day head, as well as every 30 minutes during the day. IRO-009 requires the RC to enact "preventive measures" if an IROL is predicted. The approval of and adherence to these two standards will ensure that the second most limiting component is never an issue. These two IRO standards that "the" most limiting element be respected not just for actual overloads but for predicted overloads. At no time is it allowable for an entity to exceed an established normal rating, only to observe the next most limiting element. The Models used by the RCs will define the level of detail of the data that needs to be provided. If the component data is needed then the RC will request the data be provided per IRO-010, and will be analyzed per IRO-008. If the data is not modeled than having the TO and GO submit that information is not an effective use of time or manpower. The Industry has posted a conforming set of requirements for TOPs, making this request premature or redundant.