Consideration of Comments on Initial Ballot — Facility Ratings — FAC-008-2 (Project 2009-06)

Summary Consideration: The FR SDT thanks all commenters for their thoughtful consideration of the proposed FAC-008-2 standard. Some of the comments were aimed at providing clarity to requirements without changing the intent of those requirements. The FR SDT agrees with these comments and will have these entered into the NERC Issues Data Base for consideration during the next revision of the standard. These suggested edits include:

1. Revise the phrase "performance history" in R2 and R3 to "historical performance records" to be consistent with R1.
2. Split R1 into two sentences as follows: *R1. Each Generator Owner shall have documentation for determining the Facility Ratings of its solely and jointly owned generator Facility(ies) up to the low side terminals of the main step up transformer when the Generator Owner does not own the main step up transformer. When the Generator Owner does own the main step up transformer, the Facility Ratings will continue up to the high side terminals of the main step up transformer.*
3. Add references in R4 and R5 to provide a link to requirements R1, R2 and R3. An example of this would be to revise R4 as follows: *R4. Each Transmission Owner shall make its Facility Ratings methodology (R3) and each Generator Owner shall each make its documentation for determining its Facility Ratings (R1) and its Facility Ratings methodology (R2) 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.*

A suggestion was made to remove the word "temporary" from the footnotes relative to de-ratings. The SDT believes that the footnote, 'Such as temporary de-ratings of impaired equipment in accordance with good utility practice' is an example of what may be considered under Requirements R2 and R3, Parts 2.2.4 and 3.2.4, 'Operating limitations'. Therefore, no change is necessary.

Some commenters reiterated their prior comments that this standard is duplicative with other NERC Standards (MOD-024, MOD-025, MOD-010, and MOD-011). The FR SDT notes that with industry restructuring has changed the traditional form of planning, procurement, and construction of both generation and transmission facilities. Today, not all generators are planned, built, and owned by the host utilities to which they interconnect. In addition, MOD-024 and MOD-025 are not mandatory and enforceable in the United States and most of Canada. The currently posted draft of MOD-024 does not apply to all generation facilities as it specifically excludes certain classes of generators. The FR SDT does not believe that MOD-024 and MOD-025 should provide the sole basis for determining a Facility Rating – MOD-024 and MOD-025 only require a single verification and this would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or performance history. MOD-010 only applies to provision of data for those Transmission Owners, Transmission Planners, Generator Owners and Resource Planners specified in the data requirements and reporting procedures of MOD-011. It does not require that Facility Ratings be "determined based on technically sound principles", the establishment of the Ratings based on the methodology or documentation, nor does it require the provision of data to the PC, RC or TOP. In addition, MOD-011 is not mandatory and enforceable in the United States and most of Canada.

Some commenters reiterated their prior comments that this standard should not apply to Generator Owners. The FR SDT believes that it has been remiss in providing an adequate overview of the intent of the various requirements of FAC-008-2 as they apply to Generator Owners. R1 and R2 apply to Generator Owners and should be considered together. R1 relates to the electrical rating of the generator. The FR SDT posted a previous version of the standard with the term "turbine generator" in R1 (see last posting for comment) and stakeholders requested clarity on what

was intended. The FR SDT removed the word “turbine” to indicate that R1 was only the electrical rating. The requirement (R1) does not ask for any ratings of specific equipment within the plant but only the rating at the specific points in the requirement. Where R1 ends, R2 begins. R2 relates to transmission type equipment (if owned by the Generator Owner) from the end point in R1 to the point of interconnection. If a Generator Owner owns any transmission type equipment (as noted in Requirement R2, Part 2.4.1), then that equipment is treated as a transmission facility and R2 applies. Otherwise, there is no Generator Owner applicability for R2. Please note that these are Facility Ratings to be used in long-term planning studies. We agree that a calculated rating should not be used for real-time operations and that the requirements of TOP-002 cover operational revisions to ratings. However, data from Energy Management Systems or testing can only be available after the generator becomes operational. A calculated rating, which may include long-term derates or uprates, or for a planned generator, is useful in a long-term planning study.

Some comments appear to be aimed at compliance issues and the burden of documentation to Generator Owners. The FR SDT went through an exhaustive stakeholder process to develop requirements for Generator Owners that are not burdensome and do not require the Generator Owner to recreate unavailable documentation. R1 only requires a Generator Owner to provide “documentation for determining the Facility Ratings of its solely and jointly owned generator Facility(ies) up to the low side terminals of the main step up transformer if the Generator Owner does not own the main step up transformer. When the Generator Owner does own the main step up transformer, the Facility Rating will continue up to the high side terminals of the main step up transformer Facility Rating.” This could be as simple as saying that your Facility Rating is based on the annual full load test that most Generator Owners run. The actual Facility Rating would be the result of that test. R2 only applies if a Generator Owner owns transmission facilities beyond the generator in R1 (if the Generator Owner doesn’t own transmission type equipment, then R2 does NOT apply). R3 begins the Facility Rating process for Transmission Owners. The remainder of the requirements, (except R3), apply to Generator Owners and relate to the output of R1 and R2.

The standard allows many ways of meeting the requirements, and the Generator Owner does not have to provide a "calculated facility rating". It just needs to provide a rating consistent with its documentation, which can be "design or construction information such as design criteria, ratings provided by equipment manufacturers, equipment drawings and/or specifications, engineering analyses, method(s) consistent with industry standards (e.g. ANSI and IEEE), or an established engineering practice that has been verified by testing or engineering analysis", or "Operational information such as commissioning test results, performance testing or performance history, any of which may be supplemented by engineering analyses." The FR SDT reiterates its assertion that this standard should apply to Generator Owners and that the “burden of proof” is minimal for the applicable requirements.

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedure: http://www.nerc.com/files/RSDP_V6_1_12Mar07.pdf.

Voter	Entity	Segment	Vote	Comment
David Murray	PSEG Power LLC	5	Affirmative	"PSEG is voting yes for FAC-008-2 for the following reasons, but also has concerns described below and believes that additional improvements to the standard are essential: Version 2 is an improvement over Version 1, but for generators this standard continues to be redundant with other NERC generation verification and testing standards. The standard also appears to require unnecessary generator rating documentation, as many generators have pointed out that they have never been requested to provide such data to Transmission Operators and Planners. The Requirements, as written, are overly complex, confusing and inconsistent. The language in the requirements is not consistent between the requirements for TOs and GOs. Transmission Owners are required to make only their Facility Ratings methodology available, while Generator Owners are required to make both their documentation for determining Facility Ratings and their Facility Ratings methodology available. PSEG does not understand what the difference is between "documentation for determining Facility Ratings" and "Facilitating Ratings methodology." Also confusing is that R2.4 refers to "the process by which the Rating of equipment that comprises a Facility is determined." If all of these, and perhaps other, phrases contemplate the same thing, they should use the same language. Also, if this standard is to remain applicable to generators, the requirements applicable to Transmission Owners and Generator Owners should be symmetrical."
Response: The FR SDT thanks you for your affirmative vote and comment. The standard uses the term "documentation" for generation equipment where a methodology is not required. For Transmission equipment, a "methodology" is required. R1 deals with ratings for the generation equipment. R2 only applies to a GO if it owns any transmission type equipment between the generator and the transmission system while R3 applies to the transmission facilities owned by the TO. Part 2.4, which is applicable to the GO, is analogous to Part 3.4, which is applicable to the TO, and refers to the details specified in the sub parts (2.4.1 and 2.4.2 for Part 2.4 and 3.4.1 and 3.4.2 for Part 3.4). Therefore, the requirements for the same Facility types are the same for the both the GO and the TO.				
Charlie Martin	Louisville Gas and Electric Co.	5	Affirmative	"The footnotes reference to temporary derates is inconsistent with the standard's Long Term Planning time horizon. E ON US suggests removing the footnote."
Response: The FR SDT thanks you for your affirmative vote and comment. The SDT believes that the footnote, 'Such as temporary de-ratings of impaired equipment in accordance with good utility practice' is an example of what may be considered under Requirements R2 and R3, Parts 2.2.4 and 3.2.4, 'Operating limitations'. Therefore, no change is necessary.				
Henry Ernst-Jr	Duke Energy Carolina	3	Affirmative	"While we agree with FAC-008-2 as presented for ballot, we believe that the Background Information which was included on the last Comment Form (posted August 10, 2009), will be important information for compliance auditors to consider, and should be made part of the Reliability Standard Audit Worksheet (RSAW) for this standard. This same information should also be

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				included in the next revision of FAC-008, perhaps as an Attachment."
Response: The FR SDT thanks you for your affirmative vote and comment. We will encourage and advise the RSAW developers to include the Background Information in the new RSAW for FAC-008 as you suggest.				
Larry E Watt	Lakeland Electric	1	Negative	A more detailed response is required in order to clear up the uncertainty reflected in the ballot pool e-mail debates.
Response: The FR SDT thanks you for your comment. The FR SDT can not respond to your comment without further information regarding the "uncertainty reflected in the ballot pool e-mail debates".				
Paul B. Johnson	American Electric Power	1	Affirmative	AEP proposes that an errata correction be made to requirement 7. The errata will simplify the wording and avoid future interpretation requests as to the conditions when Facility Ratings are to be provided to the specified registered entities. As proposed, the text would read: R7. Each Transmission Owner and Generator Owner shall provide Facility Ratings for its solely and jointly owned, existing and future, Facilities to its associated Reliability Coordinator(s), Planning Coordinator(s), Transmission Planner(s), Transmission Owner(s) and Transmission Operator(s) as scheduled by such requesting entities. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning]
Raj Rana	American Electric Power	3	Affirmative	
Brock Ondayko	AEP Service Corp.	5	Affirmative	
Edward P. Cox	AEP Marketing	6	Affirmative	
Response: The FR SDT thanks you for your affirmative vote and comment. We concur with your comment and will have it added to the NERC Issues Data Base for consideration in the next revisions to the standard.				
Michael Gammon	Kansas City Power & Light Co.	1	Affirmative	Although there is progress forward in improving the Facility Ratings standard it remains unclear regarding what is meant by "point of interconnection with a Transmission Owner". In addition, it is unclear regarding the expectations from this standard for a non-operating joint owner of a generating unit. Please consider these points in future revisions.
Charles Locke	Kansas City Power & Light Co.	3	Affirmative	
Thomas Saitta	Kansas City Power & Light Co.	6	Affirmative	
Response: The FR SDT thanks you for your affirmative vote and comment. We encourage you to keep abreast of future revisions to this standard and submit your				

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comments at that time. Specific suggestions for revisions would be encouraged and appreciated.				
Mike Blough	Kissimmee Utility Authority	5	Affirmative	Although we recognize that it may be a carry over from the existing Version 1 standards, the phrase "solely or jointly owned" ought to be eliminated from the Version 2 standard because it creates ambiguity and confusion. No other standards relating to the responsibility of the Owner (e.g., PRC standards) uses this language. The only other occurrence of this language is in dynamic scheduling and tagging of jointly owned generation, with a very different purpose, and applicable to other types of registration (e.g., BAs and PSEs). The "jointly" owned can be interpreted that every joint owner of a Facility (even the less than 1% owner of a nuclear plant for instance) needs to have a ratings methodology and a rating for the same Facility, which is impractical, a source of confusion, and not what we believe the SDT intended. The Statement of Compliance Registry Criteria defines a Generation Owner as the: "(e)ntity that owns and maintains generating units;" and the Transmission Owner as: "(t)he entity that owns and maintains transmission facilities." Hence, we believe the intent of the SDT is the same as the intent of the Statement of Compliance Registration Criteria; that the entity responsible for maintenance for a jointly owned Facility is the only owner (usually only one owner) that needs to be registered for that Facility (the majority owner of a nuclear plant for instance). If that is the intent, then the phrase "solely and jointly owned" is not required and is only a source of ambiguity and confusion. In addition, we see no need to separate R1 from R2 as long as the combined requirement is quite clear that Facilities between the GSU and the point of interconnection are part of the Generator Owner's responsibility. There seems to be no harm in requiring a methodology for Facilities from the electric generator through the GSU, the methodology could be as simple as "we use manufacturers' specifications" while addressing ambient temperature assumptions, etc.
Joseph S. Stonecipher	Beaches Energy Services	1	Negative	
Thomas E Washburn	Florida Municipal Power Pool	2	Negative	
Frank Gaffney	Florida Municipal Power Agency	4	Negative	
Thomas W. Richards	Fort Pierce Utilities Authority	4	Negative	
Response: The FR SDT thanks you for your comment. The use of the terms “solely or jointly owned” is used specifically in this standard to ensure that there are no gaps. Nothing in this standard precludes joint owners from assigning (through contracts or agreements) the responsibility for compliance to one entity.				
John J. Blazekovich	Exelon Energy	1	Negative	ComEd opposes this standard because of the removal of R7 from the previously balloted version and because of the inclusion of “performance history” in bullet # 3 of R 2.2.1. “Performance history” is not defined and subject to wide ranging interpretation by applicable entities and Regional auditors.
Response: The FR SDT thanks you for your comment. Based on industry consensus, R7 was removed from the previous draft of this proposed standard. “Performance history” is intended to allow historical performance (i.e. – actual performance data) of a facility as the basis for methodology used to establish the Ratings of the equipment that comprises the Facility.				

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Russell A Noble	Cowlitz County PUD	3	Negative	Cowlitz sees a need to reevaluate applicability to the Generator Owner. If the equipment rating of a generation facility is designed around the prime mover of generation, then the "most limiting" factor is not "equipment." The limiting factor is wind, maximum allowed hydro flow per FERC license, maximum carbon emission allowed, etc. Requiring documented generation rating on equipment per se adds nothing to reliability, but does add unnecessary compliance cost.
Response: The FR SDT thanks you for your comment. FAC-008 does not address the prime mover. The intent of R1 is to provide documentation as to how a rating of the electrical generation equipment was developed to deliver the power to the BES. Equipment and Facility Ratings are based on the electrical properties only (see definitions below). Equipment Rating: The maximum and minimum voltage, current, frequency, real and reactive power flows on individual equipment under steady state, short-circuit and transient conditions, as permitted or assigned by the equipment owner. Facility Rating: The maximum or minimum voltage, current, frequency, or real or reactive power flow through a facility that does not violate the applicable equipment rating of any equipment comprising the facility.				
Richard J. Padilla	Pacific Gas and Electric Company	5	Affirmative	FAC-008 Comments: R1 and R2: Should the generator rating account for the transmission path rating? If not, how is the dispatchable generator output managed? R1.1, R2, & R3: There are differences in the referenced standard organizations. R1.1 refers to ANSI/IEEE and R2 &R3 refer to CIGRE/IEEE. If CIGRE is applicable and ANSI/IEEE too shouldn't it be referenced similarly? R3 lists specific pieces of equipment while R1 and R2 do not. Is there a rationale for including a specific list for TO and not GO; shouldn't the list be eliminated completely? R4: The information required to be made available should be only methodology. There should not be additional requirements for the GO to provide documentation about the methodology. D1.4: Data retention should be since the last audit. "Since last audit period" makes it unclear as to what is required.
Response: The FR SDT thanks you for your affirmative vote and comment. R1 and R2 are separate. The generator output must respect the transmission path rating in real-time. R1 is meant to cover supporting documentation for determining the generator installed capacity, for example, the D curve. R1 is written to accommodate the GO and only requires the GO to have documentation or test reports, etc. but not a methodology to establish a rating. R2 is meant to cover the methodology used to determine the ratings of facilities in the switchyard, i.e., switch, transformers, CT, etc. So, R2 is similar to R3 but applies up to the point of interconnection with the transmission system.				

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R1.1, R2, & R3: ANSI/IEEE/GIGRE, etc, are examples and are meant to provide flexibility because FERC Order 693 requires that the methodology to be developed in an open and transparent forum. R2 (GO) and R3 (TO) are the same because they both deal with transmission type facilities. R1 does not have a list. R4 is designed for the TO and GO to make the output of R1-R3 available for review to the appropriate entities. We concur with your comment and will have it added to the NERC Issues Data Base for consideration in the next revisions to the standard.				
Linda R. Jacobson	City of Farmington	3	Negative	FEUS agrees facility rating methodology should be documented and ratings should be developed and provided to appropriate entities. However, FEUS SME's are concerned with the wording of Requirement 7 "as scheduled." FEUS agrees "when there is a change or addition" it should be provided to appropriate entities, however, a GO or TO would have no control over "schedules" imposed by other entities.
Response: The FR SDT thanks you for your comment. The intent of R7 is for entities that have a reliability need for facility ratings to be able to obtain them. If a requesting entity imposes unreasonable schedules for obtaining the ratings, the responding entity should have recourse through NERC and/or FERC.				
Ronald D. Schellberg	Idaho Power Company	1	Affirmative	I have concern over R7 not bounding the schedule the requesting entities can place on TOs and GOs. Suggest language that requesting entities must allow at least xx days to respond.
Response: The FR SDT thanks you for your affirmative vote and comment. The intent of R7 is for entities that have a reliability need for facility ratings to be able to obtain them. If a requesting entity imposes unreasonable schedules for obtaining the ratings, the responding entity should have recourse through NERC and/or FERC.				
Ralph Frederick Meyer	Empire District Electric Co.	1	Negative	I see an interpretation issue with the phrase "Engineering Analysis" used in 1.1 and 2.1 when an entity may be asked to show compliance. A definition of Engineering Analysis is needed. I do not agree with the statements in 2.3 and 3.3. The limiting elements should be a part of the measurements, a phrase in the documentation does not protect the BES, nor excluding it adds risk to the BES. R2 For the Generator owner has a VRF of Lower, while R3 for the Transmission owner has the same requirements but has a VRF of medium. Both the VRF of R2 and R3 should be the same since they are the same requirements.
Response: The FR SDT thanks you for your comment. The term "engineering analysis" is not required to be used, but is an option for the GO to use in documenting its Facility Ratings. Proposing a definition for the term would be too prescriptive to include in a standard.				

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The phrase listed in an entity's documentation, in and of itself, will not protect the BES. However, a requirement to include it in your methodology will ensure that the most limiting facility is accounted for and adhered to. The FR SDT has used the VRF Guidelines to determine the VRF for these requirements.				
Larry W. Rodriguez	Entegra Power Services	6	Negative	I will not re-invent the wheel; I agree with the comments of Jim Stanton and Tom Bradish. Also, the differences between R1 and R2 are ambiguous and very confusing. Don't we want these Standards to be extremely clear and precise for the sake of BES reliability?
Response: The FR SDT thanks you for your comment. Please see the responses to comment of Messrs. Stanton and Bradish. The FR SDT believes that the differences between R1 and R2 are clear. R1 applies to the GO and relates to generation electrical ratings. R2 applies to the GO and relates to transmission type facilities (if owned by the GO) between the generator and the point of interconnection.				
Daniel Herring	Detroit Edison Company	4	Affirmative	I'm voting affirmative only in that this revision is better than the current standard. I do not agree with GO being an applicable entity and I also believe the criteria within this revision to be repetitive, unnecessary, and to broad in scope.
Response: The FR SDT thanks you for your affirmative vote and comment.				
Kenneth Goldsmith	Alliant Energy Corp. Services, Inc.	4	Affirmative	In R1 and R2, for jointly owned units the operating partner should develop the ratings.
Response: The FR SDT thanks you for your affirmative vote and comment. The standard does not preclude such an arrangement.				
Daniel Duff	Liberty Electric Power LLC	5	Negative	It would seem to me the one-time value in the exercise is making sure you are not going to overload a component of your power train. Every registered entity should have preformed this exercise back in 2007. I would suggest making the standard applicable to GOs seeking to enter the BPS for the first time, or GOs upgrading a major component - generator, step-up transformer, or breaker. You could then satisfy the standard by demonstrating the nameplate rating was at least equal to the replaced part.
Response: The FR SDT thanks you for your comment. If an entity has performed these requirements in 2007 and its facilities and "documentation for determining the facility rating" or "facility rating methodology" does not change, then it meets the requirements (assuming it has maintained the appropriate evidence).				

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Michelle Rheault	Manitoba Hydro	1	Affirmative	Manitoba Hydro is voting affirmative, however we are submitting the following comments: Manitoba Hydro does not believe that lack of documentation or incomplete documentation rates a VSL of Severe, but would agree that a severe violation is warranted if limits are not provided. Therefore, there should not be any case of a Severe VSL associated with R1, R2, R3, R4 or R5. A Severe Violation Severity Level should be limited to situations where rating data is not provided (ie. a violation of R7). The critical issue is that planners and operators of the electric system have rating data. How does the failure to make a Facility Ratings Methodology document available for inspection (a violation of R4) jeopardize the reliability of the system? The applicability of the proposed revisions to FAC-008 to older facilities is left open to interpretation in the current draft. Many transmission and generation facilities have been in service for years under ratings established at the time of construction-and documentation of the basis for those ratings may no longer be available. Requiring recreation of those ratings now, if that is what the drafting team expects, could impose tremendous costs on the industry to perform the record searches and field work that would be required to document the basis for specific ratings. The current proposal requires that the methodology indentify how Equipment Rating standard(s) were used as well as how ratings provided by manufacturers were considered. For older facilities or facilities acquired from other entities, the basis for ratings may not have been well documented, or documented at all. Likewise, manufacturers ratings may no longer be available, and indeed, the manufacturer may no longer exist. These facilities have been operated for a number of years, presumably without problems. A narrow interpretation of Requirement 2.2 and Requirement 3.2 would force entities to collect voluminous information on facilities, at a tremendous cost. These costs would be borne by customers with potentially little, if any, demonstrable benefit to reliability. A clarification that this standard is not intended to require entities to recreate documentation or other information needed to justify historic ratings would provide certainty and would avoid the costly and time-consuming process of recreating lost data. Manitoba Hydro recommends that the words “if available” be added to the end of Requirements R2.2.2 and R3.2.2.
Greg C Parent	Manitoba Hydro	3	Affirmative	
Mark Aikens	Manitoba Hydro	5	Affirmative	
Daniel Prowse	Manitoba Hydro	6	Affirmative	

Response: The FR SDT thanks you for your affirmative vote and comment.

VSL: The VSL is an indicator of how badly an entity failed to comply with the requirement – it does not consider the impact of noncompliance on the BES. The VRF is determined based on risk to the BES (lower and medium for these requirements). Therefore it is appropriate to have a severe VSL for each of the requirements listed.

Older Facilities: The FR SDT does not intend for entities to have to recreate voluminous documentation to meet these requirements. The Requirement R2 states only that the methodology address how parts 2.2.2 and 3.2.2 were *considered*. The standard also allows for the use of “performance history” (see requirements 2.1 and 3.1).

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James B Lewis	Consumers Energy	5	Negative	My issue here is one of double (maybe triple.) jeopardy. The FAC deals with Facility Ratings. For Generator Owners, these are well covered in MOD- 024 and 025, and MOD-010 and 011. They are also required and covered in the mandated interconnection agreements. As the MODs and this FAC each require something a bit different, a potential compliance trap exists. If an auditor asks about the rating of a unit at a power plant, we would likely need to keep two or three sets of paperwork to respond as the various MODs and this FAC have slightly different requirements. In my view, this does nothing to improve the reliability of the BES. The applicability to Generator Owners was wrong from the beginning and is still wrong. Otherwise, the changes the SDT has come up with on this revision are pretty good.
Response: The FR SDT thanks you for your comment. The FR SDT notes that MOD-024 and MOD-025 are not mandatory and enforceable in the United States or in most of Canada. Also, the currently posted draft of MOD-024 does not apply to all generation facilities. MOD-010 only applies to provision of data for those TOs, TPs, GOs and RPs specified in the data requirements and reporting procedures of MOD-011. MOD-010 does not cover methodology or documentation, the establishment of the Ratings based on the methodology or documentation, nor does it require the provision of data to the PC, RC or TOP. In addition, MOD-011 is not mandatory and enforceable in the United States or in most of Canada. The FR SDT does not believe that MOD-024 and MOD-025 should be the only basis for determining the Facility rating because, at best, a single verification by itself, following what is required in MOD-024 and MOD-025, would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or historical performance records.				
Mark Ringhausen	Old Dominion Electric Coop.	4	Negative	ODEC feels that the applicability of this standard should not apply to generators as they are being tested via the MOD standards for the capabilities and these testing results should be used by operations and planning for their models not some rating methodology. Make this change and I can vote Yes for this standard.
Response: The FR SDT thanks you for your comment. The FR SDT notes that MOD-024 and MOD-025 are not mandatory and enforceable in the United States or in most of Canada. Also, the currently posted draft of MOD-024 does not apply to all generation facilities. MOD-010 only applies to provision of data for those TOs, TPs, GOs and RPs specified in the data requirements and reporting procedures of MOD-011. MOD-010 does not cover methodology or documentation, the establishment of the Ratings based on the methodology or documentation, nor does it require the provision of data to the PC, RC or TOP. In addition, MOD-011 is not mandatory and enforceable in the United States or in most of Canada. The FR SDT does not believe that MOD-024 and MOD-025 should be the only basis for determining the Facility rating because, at best, a single verification by itself, following what is required in MOD-024-1 and MOD-025, would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or historical performance records.				

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Mark Sampson	PacifiCorp	1	Affirmative	PacifiCorp is voting “yes” for the current draft of FAC-008-2 because it is generally in support of the standard as currently written and believes that it is a significant improvement on the currently effective FAC-008-1 and FAC-009-1. However, in the event the standards drafting team reviews the standard again before it is submitted to FERC, PacifiCorp recommends that the standard drafting team consider striking requirement R2.4.2 from the standard, or, in the alternative, provide more detail as to what constitutes an Emergency Rating for a generation facility. R2.4.2 requires Generator Owners to include Normal and Emergency Ratings in the scope of Ratings addressed in the process by which the Rating of equipment that comprises a Facility is determined. PacifiCorp believes that this requirement should not be applicable to Generator Owners because generating facilities do not have Emergency Ratings in the same way as transmission facilities. The definition of Emergency Rating states that such rating assumes acceptable loss of equipment life or other physical or safety limitations for the equipment involved. Running a generating facility above the Normal Rating would immediately result in the unacceptable loss of equipment life or other physical or safety limitations. Therefore, there is not a realistic way to develop an Emergency Rating for a generator, even for a finite period of time.
John Apperson	PacifiCorp	3	Affirmative	
Sandra L. Shaffer	PacifiCorp	5	Affirmative	
Response: The FR SDT thanks you for your affirmative vote and comment. R2 relates to transmission type equipment only (not generator facilities which are covered in R1) that a GO may own up to the point of interconnection. If a GO does not own any transmission type equipment, then R2 is not applicable.				
James D. Hebson	PSEG Energy Resources & Trade LLC	6	Affirmative	PSEG is voting "yes" for FAC-008-2 for the following reasons, but also has concerns described below and believes that additional improvements to the standard are essential: 1. Version 2 is an improvement over Version 1, but for generators this standard continues to be redundant with other NERC generation verification and testing standards. 2. The standard also appears to require unnecessary generator rating documentation, as many generators have pointed out that they have never been requested to provide such data to Transmission Operators and Planners. 3. The Requirement, as written, are overly complex, confusing and inconsistent. Also, the language in the requirements is not consistent between the requirements for TOs and GOs. While Transmission Owners are required to make only their Facility Ratings methodology availagle, Generator Owners are required to make both their documentation for determining Facility Ratings and their Facility Ratings methodology available. PSEG does not understand what the difference is between "documentation for determining Facitlity Ratings" and "Facilitay Ratings methodology." Also confusing is that R2.4 refers to "the process by which the Rating of equipment that comprises a Facility is determined." If all of these, and perhaps other, phrases contemplate the same thing, they
Kenneth D. Brown	Public Service Electric and Gas Co.	1	Affirmative	
Jeffrey Mueller	Public Service Electric and Gas Co.	3	Affirmative	

Voter	Entity	Segment	Vote	Comment
				should use the same language. Also, if this standard is to remain applicable to generators, the requirements applicable to Transmission Owners and Generator Owners should be symmetrical."

Response: The FR SDT thanks you for your comment.

*The FR SDT notes that MOD-024 and MOD-025 are not mandatory and enforceable in the United States or in most of Canada. Also, the currently posted draft of MOD-024 does not apply to all generation facilities. MOD-010 and MOD-011 only apply to data provision and not facility ratings. The FR SDT does not believe that MOD-024 and MOD-025 should be the only basis for determining the Facility Rating because, at best, a single verification by itself following what is required in MOD-024-1 and MOD-025 would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or performance history.

* The FR SDT does not intend for entities to have to recreate voluminous documentation to meet these requirements. The Requirements R2 and R3 say only that the methodology address how Parts 2.2.2 and 3.2.2 were *considered*. The standard also allows for the use of "performance history" (see Requirements R2 and R3, Parts 2.1 and 3.1).

*R4 is designed for the TO and GO to make the output of R1-R3 available for review to the appropriate entities. We concur with your comment and will have it added to the NERC Issues Data Base for consideration in the next revisions to the standard.

*Part 2.4, which is applicable to the GO, is analogous to Part 3.4, which is applicable to the TO, and refers to the details specified in the sub parts (2.4.1 and 2.4.2 for Part 2.4 and 3.4.1 and 3.4.2 for Part 3.4). Therefore, the requirements for the same Facility types are the same for the both the GO and the TO.

Joseph G. DePoorter	Madison Gas and Electric Co.	4	Negative	R1 is confusing and recommend that it be re-written to read: "Each Generator Owner shall have documentation for determining the Facility Ratings of its solely and jointly owned generator Facility(ies) up to the low side terminals of the main step up transformer when the Generator Owner does not own the main step up transformer. When the Generator Owner does own the main step up transformer, the Facility Ratings will continue up to the high side terminals of the main step up transformer."

Response: The FR SDT thanks you for your comment. We concur with your comment and will have it added to the NERC Issues Data Base for consideration in the next revisions to the standard.

Voter	Entity	Segment	Vote	Comment
John J. Moraski	Baltimore Gas & Electric Company	1	Affirmative	Requirement (R1) of the proposed new standard states the following: Each Generator Owner shall have documentation for determining the Facility Ratings of its solely and jointly owned generator Faciliy(ies) up to the low side terminals of the main step up transformer if the Generator Owner does not own the main step up transformer and the high side terminals of the main step up transformer if the Generator Owner owns the main step up transformer. This statement assumes the point of interconnect dividing asset ownership between the Generator and Transmission Owners is either the low or high side terminals of the main step up transformer. However, there may be cases where the point of interconnect is not the main step up transformer. The wording of this requirement is too prescriptive by stating a specific asset as the point of interconnect. We recommend changing the wording of the requirement to state that the Generator Owner is responsible for determining the Facility Ratings up to the interconnect point and the Transmission Owner is also responsible for determining the Facility Ratings up to the interconnect point. An alternative to the current wording for the requirement could be: Each Generator Owner shall have documentation for determining the Facility Ratings of its solely and jointly owned generator Facility(ies) up to the point of interconnection. (For example, if the point of interconnection is the main step up transformer; if the Generator Owner does not own the main step up transformer, the Generator Owner is responsible for the Facility Ratings up to the low side terminals of the main step up transformer; however, if the Generator Owner does own the main step up transformer, the Generator Owner is responsible for the Facility Ratings up to the high side terminals of the main step up transformer.)
Response: The FR SDT thanks you for your affirmative vote and comment. The FR SDT agrees with your point that the main step up transformer may not be the point of interconnection. R1 and R2 apply to Generator Owners and should be considered together to address your concern. 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.				
Robert Kondziolka	Salt River Project	1	Negative	SRP believes that facility ratings information needs to be shared between the appropriate reliability entities. We agree that the proposed Standard FAC-008-2 generally meets that objective. However, Requirement 7 of the Standard causes us some concern. The requirement states that the TO and GO should provide Facility Ratings to its associated RC, PC, TP, TOP, and TO, “as scheduled by such requesting entities.” The schedule to provide the information is at the sole discretion of the requesting entity. An unreasonable schedule could result in the GO or TO being non-compliance to the requirement.
Response: The FR SDT thanks you for your comment. The intent of R7 is for entities that have a reliability need for facility ratings to be able to obtain them. If a requesting entity imposes unreasonable schedules for obtaining the ratings, the responding entity should have recourse through NERC and/or FERC.				

Voter	Entity	Segment	Vote	Comment
John T. Underhill	Salt River Project	3	Negative	SRP believes that facility ratings information needs to be shared between the appropriate reliability entities. We agree that the proposed Standard FAC-008-2 generally meets that objective. However, Requirement 7 of the Standard causes us some concern. The requirement states that the TO and GO should provide Facility Ratings to its associated RC, PC, TP, TOP, and TO, "as scheduled by such requesting entities." The schedule to provide the information is at the sole discretion of the requesting entity. An unreasonable schedule could result in the GO or TO being non-compliance to the requirement. SRP suggests that an additional requirement could be added to establish reasonable parameters for what the schedule to provide the Facilities Rating information might be. Another alternative could be that the language in Requirement 7 be altered to state "based on the schedule agreed to by the entities providing and receiving the information."
Glen Reeves	Salt River Project	5	Negative	
Mike Hummel	Salt River Project	6	Negative	
Response: The FR SDT thanks you for your comment. The intent of R7 is for entities that have a reliability need for facility ratings to be able to obtain them. Regarding your suggestion for alternative language for the requirement: 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.				
Edwin Les Barrow	City Public Service of San Antonio	3	Negative	The concept of "ratings" in relation to generation has no real correlation to BES reliability. Unit capability as reported through MOD standards is relevant to reliability.
Response: The FR SDT thanks you for your comment. The FR SDT notes that MOD-024 and MOD-025 are not mandatory and enforceable in the United States or in most of Canada. Also, the currently posted draft of MOD-024 does not apply to all generation facilities. MOD-010 and MOD-011 only apply to data provision and not facility ratings. The FR SDT does not believe that MOD-024 and MOD-025 should be the only basis for determining the Facility Rating because, at best, a single verification by itself, following what is required in MOD-024-1 and MOD-025, would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or performance history.				
Duncan Brown	Calpine Corporation	5	Negative	The concern identified is that as worded the GO and TO have no control over the schedule they must adhere to in providing the required rating information and that because of this they may be subject to potential penalties for non-compliance.
Response: The FR SDT thanks you for your comment. The intent of R7 is for entities that have a reliability need for facility ratings to be able to obtain them. If a requesting entity imposes unreasonable schedules for obtaining the ratings, the responding entity should have recourse through NERC and/or FERC.				
Larry Monday	E.ON U.S. LLC	1	Affirmative	The footnote reference to temporary derates is inconsistent with the standard's Long Term Planning time horizon. E ON US suggests removing the footnote.
Charles A.	Louisville Gas and	3	Affirmative	

Voter	Entity	Segment	Vote	Comment
Freibert	Electric Co.			
Daryn Barker	Louisville Gas and Electric Co.	6	Affirmative	
Response: The FR SDT thanks you for your affirmative vote and comment. The SDT believes that the footnote, 'Such as temporary de-ratings of impaired equipment in accordance with good utility practice' is an example of what may be considered under Requirements R2 and R3, Parts 2.2.4 and 3.2.4, 'Operating limitations'. Therefore, no change is necessary.				
Richard Salgo	Sierra Pacific Power Co.	1	Negative	The reason for the "negative" vote has to do solely with Requirement R7, which compels the responsible entity to provide Facility Ratings to requesting entities "as scheduled by such requesting entities". While this would normally not be problematic, we feel that without clear definition of a reasonable schedule for delivery of such data, the provider of the data will have a degree of compliance uncertainty. We suggest that this requirement be amended to specify a time frame for response to such requests for Facility Ratings, rather than leaving it open to interpretation.
Response: The FR SDT thanks you for your comment. The intent of R7 is for entities that have a reliability need for facility ratings to be able to obtain them. Because it is not known in advance the number of ratings requested, the SDT refrained from specifying a time frame to respond. If a requesting entity imposes unreasonable schedules for obtaining the ratings, the responding entity should have recourse through NERC and/or FERC.				
James R. Keller	Wisconsin Electric Power Marketing	3	Negative	The revision results in less clarity than before due to the use of imprecise terms. Previously FAC-008 required a Facility Ratings methodology and FAC-009 required Facility Ratings. Now FAC-008-2 requires documentation for determining Facility ratings, a documented methodology for determining facility ratings, and the process by which a Rating is determined. I do agree with the longer timeframes for responding to a request for this data from another entity.
Anthony Jankowski	Wisconsin Energy Corp.	4	Negative	
Linda Horn	Wisconsin Electric Power Co.	5	Negative	
Response: The FR SDT thanks you for your comment. The proposed standard FAC-008-2 is expected to replace both FAC-008-1 and FAC-009-1 in accordance with the recommended changes identified in the Standard Review Guidelines. In addition, the FR SDT assumes that your comment relates to R4 and R5. R4 is designed for the TO and GO to make the output of R1-R3 available for review to the appropriate entities. A similar logic can be extended to R5. We will have your comment added to the NERC Issues Data Base for consideration in the next revisions to the standard.				
Jim R Stanton	SPS Consulting	8	Negative	The standard requirements in their current state do not define periodicity of facility rating activities

Voter	Entity	Segment	Vote	Comment
	Group Inc.			nor the scope of limiting equipment to be considered. Also, generator output data is abundantly available through other reporting requirements which more accurately reflect the "rating" of the facility, which basically changes every day. This is likely a good standard for transmission elements that do not change much from day to day, but it is nonsense to try and adapt it to a generator. Data for operational and planning needs should be more precise than a "sample day" based on assumed ambient conditions. There is no need for FAC-008-2 to apply to generators.
Response: The FR SDT thanks you for your comment. Requirement 7 specifies that the Facility Ratings are to be provided to the "Reliability Coordinator(s), Planning Coordinator(s), Transmission Planner(s), Transmission Owner(s) and Transmission Operator(s) as scheduled by such requesting entities." Each requirement provides sufficient details as to which Facility Ratings are required. If a requesting entity imposes unreasonable schedules for obtaining the ratings, the responding entity should have recourse through NERC and/or FERC. The FR SDT assumes that your second comment relates to the MOD family of standards. We also note that MOD-024 and MOD-025 are not mandatory and enforceable in the United States or in most of Canada. Also, the currently posted draft of MOD-024 does not apply to all generation facilities. MOD-010 and MOD-011 only apply to data provision and not facility ratings. The FR SDT does not believe that MOD-024 and MOD-025 should be the only basis for determining the Facility Rating because, at best, a single verification by itself, following what is required in MOD-024-1 and MOD-025, would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or historical performance records for generators.				
Robert D Smith	Arizona Public Service Co.	1	Negative	The term "Facility Rating" in R1 needs to be definitive and clearly indicate what facilities are included. Specifically, it needs to clearly spell out if auxiliaries are included. It also needs to be clear whether it is the generator electrical rating or turbine mechanical rating. There are also additional issues that are not touched on with this rating requirement where the rating is not limited by the turbine generator or a component but by regulatory environmental issues.
Thomas R. Glock	Arizona Public Service Co.	3	Negative	
Response: The FR SDT thanks you for your comment. The FR SDT posted a version of the standard with the term "turbine generator" in R1. Stakeholders requested clarity and the word "turbine" was removed. R1 and R2 apply to Generator Owners and should be considered together to address your concern. 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.				
Kirit S. Shah	Ameren Services	1	Affirmative	The word 'or' has been misspelled as 'ore' in the High VSL text for Requirements R5 and R7.
Response: The FR SDT thanks you for your affirmative vote and comment. We have corrected this and will note this when the standard is posted for recirculation ballot.				

Voter	Entity	Segment	Vote	Comment
Kenneth Parker	Entegra Power Group, LLC	5	Negative	There are sufficient requirements in various other standards and in IA agreements for generators to provide plant ratings, modeling data, capacity and capability, therefore FAC-008 appears redundant.
Response: The FR SDT thanks you for your comment. We are assuming that the redundant standards that you are referring to are in the MOD family of standards. The FR SDT notes that MOD-024 and MOD-025 are not mandatory and enforceable in the United States or in most of Canada. Also, the currently posted draft of MOD-024 does not apply to all generation facilities. MOD-010 and MOD-011 only apply to data provision and not Facility Ratings. The FR SDT does not believe that MOD-024 and MOD-025 should be the only basis for determining the Facility Rating because, at best, a single verification by itself, following what is required in MOD-024and MOD-025, would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or historical performance records. We also note that IA agreements are not mandatory and enforceable reliability standards.				
Charles H Yeung	Southwest Power Pool	2	Affirmative	This is a step in the right direction for generator applicability but a new request should be submitted to further define what information from generators is applicable for reliability.
Response: The FR SDT thanks you for your affirmative vote and comment.				
Mark A. Heimbach	PPL Generation LLC	5	Affirmative	This standard is an improvement to the existing versions of FAC-008 & 9 and the effort of the drafting team is appreciated. Please note that PPL Generation has reservations around the applicability of this standard to a GO and would prefer that a team look at all the standards that involve generator ratings/testing, etc. and eliminate any duplicate and unnecessary standards/requirements.
Response: The FR SDT thanks you for your affirmative vote and comment.				
George R. Bartlett	Entergy Corporation	1	Negative	Traditional power plant construction planning has been to select a turbine-generator size based on system requirements for additional generating capacity. The sizing of the generator included a multitude of factors that finally end up with the utility picking the optimum turbine-generator for their needs. The construction design sizes the boiler or reactor and the auxiliary systems to support the size turbine generator that had been selected. Post construction generating units are subjected to performance testing. These testing efforts are usually extensive and tightly controlled. The purpose of this testing is to prove the unit has been designed and constructed to meet the original design specifications. Utilities hold equipment manufacturers and construction companies to pre-construction guarantees. Should an item of equipment be insufficiently sized on inadequate for the purpose it was design to fulfill, the shortcoming will become apparent during the acceptance testing

Voter	Entity	Segment	Vote	Comment
				of the unit. The supplier/constructor will be required to remedy that shortcoming. Post testing the unit is declared to "go commercial" and the unit capability is declared at that time and the capability assigned is based on the design and acceptance testing that was performed. The above process is traditional and a long standing industry practice for determining the facility ratings of generating units. The activities in FAC-008 are also traditional for construction of substations. Substation facilities cannot be tested to determine what the facility ratings should be. The inability to demonstrate what the facility rating should be then requires an elaborate process be put into place that assures that each piece of equipment going into that facility is adequately sized. This process required by FAC-008 is sensible and understood and has been followed by utilities constructing substations for many decades. This process in not sensible and is misunderstood and is a complete departure from the normal way of doing business for entities trying to rate generating facilities. It is vastly unfair as it requires an entity attempting to rate a generating facility to reverse engineer virtually every component on the generating unit to prove that it has been sized and / or engineered properly. The procedure is a built in "got you" for any audit of any generating station. Generating units should be removed from the requirements of FAC-008. In addition to the above the reliability requirements MOD-024 and MOD-025 go into great detail to tell generator owners exactly how to rate their generating facilities.
Matt Wolf	Entergy Services, Inc.	3	Negative	Traditional power plant construction planning has been to select a turbine-generator size based on system requirements for additional generating capacity. The sizing of the generator included a multitude of factors that finally end up with the utility picking the optimum turbine-generator for their needs. The construction design sizes the boiler or reactor and the auxiliary systems to support the size turbine generator that had been selected. Post construction generating units are subjected to performance testing. These testing efforts are usually extensive and tightly controlled. The purpose of this testing is to prove the unit has been designed and constructed to meet the original design specifications. Utilities hold equipment manufacturers and construction companies to pre-construction guarantees. Should an item of equipment be insufficiently sized on inadequate for the purpose it was design to fulfill, the shortcoming will become apparent during the acceptance testing of the unit. The supplier/constructor will be required to remedy that shortcoming. Post testing the unit is declared to "go commercial" and the unit capability is declared at that time and the capability assigned is based on the design and acceptance testing that was performed. The above process is traditional and a long standing industry practice for determining the facility ratings of generating units. The activities in FAC-008 are also traditional for construction of substations. Substation facilities cannot be tested to determine what the facility ratings should be. The inability to demonstrate what the facility rating should be then requires an elaborate process be put into place that assures that each piece of equipment going into that facility is adequately sized. This process
Stanley M Jaskot	Entergy Corporation	5	Negative	

Voter	Entity	Segment	Vote	Comment
Terri F Benoit	Entergy Services, Inc.	6	Negative	required by FAC-008 is sensible and understood and has been followed by utilities constructing substations for many decades. This process in not sensible and is misunderstood and is a complete departure from the normal way of doing business for entities trying to rate generating facilities. It is vastly unfair as it requires an entity attempting to rate a generating facility to reverse engineer virtually every component on the generating unit to prove that it has been sized and / or engineered properly. The procedure is a built in "got you" for any audit of any generating station. Generating units should be removed from the requirements of FAC-008. In addition to the above the reliability requirements MOD-024 and MOD-025 go into great detail to tell generator owners exactly how to rate their generating facilities.
Response: The FR SDT thanks you for your comment. The FR SDT notes that with industry restructuring has changed the traditional form of planning, procurement, and construction of both generation and transmission facilities. Today, not all generators are planned, built and owned by the host utilities, to which they interconnect. In addition, The FR SDT notes that MOD-024 and MOD-025 are not mandatory and enforceable in the United States or in most of Canada. Also, the currently posted draft of MOD-024 does not apply to all generation facilities. The FR SDT also does not believe that MOD-024 and MOD-025 should be the only basis for determining the Facility Rating because, at best, a single verification by itself, following what is required in MOD-024-1 and MOD-025, would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or historical performance records. FAC-008-2 does not require Generator Owners to perform any reverse engineering, it only require that they have documentation for determining the Ratings of its Facility(ies) and that the Ratings are based on the documentation.				
Keith V. Carman	Tri-State G & T Association Inc.	1	Negative	Tri-State has concerns with sections 2.2.4 and 3.2.4. Those sections state that Generator Owners and Transmission Owners must identify how "Operating limitations" were considered in their Facility Rating methodologies. The footnote gives an example using "good utility practices." This is a vague term and should not be used in this standard. "Operating limitations" as described in the footnote are also inconsistent with the Time Horizon of these requirements (Long-term Planning). Operating limitations' impact on facility ratings belongs in an operating standard, not FAC-008. The wording in R4, R5, and M4 is ambiguous. When discussing Generator Owners, the phrase "documentation for determining" can be interpreted to apply to both "its Facility Ratings" and to "its Facility Ratings methodology." The Transmission Owner responsibility is clear in R4 and R5 in that the requirements apply to the Facility Rating methodology and do not apply to documentation for determining the Facility Rating methodology. R2 and R3 have the same wording regarding the Generator Owner and Transmission Owner responsibility for Facility Rating methodology so it appears that the requirements for Generator Owners are also intended to be only Facility Rating

Voter	Entity	Segment	Vote	Comment
				methodology. In M4, the order in which the two Generator Owner Facility Rating items are mentioned is reversed and the ambiguity does not exist in that measure. Tri-State recommends that similar changes should be made to R4, R5, and M4 to eliminate the possible confusion.
Response: The FR SDT thanks you for your comment. "temporary": The SDT believes that the footnote, 'Such as temporary de-ratings of impaired equipment in accordance with good utility practice' is an example of what may be considered under Requirements R2 and R3, Parts 2.2.4 and 3.2.4, 'Operating limitations'. Therefore, no change is necessary. R4 and R5: R4 is designed for the TO and GO to make the output of R1-R3 available for review to the appropriate entities. A similar logic can be extended to R5. We will have your comment added to the NERC Issues Data Base for consideration in the next revisions to the standard.				
Trent Carlson	RRI Energy	6	Negative	We appreciate the efforts of the drafting in stripping the questionable Requirement 7 from the revised Standard and posting for a new round of comments and re-ballot. We are disappointed however that the drafting team did not take this re-posting opportunity to correct the remaining fatal flaw in the Standard which is the inclusion of Generator Owner as an applicable entity. The flaw begins with the disconnect between the reliability of the Bulk Electric System and the stated Purpose of the standard which is, "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." The flaw is transferring a rating methodology used for predominately static networked components of a transmission system and inappropriately applying the same basic methodology to generating facilities. The reliability of the BES is dependent upon the ability of generating facilities to delivery power to the system which is not equated to the electrical ratings of the components that make up the facility. A Facility Rating for a Generator that is derived from "ratings provided by equipment manufacturers" is not appropriate to use in the operation of the bulk electric system, and to do so presents a risk to the system. For operation of the bulk electric system, it will necessitate that a calculated Facility Rating for a generator would include any degradation to facility systems that would limit the output of the facility. However, such degradations tend to be maintenance related and transitory in nature in that they will be corrected. What is the usefulness of facility rating if it is based on a transitory limitation, especially for planning purposes? Such transitory limitations will be made known for operational purposes as mandated by TOP-002-2 Requirement 3. A calculated facility rating for generators should never be used for operational purposes as the real capability and not the calculated capability should be considered. There are other standards that mandate the reporting of generator capability. They are MOD-010 and IRO-004. A calculated facility rating for generators is not useful for planning purposes. One would assume that periodic applications of a calculated facility rating would account for long term or non-transitory changes to the capability of the facility. However, the

Voter	Entity	Segment	Vote	Comment
				units actual output at varying ambient conditions is captured in the TOP's energy management system (EMS). If the long term limitation is remediated then it would show up in the units actual output in the EMS. It will also be reported in real time to satisfy the requirements in IRO-004. These sources of facility rating would be more precise than a calculated rating. As these changes to capability are accounted for and reported, changes to planning models would logically follow. There is no benefit to using a calculated facility rating for planning purposes when a real facility rating is available and indeed mandated by other Standards. FAC-008-2 also references ambient conditions as a factor in facility rating methodology. Ambient conditions are inherently accounted for in capability tests and manufacturer ratings are certainly available to condition capability upon conditions like ambient.

Voter	Entity	Segment	Vote	Comment
Benjamin Church	FPL Energy	5	Negative	We appreciate the efforts of the drafting in stripping the questionable Requirement 7 from the revised Standard and posting for a new round of comments and re-ballot. We are disappointed however that the drafting team did not take this re-posting opportunity to correct the remaining fatal flaw in the Standard which is the inclusion of Generator Owner as an applicable entity. The flaw begins with the disconnect between the reliability of the Bulk Electric System and the stated Purpose of the standard which is, "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." The flaw is transferring a rating methodology used for predominately static networked components of a transmission system and inappropriately applying the same basic methodology to generating facilities. The reliability of the BES is dependent upon the ability of generating facilities to delivery power to the system which is not equated to the electrical ratings of the components that make up the facility. A Facility Rating for a Generator that is derived from "ratings provided by equipment manufacturers" is not appropriate to use in the operation of the bulk electric system, and to do so presents a risk to the system. For operation of the bulk electric system, it will necessitate that a calculated Facility Rating for a generator would include any degradation to facility systems that would limit the output of the facility. However, such degradations tend to be maintenance related and transitory in nature in that they will be corrected. What is the usefulness of facility rating if it is based on a transitory limitation, especially for planning purposes? Such transitory limitations will be made known for operational purposes as mandated by TOP-002-2 Requirement 3. A calculated facility rating for generators should never be used for operational purposes as the real capability and not the calculated capability should be considered. There are other standards that mandate the reporting of generator capability. They are MOD-010 and IRO-004. A calculated facility rating for generators is not useful for planning purposes. One would assume that periodic applications of a calculated facility rating would account for long term or non-transitory changes to the capability of the facility. However, the units actual output at varying ambient conditions is captured in the TOP's energy management system (EMS). If the long term limitation is re-mediated then it would show up in the units actual output in the EMS. It will also be reported in real time to satisfy the requirements in IRO-004. These sources of facility rating would be more precise than a calculated rating. As these changes to capability are accounted for and reported, changes to planning models would logically follow. There
Mike Laney	Luminant Generation Company LLC	5	Negative	

Voter	Entity	Segment	Vote	Comment
Thomas J. Bradish	RRI Energy	5	Negative	is no benefit to using a calculated facility rating for planning purposes when a real facility rating is available and indeed mandated by other Standards. FAC-008-2 also references ambient conditions as a factor in facility rating methodology. Ambient conditions are inherently accounted for in capability tests and manufacturer ratings are certainly available to condition capability upon conditions like ambient temperature and humidity. This data is certainly available but it is a sheet or two from a vendor manual and not a facility rating methodology. FAC-008-2 is technically sound and essential for the planning and operation of the networked connection of static components transmission equipment but the requirements are misapplied and a threat to reliability when imposed and used to calculate a generator rating. That the Standard was intended for transmission equipment rather than generators is in part illustrated by Requirement 2.4.2 The scope of Ratings addressed shall include, as a minimum, both Normal and Emergency Ratings. Generating stations may have the ability to increase their output for a limited period of time but the Generators themselves do not have emergency ratings that should be used for modeling purposes by system planners. The conclusion is a calculated facility rating for a generator, when real facility capability data is available, is useless and dangerous for operating purposes, and simply useless for planning purposes. As radial components, no one is seriously questioning the ability of the elements of the generating stations to deliver power to the BES. However, generating owners are expending significant time, effort, and resources to acquire and develop documentation to meet the requirements of Facility Ratings for stations that have multiple decades of successful operation. Try to think of one disturbance or blackout that was traced to the facility rating documentation of a generating facility as the culprit. Yet the standard applies the same violation risk factors and penalties to the radial components of a small generating facility as it does to the networked components of the transmission grid. To date, the FAC-008-1 Standard is one in which generator owners are most vulnerable for non-compliance, in spite of the considerable efforts of the generator-owning industry to make sense of a set of requirements which make little sense, and which no operating entity is actually requesting of them. The individuals showing the most interest in Facility Rating documentation are the auditors or the RROs. The reason the standard it is so often violated is not because the industry in inattentive, but it is for documentation errors of successfully operating generating facilities that in reality are imposing no threat to the reliability of the Bulk Electric System. Not only are the standard requirements flawed in their application to generator owners, but the documentation burden of proof, as it is being imposed, is unwarranted. Generator Owner applicability should be stripped from FAC-008-2 and any further reliability needs pursuant to generator performance and capability should be referred to the Generator Verification Project 2007-09.

Response: The FR SDT thanks you for your comment. The FR SDT believes that we have been remiss in providing an adequate overview of the intent of the

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				various requirements of FAC-008-2 as they apply to Generator Owners. R1 and R2 apply to Generator Owners and should be considered together. R1 relates to the electrical rating of the generator. The FR SDT posted a previous version of the standard with the term “turbine generator” in R1 (see pre-ballot posting) and stakeholders requested clarity on what was intended. The FR SDT removed the word “turbine” to indicate that R1 was only the electrical rating. The requirement does not ask for any ratings of specific equipment within the plant but only the rating at the specific points in the requirement. Where R1 ends, R2 begins. R2 relates to transmission equipment (if owned by the GO) from the end point in R1 to the point of interconnection. If a GO owns any transmission type equipment (as noted in Part 2.4.1), then that equipment is treated as transmission facilities and R2 applies. Otherwise, there is no GO applicability for R2. Please note that these are Facility Ratings to be used in long-term planning studies. We agree that a calculated rating should not be used for real-time operations and that the requirements of TOP-002 cover operational revisions to ratings. However, data from EMS or testing can only be available after the generator becomes operational. A calculated rating, which may include long-term derates or uprates, or for a planned generator is useful in a long-term planning study. The FR SDT further notes that TOP-002-2 R3 states, "Each Load Serving Entity and Generator Operator shall coordinate (where confidentiality agreements allow) its current-day, next-day, and seasonal operations with its Host Balancing Authority and Transmission Service Provider. Each Balancing Authority and Transmission Service Provider shall coordinate its current-day, next-day, and seasonal operations with its Transmission Operator.' It is focused, therefore, on coordination, not methodology or supporting documentation. In any case, it does not address data needed for long term planning. MOD-010 only applies to provision of data for those TOs, TPs, GOs and RPs specified in the data requirements and reporting procedures of MOD-011. MOD-010 does not require that Facility Ratings be "determined based on technically sound principles", does not require the establishment of the Ratings based on the rating methodology or documentation, nor does MOD-010 require the provision of data to the PC, RC or TOP. In addition, MOD-011 is not mandatory and enforceable in the United States or in most of Canada. IRO-004-2 is applicable to the BA, TOP and TSP, not the GO. Normal and Emergency ratings are not included in R1, which provides for the Facility Rating of the generation equipment. R2 is the first instance of applicability to a GO for these ratings and they apply to transmission equipment (if owned by the GO) from the end point in R1 to the point of interconnection. Therefore these two ratings are appropriate. The remainder of your comment appears to be aimed at compliance issues and the burden of documentation to GOs. The FR SDT went through an exhaustive stakeholder process to develop requirements for GOs that were not burdensome and that did not require the GO to recreate unavailable documentation. R1 only requires a GO to provide “documentation for determining the Facility Ratings of its solely and jointly owned generator Facility(ies) up to the low side terminals of the main step up transformer if the Generator Owner does not own the main step up transformer. When the Generator Owner does own the main step up transformer, the Facility Rating will continue up to the high side terminals of the main step up transformer Facility Rating.” This could be as simple as saying that your Facility Rating is based on the annual full load test that most GOs run. The actual Facility Rating would be the result of that test. R2 only applies if a GO owns transmission facilities beyond the generator in R1 (if the GO doesn’t own transmission type equipment, then R2 does NOT apply). R3 begins the Facility Rating process for TOs. The remainder of the requirements (except R3) apply to GOs, and all of them relate to the output of R1 and R2. The standard allows many ways of meeting the requirements, and the GO does not have to provide a "calculated facility rating". It just needs to provide a rating consistent with its documentation, which can be "design or construction information such as design criteria, ratings provided by equipment manufacturers, equipment drawings and/or specifications, engineering analyses, method(s) consistent with industry standards (e.g. ANSI and IEEE), or an established engineering practice that

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has been verified by testing or engineering analysis", or "Operational information such as commissioning test results, performance testing or performance history, any of which may be supplemented by engineering analyses." The FR SDT reiterates its assertion that this standard should apply to Generator Owners and that the “burden of proof” is minimal for the applicable requirements.				
Greg Lange	Public Utility District No. 2 of Grant County	3	Negative	We are casting a negative vote for several reasons. First in general we are committed to voting against any additional prescriptive standards language while the industry moves to the performance based methodology in development now. We should not be making it worse before we fix it. More specifically to this standard, statements of attestation such as 2.3 and 3.3 are useless waste of management time. Either the ratings are correct or they are not. The additional words in this version draft still leave the notion of most limiting factor on a generation facility vague and hard to follow. The addition of the transmission facility connection do not help to clarify this issue one bit. Our suggestion is to table this revision until it can be developed into a performance based standard and an accompanying set of guidelines.
Response: The FR SDT thanks you for your comment. R2 applies to any transmission type equipment owned by the GO, and R3 applies to transmission facilities owned by the TO. The phrase concerning the “most limiting applicable Equipment Rating” listed in an entity’s documentation, in and of itself, will not protect the BES. However, a requirement to include it in your methodology, coupled with a requirement to follow the methodology, will ensure that the most limiting facility is accounted for and adhered to. The Standards Committee has directed drafting teams to continue with the work in progress and not wait for more definition on how to develop a results-based standard.				
Gregory L Pieper	Xcel Energy, Inc.	1	Negative	Xcel Energy believes that this standard, as drafted, is not acceptable because of the inclusion of generating facilities. The concept of arbitrarily applying a methodology historically used for transmission facilities is fundamentally flawed. The flaw begins with the disconnect between the reliability of the Bulk Electric System and the stated Purpose of the standard which is, “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”. There are two distinct functions, planning and operation. For planning purposes, the required output of a facility is determined, and then the elements of the facility are designed to achieve that required output. Applying this standard to a generating facility that is in the planning stage presumes that a random set of electrical equipment is accumulated and calculations are then performed to determine its rating. Also, the Standard Drafting Team has stated

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Michael Ibold	Xcel Energy, Inc.	3	Negative	in its Consideration of Comments that this standard applies only to electrical facilities. In the design and construction of generating facilities, the limit to the facility output is rarely the electrical equipment. It most often is the prime mover or something behind it. Thus, using a "Facility Rating" derived through this standard for planning purposes, would give an incorrect indication of the actual output of the facility which would tend to reduce grid reliability. For grid operations, the Facility Rating obtained by this standard would also be fictitious for the same reason and in the real world is not used. The ratings used by Transmission Operations are those determined by verification testing as required by MOD-024. This is a demonstrated value that can be realistically relied upon. Any temporary changes in the status of generating facility equipment that would cause a reduction in this demonstrated value are reported to the Transmission Operator per TOP-002. This includes facility rating reductions caused by mechanical equipment behind the generator (which are not covered by the proposed FAC-008) as well as the electrical equipment between the generator and the grid. The Standard Drafting Team has discounted the existence of MOD-024 in the past because it has not been approved by FERC. However, the fact remains that it has been approved by NERC and is being widely followed. In fact, many RTO's and ISO's have performance verification requirements where regional requirements may be lacking. The inclusion of "operational information" in R1.1 as a valid methodology is still flawed, since it would still apply only to the electrical equipment and if applied to all equipment in the facility would merely be duplicative of MOD-024. The conclusion is a calculated facility rating for a generator, when real facility capability data is available, is useless and dangerous for operating purposes, and simply useless for planning purposes. Xcel Energy does agree with, and support, the changes made to Requirement 3 for the Transmission Owner allowing the use of performance history in the methodology. If the applicability to the Generator Owner were removed, Xcel Energy would support the rest of the proposed standard as it is written.
Liam Noailles	Northern States Power Co.	5	Negative	

Response: The FR SDT thanks you for your comment. The FR SDT believes that we have been remiss in providing an adequate overview of the intent of the various requirements of FAC-008-2 as they apply to Generator Owners. R1 and R2 apply to Generator Owners and should be considered together. R1 relates to the electrical rating of the generator. The FR SDT posted a previous version of the standard with the term "turbine generator" in R1 (see pre-ballot posting) and stakeholders requested clarity on what was intended. The FR SDT removed the word "turbine" to indicate that R1 was only the electrical rating.

The requirement does not ask for any ratings of specific equipment within the plant but only the rating at the specific points in the requirement. Where R1 ends, R2 begins. R2 relates to transmission equipment (if owned by the GO) from the end point in R1 to the point of interconnection. If a GO owns any transmission type equipment (as noted in Part 2.4.1), then that equipment is treated as transmission facilities and R2 applies. Otherwise, there is no GO applicability for R2. Please note that these are Facility Ratings to be used in long-term planning studies. We agree that a calculated rating should not be used for real-time operations and that the requirements of TOP-002 cover operational revisions to ratings. However, a calculated rating, which may include long-term derates or uprates, or for a planned generator is useful in a long-term planning study.

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				The FR SDT does not believe that MOD-024 and MOD-025 should be the only basis for determining the Facility Rating because, at best, a single verification by itself following what is required in MOD-024-1 and MOD-025 would be a subset of what is required in complying with FAC-008-2. The purpose of FAC-008 is "To ensure Facility Ratings used in the reliable planning and operation of the BES are determined based on technically sound principles." Prior to any generator being placed in service, "Facility Ratings" for a generator are required for BES planning. FAC-008-2 allows the use of test data and/or performance history. Normal and Emergency ratings are not included in R1, which provides for the Facility Rating of the generation equipment. R2 is the first instance of applicability to a GO for these ratings and they apply to transmission equipment (if any) from the end point in R1 to the point of interconnection. Therefore these two ratings are appropriate. The remainder of your comment appears to be aimed at compliance issues and the burden of documentation to GOs. The FR SDT went through an exhaustive stakeholder process to develop requirements for GOs that were not burdensome and that did not require the GO to recreate unavailable documentation. R1 only requires a GO to provide "documentation for determining the Facility Ratings of its solely and jointly owned generator Facility(ies) up to the low side terminals of the main step up transformer if the Generator Owner does not own the main step up transformer. When the Generator Owner does own the main step up transformer, the Facility Rating will continue up to the high side terminals of the main step up transformer Facility Rating." This could be as simple as saying that your Facility Rating is based on the annual full load test that most GOs run. The actual Facility Rating would be the result of that test. R2 only applies if a GO owns transmission facilities beyond the generator in R1 (if the GO doesn't own transmission type equipment, then R2 does NOT apply). R3 begins the Facility Rating process for TOs. The remainder of the requirements (except R3) apply to GOs and all of them relate to the output of R1 and R2. The FR SDT reiterates its assertion that this standard should apply to Generator Owners and that the "burden of proof" is minimal for the applicable requirements.