Background

The Determine Facility Ratings Standard Drafting Team thanks all those who submitted comments with the last posting of the standard. After careful review and consideration of all comments received, the drafting team has modified the standard and is posting it for a 30-day review period, prior to ballot.

The Determine Facility Ratings Standard was posted for a third public comment period from February 18 through April 4, 2005. The SDT asked industry participants to provide feedback to the standard through a special Standard Comment Form. There were 32 sets of comments, including comments from more than 112 different people 7 of the 9 Industry Segments, and all NERC Regions as shown in the table on the following pages. The comments can be viewed in their original format at:

ftp://www.nerc.com/pub/sys/all_updl/standards/sar/Facility_Ratings_Comments_04_05.pdf

The SDT made changes to the definitions and the standard based on the comments submitted by industry stakeholders. The SDT's consideration of comments is provided in yellow highlighted text immediately following each comment submitted for each question.

If you feel that your comment has been overlooked, 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 Director of Standards, Gerry Cauley at 609-452-8060 or at gerry.cauley@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

There were very few 'content' changes made to the standards, and these are highlighted in the red line versions of the standards that are posted for review. Most of the changes result in modifications to the 'format' rather than the content of the requirements and measures. Note that the SAC directed the SDT to change, 'Reliability Authority' to 'Reliability Coordinator.'

Future Actions:

The SDT feels that additional postings of this standard for comment will not result in any additional significant changes to the standard and is moving the standard forward for its initial ballot.

[1] The appeals process is in the Reliability Standards Process Manual: http://www.nerc.com/standards/newstandardsprocess.html.

Commenter "I" indicates a comment submitted by an individual "G" indicates a comment submitted by one of the groups listed at the end of the table	Organization	Industry Segment								
		1	2	3	4	5	6	7	8	9
Al Boesch (G5)	NPPD	x	x							
Al Corbet (G13)	TVA	x								
Alan Adamson	NYSRC		x							
Alan Adamson (G6)	NYSRC		x							
Alan Gale (G3)	City of Tallahassee					x				
Anita Lee (G4)	AESO		x							
Arthur Brown (G9)	SCPSA	x								
Baj L. Agrawal (G14)	APS	x								
Ben Morris (G7)	PG&E	x								
Bill Bojorquez (G12)	ERCOT		x							
Bill Philips (G4)	MISO		x							
Bob Birch (G3)	FP&L	x								
Bob Dalrymple (G13)	TVA	x								
Bob Jones (G11)	So Co Svcs	x								
Bob Jones (G9)	So Co Svcs	x								
Brain Moss (G9)	Duke Pwr Co	x								
Brian K. Keel (G14)	SRP	x								
Bruce Balmat (G4)	PJM		x							
C. Robert Moseley (G8)	PSC of SC									x
Carissa P. Sedlacek	ISO-NE		x							
Charles Lawrence (G1)	ATC	x								
Charles Yeung (G4)	SPP		x							
Chifong Thomas (G7)	PG&E	x								

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		1	2	3	4	5	6	7	8	9
Chuck Feagans (G13)										
Chuck Matthews (G14)	BPAT	x								
Clay Young (G9)	SC E&G			x						
Craig Cameron (G14)	SMUD				x					
Darrell Pace (G9)	AL Elec Coop	x								
Darrick Moe (G5)	WAPA		x							
David Kiguel (G6)	Hydro One	x								
David Till (G13)	TVA	x								
David Till (G9)	TVA	x								
David Weekley (G9)	MEAG Pwr	x								
David Wright (G8)	PSC of SC									x
Dennis Florom (G5)	LES		x							
Doug McLaughlin (G11)	So Co Svcs	x								
Ed Davis	Entergy	x								
Elizabeth Fleming (G8)	PSC of SC									x
Eric Senkowicz (G3)	FRCC		x							
Frank McElvain (G14)	TSGT	x								
G. O'Neal Hamilton (G8)	PSC of SC									x
Gerald Rheault	Manitoba	x		x		x	x			
Greg Campoli (G6)	NY ISO		x							
Greg Mason	Dynergy Gen					x				
Guy Zito (G6)	NPCC		x							
Hari Singh (G1)	ATC	x								
J. Chris Reese (G14)	PSE									
James Whitehead (G13)	TVA	x								

Commenter "I" indicates a comment submitted by an individual "G" indicates a comment submitted by one of the groups listed at the end of the table	BPA Organization	x			Industry Segment					
		1	2	3	4	5	6	7	8	9
Jamie Murphy (G2)										
Jason Shaver (G1)	ATC	x								
Jeff Mitchell	ECAR		x							
Jeffrey Miller (G14)	CA-ISO		x							
Jim Burns (G2)	BPA	x								
Jim Griffith (G11)	So Co Svcs	x								
Jim Maenner (G5)	WPS		x							
Joe Knight (G5)	MRO		x							
Joel Dison (G10)	So Co Gen						x			
John Blazekovich	Exelon	x		x		x	x			
John Horakh	MAAC		x							
John Howard (G8)	PSC of SC									x
Karl Tammar (G12)	NYISO		x							
Karl Tammer (G4)	NYISO		x							
Kathleen Davis (G13)	TVA	x								
Kathleen Goodman	ISO-NE		x							
Kathleen Goodman (G6)	ISO-NE		x							
Keith Calhoun (G11)	So Co Svcs	x								
Ken Goldsmith (G5)	ALT		x							
Kenneth Goldsmith	Alliant Energy	x								
Kham Vongkhamchanh (G9)	Entergy	x								
Khaqan Khan	IESO		x							
Khaqan Khan (G6)	IESO		x							
Linda Campbell (G3)	FRCC		x							
Lucius Burris (G10)	So Co Gen						x			

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		1	2	3	4	5	6	7	8	9
Marc Butts (G11)	So Ga Gen Co	x								
Michael Calimano	NYISO		x							
Michael Raezer (G12)	Tucson Elec	x								
Michael Sidiropoulos (G14)	PAC	x								
Mignon Clyburn (G8)	PSC of SC									x
Mike Viles (G2)	BPA	x								
Milt Perciva (G14)	WALC		x							
Mitch Needham (G13)	TVA	x								
Mitchell Needham (G12)	TVA									x
P.D. Henderson	IESO		x							
Pat Huntley (G9)	SERC		x							
Paul Elwing (G3)	Lakeland Elec					x				
Peter Brandien (G4)	ISO-NE		x							
Peter Burke (G1)	ATC	x								
Peter Henderson (G4)	IESO		x							
Peter Lebro (G6)	National Grid	x								
Peter Mackin (G7)	TANC	x								
Phil Riley (G8)	PSC of SC									x
Phil Winston (G11)	Ga Pwr Co			x						
R. John Leland (G14)	NWMT	x								
Raj Rana	AEP	x				x				
Ralph Rufrano (G6)	NYPA	x								
Randy Mitchell (G8)	PSC of SC									x
Raymond Vice (G11)	So Co Svcs	x								
Rebecca Berdahl (G14)	BPAP									

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		1	2	3	4	5	6	7	8	9
Rebecca Berdahl (G2)										
Richard Kafka (G12)	Pepco	x								
Rick Padilla	PG&E					x				
Robert Coish (G5)	MHEB		x							
Robert Rhodes	SPP		x							
Roger Champagne (G6)	TransEnergie	x								
Roger Greene (G10)	So Co Gen					x				
Roman Carter (G10)	So Co Gen						x			
Ron Mazur (G12)	Manitoba	x								
Ronald D. Schellberg (G14)	IPC	x								
Scott Waples (G14)	AVA									
Sergio Garza (G12)	LCRA									x
Steve Ruecker (G14)	WECC		x							
Sue Mangum-Goins (G13)	TVA	x								
Syed Ahmad	Ameren	x								
Terry Bilke (G5)	MISO		x							
Terry Crawley (G10)	So Co Gen					x				
Todd Gosnell (G5)	OPPD		x							
Tom Higgins (G10)	So Co Gen					x				
Tom Mielnik (G5)	MidAmerican		x							
Tony Reed (G10)	So Co Gen						x			
Tracy Edwards (G2)	BPA	x								
Wayne Guttermson (G5)	SPC		x							
William Smith	Allegheny Pwr	x								

Groups Providing a Set of Comments:

G1 – ATC: (4 - #1)

G2 – BPA: (5 - #1)

G3 - FRCC: (1 - #1; 2 - #2; 2 - #5)

G4 – ISO/RTO Standards Review Committee (7 - #2)

G5 – Midwest Reliability Organization: (10 - #2; plus?)

G6 - NPCC CP9 Reliability Standards Working Group (4 - #1; 5 - #2)

G7 – PG&E: (3 - #1; 1 - #5)

G8 - PSC of SC: (8 - #9)

G9 – SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)

G10 – Southern Co. Generation: (6 - #5; 1 - #6)

G-11 – Southern Company Services: (6 - #1; 1 - #3)

G-12 - Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

G13 - TVA: (7 - #1)

G14 - WECC Reliability Subcommittee: (9 - #1; 2 - #2; 1 - #4; 3 - ?)

Index to Questions and their Consideration:

1. Do you agree with the SDT's proposed definitions for Cascading Outages, Contingencies, Interconnection Reliability Operating Limits, and Interconnection Reliability Operating Limit T_v?

Summary Consideration:

While many commenters agreed with the proposed changes to the definitions, there were also suggestions for additional revisions and some commenters suggested reverting to the definitions approved with Version 0 Standards. In trying to reach the best consensus, the SDT is making the following changes to its proposed definitions of Cascading Outages, Contingency, and Facility and has dropped its proposed definition for Pre-contingency.

The definition of Cascading Outages has been changed to the following:

Cascading Outages: The uncontrolled successive loss of BES Facilities triggered by an incident (or condition) at any location resulting in the interruption of electric service that cannot be restrained from spreading beyond a pre-determined area.

The definition approved with Version 0 was:

Cascading: The uncontrolled successive failure of system elements triggered by an incident at any location within the Interconnection. Cascading results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.

The definition proposed with the last posting of this standard was:

Cascading Outages: The uncontrolled and unplanned successive loss of system elements triggered by an incident at any location.

The reasons for the changes from the Version 0 definition and the definition provided with the last posting of this standard are:

- The Version 0 definition used the term, 'elements' when the term, 'facilities' is more precise
- The Version 0 definition used the term, 'failure' and this has been replaced by 'loss' to address events that may be caused by things such as a lightning strike or a misoperation – things that aren't the result of any 'failure'
- The Version 0 definition used the phrase, 'pre-determined by study' and this was replaced with the phrase, 'predetermined area'. The input to the study is the 'area'- the results of the study have to be rationalized against applicable Planning or Operating Criteria.
- Both the Version 0 definition and the version included in the last posting used the term 'Incident' - the proposed definition replaces 'incident' with 'incident or condition' because there may be cascading outages that are initiated by scenarios, such as overloads, other than the loss of a Facility
- The last posted version used the term 'unplanned' and comments indicated this term was misunderstood. 'Unplanned' was intended to indicate that the condition wasn't foreseen in studies or analyses – and in the proposed definition the term, 'unplanned' has been replaced with the phrase, 'pre-determined area'.

The definition of Contingency has been changed to the following:

Contingency: Unexpected loss of one or more BES Facilities caused by a single initiating event.

The definition approved with Version 0 was:

Contingency: The failure, with little or no warning, of one or more elements of the transmission system. This includes, but is not limited to, generator, transmission line, transformer, and circuit breaker failures or misoperations.

The definition proposed with the last posting of this standard was:

Contingency: The unexpected outage of a system component. A single contingency also may result in outages of multiple Facilities.

The reasons for the changes from the Version 0 definition and the definition provided with the last posting of this standard are:

- The Version 0 definition used the term 'element' and the last posted proposed definition used the term, 'system component' when the term, 'Facility' would be consistent with other uses of the term, 'Facility' in this set of Standards.
- The Version 0 definition used the term, 'failure' and the last posted proposed definition used the term, 'outage' and these terms have been replaced by the term, 'loss' to address events that may be caused by things such as a lightning strike or a misoperation – things that aren't the result of any 'failure'
- The last proposed definition used the word,' contingency' in the example provided with the definition.

The definition of Facility has been changed to the following:

Facility: A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a transmission line, a generator, a shunt compensator, transformer, etc.)

- The only change made to the definition was to replace the term, 'generating plant' with the term, and 'generator' as proposed by commenters.

The definition of 'Pre-Contingency State' has been removed.

Note that the term is still used in the set of Standards, however when the term is used, the term is not capitalized, indicating that the term does not have an associated definition. During the development of the definitions for Version 0 Standards, a pattern was established of defining a term, but not defining all the variations of the term that are formed by adding prefixes. Thus, the term 'contingency' is defined, but 'pre-contingency' and 'post-contingency' are not defined.

Agree with Proposed Definitions:

PG&E: (3 - #1; 1 - #5)

Agree with the SDT's proposed definitions for Cascading Outages. Interconnection Reliability Operating Limits, and Interconnection Reliability Operating Limit Tv.

Raj Rana – AEP - #1, 3, 5

PSC of SC: (8 - #9)

WECC Reliability Subcommittee: (9 - #1; 2 - #2; 1 - #4; 3 - #?)

Greg Mason – Dynergy Generation - #5

Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6

Ed Davis – Entergy Services, Inc - #1

Southern Co. Generation: (6 - #5; 1 - #6)
Southern Company Services: (6 - #1; 1 - #3)
William Smith – Allegheny Power - #1
SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)
John Blazekovich - Exelon Corporation - #1,3,5, 6
BPA: (5 - #1)

Disagree with Multiple Definitions:

Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)

The ISO/RTO SRC disagrees with the revised definitions of Cascading Outages, Contingency and IROL, and recommends the use of original definitions as stated in the Version 0 Glossary for consistency purposes.

Please see the revised proposed definitions for Cascading Outages and Contingency. Please review the reasons provided for making the proposed changes to the definitions provided with Version 0. Note that most commenters agreed with the definition of IROL and this was not changed.

Alan Adamson – NYSRC – #2

The STD's definitions for Cascading Outages and Contingencies are inconsistent with the definitions for those terms included in the Version 0 Glossary of Terms (Draft 4 - 1/7/05). We prefer the Version 0 definitions.

Please see the revised proposed definitions for Cascading Outages and Contingency. Please review the reasons provided for making the proposed changes to the definitions provided with Version 0.

Disagree with Definition for Cascading Outages:

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

The SES recommends the definition of Cascading Outages be revised to read: The uncontrolled and unplanned successive loss of system elements triggered by an incident that leads to loss of load and or generation.

Please see the revised proposed definition for Cascading Outages.

Robert Rhodes – SPP - #2

I concur with all of the definitions except Cascading Outages. I understand the difficult situation the SDT finds itself in trying to tie down this most important definition. I also understand some of the shortcomings that were pointed out in the previous definition but I'm afraid that this attempt is a swing too far in the other direction. This definition is too restrictive. If I read it correctly, and I may not be, loss of a single substation bus could be classified as a cascading outage. I certainly hope this is not what the SDT intended because I don't think this is the answer the industry is looking for.

Please see the revised proposed definition for Cascading Outages. The SDT did not intend that the loss of a single substation bus would be classified as a Cascading Outage.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

NPCC's participating members disagree with the revised definition of Cascading Outages and prefers the original definition as stated in the Version 0 Glossary Draft 4 dated 1/7/05.

Please see the revised proposed definition for Cascading Outages and please review the reasons provided for making the proposed changes to the definition provided with Version 0.

Kenneth A. Goldsmith – Alliant Energy - #1

We believe that the definition as defined may be too stringent. The original definition may have been relatively vague, however, it was done to allow flexibility. What could be used is to have the local area defined as the control area/balancing authority. In this way if an outage propagates beyond the CA/BA boundary it would be considered cascading.

There are some CA/BAs that are quite large –and outages within a CA/BA's boundaries may be classified as 'cascading outages' under some conditions. Please see the revised proposed definition for Cascading Outages.

Midwest Reliability Organization: (10 - #2; Plus 31?)

The Midwest Reliability Organization (MRO) applauds the Standard Drafting Team for taking on a number of important issues since the last draft of this standard. These issues were ones that needed to be resolved.

The MRO has concerns with the proposed definition of Cascading Outages. While the MRO agrees that the prior definition was to a certain extent vague, the MRO believes that the proposed definition is potentially too limiting a definition. The original definition refers to cascading as a "widespread event". While the SDT properly indicates that this is a vague term that requires interpretation, the MRO believes that the reason such language is used in the original definition is so that cascading would exclude events which result in multiple outages but which are purposely confined to a limited area. For example, the definition proposed by the SDT could be used to define a breaker failure event that confines the outaged area to the secondary area of protection that is successfully separated from the interconnected system in a controlled way with a breaker failure scheme as being cascading. This is because a breaker failure event, in and of itself, even with successful operation of the breaker failure protection system, could be considered to create unplanned and uncontrolled successive outages: that is the initial faulted system unit (a portion of the system potentially consisting of multiple elements which is collectively separated from other elements in the system by breakers) followed by the unplanned and uncontrolled successive outage of the second system unit. The two successive outages are controlled by the breaker failure protection system to not continue into a third unit. However, it could be argued that the succesive outages of the two system units consists of successive uncontrolled and unplanned loss of system elements. Further, even if industry could determine that this proposed definition is designed to not categorically call breaker failure a cascading event (in other words that breaker failure would only be a cascading event if the breaker failure is not properly planned for and controlled by breaker failure protection), then why would it be necessary to be concerned about the uncontrolled and unplanned successive that are controlled and planned to not propagate beyond a local area. The NERC Standards should not be concerned with any propagating outage that remains within the local area in which the initiating incident began and that does not propagate to separate a significant amount of load. The MRO recommends that the SDT make further effort to define what portion of a system consists of more than a local area and more than a significant amount of load. The MRO has had a representative present at discussions of the SAR DT for SAR 600, Assess Transmission Future Needs and Develop Transmission Plans, in which such discussions of cascading were discussed. That group envisioned that a more precise definition would refer to the MW amount of load dropped or geographical size of the system separated. In lieu of the SDT developing more specific language which provides more description than the definition currently proposed by the SDT, the MRO recommends that the SDT include examples in their definition for cascading, such as indicating that areas of the system that have been designed to be outaged at the same time, as well as, breaker failure events, are not categorically considered cascading outages, then perhaps that would be a more acceptable definition.

Please see the revised proposed definition for Cascading Outages. The proposed definition does not reference any # of MWs or geographic size of separation but does attempt to improve on both the Version 0 definition and the definition included in the last posting of the standard.

TVA: (7 - #1)

Cascading Outages - we prefer the Version 0 definition that specified "beyond an area predetermined by studies". Adding this phrase to the present definition would be an improvement.

Other definitions were okay.

Please see the revised proposed definition for Cascading Outages. The phrase, 'beyond a pre-determined area' is used in the revised definition. The only way to 'pre-determine' is to do a study.

Michael C. Calimano – NYISO - #2

NYISO believes the original definition as stated in the Version 0 Glossary is preferable to the revised definition of Cascading Outages.

Please see the revised proposed definition for Cascading Outages and please review the reasons provided for making the proposed changes to the definition provided with Version 0.

Disagree with Definition for Contingency:

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

NPCC participating members suggest the definition of contingency be consistent with the same Version 0 Glossary Draft 4 as indicated above. Alternately it could be defined as follows Contingency: The unexpected outage of a single system element or multiple elements.

Please see the revised proposed definition for Contingency and please review the reasons provided for making the proposed changes to the definition provided with Version 0.

Michael C. Calimano – NYISO - #2

The definition for Contingency should be reworded as follows: Contingency: The unexpected outage of a single system element or multiple elements initiated by a single event.

The revised definition supports your suggested changes, but replaces, 'outage' with 'loss'.

John Horakh – MAAC - #2

Change the definition of Contigency to the following: An incident that results in the unexpected outage of a system Facility. A single contingency may result in outages of multiple Facilities.

The revised definition supports your suggested changes, but replaces, 'outage' with 'loss' and avoids using the word, 'contingency' in the definition.

PG&E: (3 - #1; 1 - #5)

Disagree with the definition of Contingency.

The definition of Contingency states, The unexpected outage of a system component. A single contingency also may result in outages of multiple Facilities.

While it is true that a single contingency also may result in outages of multiple Facilities, this reference could cause confusion with Standard 051, Table 1, which refers to Events that could result in loss of contingency elements. We suggest modifying this defeinition to read:

Contingency: The unexpected outage of a system component due to an initiating event. A single initiating event also may result in outages of multiple Facilities.

The revised definition supports your suggested changes.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

The SES also has concerns over the revised definition of Contingency proposed in FAC-010-1. The SES poses the following question: Is the definition being proposed in FAC-010-1 intended to replace the definition of Contingency provided in the Version 0 standards recently adopted? If not, does the SDT believe having two definitions of Contingency may lead to confusion? And if so, has the SDT completed a comprehensive analysis of any impacts, changes, or conflicts that may make this new definition incompatible with any provision of the Version 0 standards?

Without regard to the above statement, the SES believes the proposed definition for Contingency in FAC-010-1 is confusing. The plain reading of the definition appears to state that a single contingency may also result in a multiple contingency. As a result, the SES recommends the definition of Contingency remain as adopted in the Version 0 standards.

All proposed definitions posted with 'Version 1' standards are intended to either replace or be modifications to the set of definitions that were approved with Version 0 Standards.

The proposed changes were intended to clarify ambiguities in existing definitions – the proposed changes were not intended to change the intended meaning of the terms. Therefore, if approved by Stakeholders, the revised definitions would not adversely impact the already approved Version 0 Standards.

Please see revised proposed definition for Contingency and please review the reasons provided for making the proposed changes to the definition provided with Version 0.

Midwest Reliability Organization: (10 - #2; Plus 31?)

With regard to the contingency definition, the MRO is unsure as to why the SDT decided to delete the examples which explained that a system component in this definition is intended to refer to electrical components. In other words, the NERC Version 0 definition for contingency would call an electrical element outage as a contingency, it would not however include a non-electrical outage such as the outage of the fuel system at a generating plant, a system component. The MRO recommends that the SDT restore the reference to system components, such as a generator, transmission line, breaker, switch, or other electrical element, to the definition. The MRO believes that the addition clarifying that a single contingency may involve multiple elements is a helpful improvement. We think that it would be even better to indicate that it may include multiple elements if the multiple elements are within the same unit of the system. The MRO recommends that the SDT consider using the terminology in the current Version 0 standards for TPL-001-0 through TPL-004-0 which refer to events. A single event then may cause multiple element outages because of the connected nature of the system. In other words, the MRO recommends that the SDT refer to the items in the standard currently referred to as single contingencies as events and contingency elements.

The definition of Contingency was revised to use the term 'facilities' instead of 'components' and the examples of 'elements' were returned to the definition.

Disagree with Definition for IROL and IROL T_v

ATC: (4 - #1):

The maximum time Tv that an IROL can be violated should also include the corresponding (maximum) extent of violation (above/below IROL). In most cases, the acceptable time duration will depend on the extent that the IROL is violated.

T_v is already linked to the magnitude of the violation of the IROL.

Acceptable risk needs to be defined by the entities that develop the IROLs and their associated T_v. IROLs may be dynamic.

Michael C. Calimano – NYISO - #2

IROL definitions should be coordinated with Operating Definition Limit Task Force. There is concern that an entity could repeatedly violate a given IROL, yet never exceed the Tv during any violation. This would not represent an ideal mode of operation, but is not addressed in the standard.

The SDT is trying to coordinate its work with the Operating Limits Definition Task Force and the IROL SDT. Real-time operations involving instances of exceeding IROLs are addressed in the IROL Standard.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

IROL Definitions should be coordinated and consistent with the Version 0 Reliability Standards-Glossary for consistency purposes. Efforts should also be made to address entities "floating" below and over a limit repeatedly.

The SDT felt that the proposed definition of IROL was an improvement over the definition provided in the V0 Reliability Standards Glossary. If approved, the proposed definition would replace the definition provided with V0. Real-time operations involving instances of exceeding IROLs are addressed in the IROL Standard. Note that the reason the SDT is proposing a change to the V0 definition of an IROL is because the V0 definition only addresses 'exceeding' limits – which may be interpreted as excluding violations that may occur from operating at too low a frequency or voltage level. The proposed definition of IROL replaced the word, 'exceeding' with the word, 'violating.'

Disagree with Other Definitions

John Horakh – MAAC - #2

Also, in the definition of Facility, replace: a generating plant, with: a generating unit.

The definition was revised to use the word, 'generator', rather than generating unit.

Also, in the definition of Performance-Reset Period, insert the word: violating, before the word: entity.

Non-compliance is already addressed in the definition so no change was made to the definition.

Other Comments on Definitions:

Syed Ahmad – Ameren Services - #1

On Page 2 of 9, under Pre-Contingency State - What does "normal" mean in the first line versus "normal" in the third line?

The definition of 'pre-contingency state' was removed from the set of definitions being proposed.

FRCC: (1 - #1; 2 - #2; 2 - #5):

Although we could accept the definition for "cascading outages" and "IROLs", and interpret it conservatively, under the revised definition, a separation of the FRCC from the Interconnection would not be considered an IROL since the Special Protection Systems and schemes protecting the Region are planned and designed to operate under controlled separation scenarios. Is this an intended or unforeseen result of the revised definitions?

This is an intended result of the revised definitions – however this does not prevent you from specifying a System Operating Limit to prevent such a situation.

FRCC

In reviewing the existing version zero Glossary of terms and the proposed definitions of these standards, it appears that there is an opportunity for consolidation and clarifcation of the NERC standards related terminology when defining system elements.

A uniform mapping of nomenclature may be in order as there appears to be some ambiguity and inconsistency when integrating and defining new terminology with respect to existing glossary terminology. A suggested uniform nomenclature could be established, i.e. "Bulk Electric System" is made up of interconnected "Systems". "Systems are made up of interconnected "Facilities". "Facilities" are made up of interconnected "Components". The term "Element" is repetitious to the term "Facility" and may create confusion in development of other standards. For simplicity if this type of terminology standardization was achieved it may help industry understanding of standards language.

Some examples of ambiguity in the proposed definitions are:

New definition for "Equipment Rating" uses "individual equipment" in its definition, along with the new definition for "Facility" which uses "electrical equipment" in its definition. Although straightforward, the new terminology does not integrate into the existing definition for "Bulk Electric System Element" which uses terminology like "electrical generation resources" and "elements" which in its definition refers to "components". The eventual conclusion can be made that "components" are individual pieces of "electrical equipment", but why not avoid the confusion by using one set of terminology and consistently applying to new standards and new standards definitions?

Element is a defined term included in the glossary approved with V0.

A second example of potential confusion is in the definition of "Cascading Outages". By defining using "loss of system elements" we introduce new terminology which is defined in the glossary under definitions for "System" and "Element" yet the intention of the statement could be achived using the term "facility", which is what this standard has in its title.

The definition of Cascading Outages has been modified to use the term, 'loss of BES Facilities'.

A third example is in the definition of "Contingency". The terminology of "system components" is once again, new terminology for which "component" is not defined in the NERC glossary. Is there an intended distinction in the terminology selection, or would "unexpected outage of a facility" achieve the intended definition?

The definition of Contingency has been modified to use the term, 'loss of one or more BES Facilities'.

Overall the variations and interchangeable use of terms like "facility", "elements", "electrical equipment", "system components", "system elements", "individual equipment", "components" and "Bulk Electric System Elements" introduces unnecessary ambiguity in the standards process and language. These comments may seem trivial, but are intended to reinforce the fact that these standards are being written for our industry and should be as straightforward and "clear and unambiguous" as possible. We must remember that many of the individuals reading and being expected to comply with these standards may not be as fluent with "NERC" standards language as those of us who are more involved with their development.

The SAR used the term, 'Facility'; the standard has been changed so that the term, 'component' is not used.

Michael C. Calimano – NYISO - #2

Coordination of the terms used to comprise the glossary would improve the clarity of the definitions, e.g. the definiton of Cascading Outages uses the phrase 'system elements' and the definitions for Contingency uses the phrase 'system components'. Are components and elements

interchangable? Are components the same as Facilities? Using the same phrase wherever possible would eliminate some confusion.

NERC Definition should perhaps be revised and coordinated by one entity responsible for that definition.

Please see the revised definitions – the SDT tried to use the term, 'Facility' more consistently in its definitions of Contingency and Cascading Outages.

Many commenters have provided very useful suggestions for improving the proposed definitions – and many suggestions for improving the V0 definitions. This process of using Stakeholder comments seems to be working, even though it does take more effort than the methods suggested. Drafting teams to share proposed definitions with other teams that may be using the same term.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

NERC Definitions should perhaps be coordinated and revised by one entity responsible for that definition.

Many commenters have provided very useful suggestions for improving the proposed definitions – and many suggestions for improving the V0 definitions. This process of using Stakeholder comments seems to be working, even though it does take more effort than the methods suggested. Drafting teams to share proposed definitions with other teams that may be using the same term.

Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)

NERC definitions should be coordinated and revised by one body/entity responsible for that definition (such as Director, NERC Standards)

Many commenters have provided very useful suggestions for improving the proposed definitions – and many suggestions for improving the V0 definitions. This process of using Stakeholder comments seems to be working, even though it does take more effort than the methods suggested. Drafting teams to share proposed definitions with other teams that may be using the same term.

2. What additional changes, if any, should the SDT make to Reliability Standard FAC-008-1 (Facility Ratings Methodology) to add more criteria to the requirement for establishing a Facility Ratings Methodology?

Summary Consideration:
The following changes were made to the criteria for a Facility Ratings Methodology:

- R1.2.1 In the scope of equipment to be addressed by the methodology, 'relay protective devices' was added.
- R1.3.1 In the list of considerations for development of facility ratings, the phrase 'ratings provided by equipment suppliers' was changed to 'ratings provided by equipment manufacturers.'
- R1.3.2 The phrase, 'such as manufacturer's warranty, IEEE, ANSI" was added to give specific examples of the types of standards that should be referenced when considering design criteria for facility ratings.
- R1.3.4 'Operating limitations' was added to the list of categories to be considered in the facility rating methodology

Several stakeholders suggested that there be a requirement that the facility rating be consistent with and based on credible and recognized standards/criteria and this was only partially adopted. Facility owners need flexibility to establish ratings that meet their needs, based on their risk management. The drafting team did add language to the list of considerations in R1.3 so that it reads as follows:

> Design criteria (e.g., including applicable references to industry Rating practices such as manufacturer's warranty, IEEE, ANSI or other standards' but didn't use all of the suggested words such as 'credible' because this can't be measured.

No Additional Changes Needed to FAC-008-1 – Facility Ratings Methodology:

FRCC: (1 - #1; 2 - #2; 2 - #5):

> Selection of criteria seems appropriate, except for R1.3.1 which addresses "ratings provided by equipment suppliers". This is not typical, since equipment ratings are typically provided by equipment manufacturers which design the equipment and not suppliers (with the understanding that in some cases they may be the same) .

This was changed as suggested - "equipment suppliers" was changed to "equipment manufactures."

Raj Rana – AEP - #1, 3, 5
PSC of SC: (8 - #9)
TVA: (7 - #1)
Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6
Ed Davis – Entergy Services, Inc - #1
Southern Co. Generation: (6 - #5; 1 - #6)
ATC: (4 - #1)
Midwest Reliability Organization: (10 - #2; Plus 31?)
Southern Company Services: (6 - #1; 1 - #3)
William Smith – Allegheny Power - #1
SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)
Kenneth A. Goldsmith – Alliant Energy - #1
BPA: (5 - #1)
PG&E: (3 - #1; 1 - #5)
John Blazekovich - Exelon Corporation - #1,3,5, 6

Comments on Requirements in FAC-008-1 – Facility Ratings Methodology:

Carissa P. Sedlacek – ISO-NE - #2

With regard to the following definition: "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" ISO-NE System Planning questions the requirements for short circuilt (SC) and transistent conditions as related to FAC-008-1 section B.R1.1. Specifically what equipment should be rated under the SC and transistent rating definition and how should it be rated under this definition?

Assuming you are asking for an exhaustive list of equipment that must be rated, the SDT does not intend to provide such a list as part of the standard because any list provided would not be appropriate for all entities. Please see R1.2.1. Individual equipment is rated by the equipment owner. Equipment capabilities either permitted or assigned by the equipment owner are provided by the equipment owner for steady state, short-circuit, and transient conditions for the protection of the equipment.

Jeff Mitchell – ECAR - #2

Under Requirement R1.2.1, it is not unequivocally clear what series circuit elements are required to be included in terminal equipment. At the least, it should state ALL terminal equipment including substation bus conductor from one terminal to the substation bus conductor of the other terminal of a transmission facility. All equipment including substation bus conductor, current transformers, relays (both thermal and loadability considerations), metering (thermal and scale considerations), etc. should be included in terminal equipment, but is not specifically mentioned in this standard. This may give the impression that secondary series equipment, or minor equipment such as leads, may not be required to be included as part of the overall facility rating. This standard should state that ALL conductor and equipment must be included to find the overall facility rating.

The SDT does not intend to provide such a list as part of the standard because any list provided would not be appropriate for all entities.

Greg Mason – Dynergy Generation - #5

Item B,R1.3.3 needs to be expanded to more clearly include generating equipment.Our new suggested wording for this item is:"Operating limitations(e.g.,ambient conditions,voltage levels,equipment constraints)"

The list in R1.3 was modified by adding, 'R1.3.4 Operating Limitations' to adopt the intent of your suggestion.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)
Michael C. Calimano – NYISO - #2

The requirement R1.3 should be consistent with and based on credible and recognized standards/criteria (such as IEEE, ANSI etc) for purposes of "methodology" that could be used as guidelines.

Please refer to R1.3.2. The Drafting Team did not adopt the change because there are many Facilities in place with ratings that were established many years ago and it would be very costly to go back and re-establish ratings based on a set of industry standards. Some people specify equipment with ratings that are different from industry standards. The owners need flexibility to establish ratings that meet their needs, based on their risk management. The intent of this suggestion has been adopted – the drafting team didn't use all of the suggested words such as 'credible' because this can't be measured.

John Horakh – MAAC - #2

Add under R1.3 and under M1.3 (consideration of) The time period that the Facility must sustain the Rating

The definition of the time period is implicit in the Facility Rating. The list in R1.3 was modified by adding, 'R1.3.4 & M1.3.4 Operating Limitations,' this addition should address the intent of your suggestion.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

While the SES believes this standard should not mandate a Transmission Owner (TO) or Generation Owner (GO) to develop emergency ratings; we do feel it appropriate to include a requirment for any assumptions used for the development of emergency ratings; if used, to be addressed in section R1.3. This could be accomplished by revising R1.3.4 to read: Any other assumptions including those for emergency ratings, if appropriate.

As proposed, assumptions are required for all types of Facility Ratings – this would include emergency ratings.

Alan Adamson – NYSRC – NPCC - #2

In R2 the following phrase should be added: "in accordance with the individual's confidentiality agreements." This addition is necessary because of the Intellectual Property issues that may exist.

Confidentiality agreements are expected to be in place where necessary and adding these to the standard is outside the scope of this standard.

Comments on Measures in FAC-008-1 – Facility Ratings Methodology:

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

In section C the measures M1.2 and M1.2.1 are exact repetition/copy of requirements R 1.2 and R1.2.1. We recommend that R1.2/R1.2.1 should be revised to reflect these as specific measures. Moreover, in the measure, there is a need to add "a requirement to change methodology" if the technical review results show that it does not meet the criteria specified on R1.3.

The proposed measures are similar to, but not exact repetitions of the associated requirements.

A user of a methodology doesn't have the right to require a Facility owner to change its methodology for establishing Facility Ratings. As explained in the Executive Overview posted with the last version of this standard, a key element in the development of a Facility's rating is the Equipment Rating provided by the manufacturer. Manufacturers, who establish and use their own rating methodologies based on a variety of assumptions, link their warranties to requirements that owners respect the equipment rating provided by the manufacturer. Establishing Facility Ratings outside those established by the manufacturer may void any warranty. With numerous manufacturers producing the same equipment, Facility Ratings for similar Facilities can vary simply on the basis of which manufacturer's equipment was installed.

Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)

In section C the measures M1.2 and M1.2.1 are exact repetition/copy of requirements R 1.2 and R1.2.1. We recommend that R1.2/R1.2.1 should be revised to reflect these as specific measures. Moreover, there is a need to add a requirement and associated measure "to change methodology", if the technical review results show that it does not meet the criteria and/or methodology specified on R1.3.

The proposed measures are similar to, but not exact repetitions of the associated requirements.

A user of a methodology doesn't have the right to require a Facility owner to change its methodology for establishing Facility Ratings. As explained in the Executive Overview posted with the last version of this standard, a key element in the development of a Facility's rating is the Equipment Rating provided by the manufacturer. Manufacturers, who establish and use their own rating methodologies based on a variety of assumptions, link their warranties to requirements that owners respect the equipment rating provided by the manufacturer. Establishing Facility Ratings outside those established by the manufacturer may void any warranty. With numerous manufacturers producing the same equipment, Facility Ratings for similar Facilities can vary simply on the basis of which manufacturer's equipment was installed.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

> NPCC participating members are of the opinion that the measures M2 and M3 have no merit if there is no requirement to follow any credible methodology. Accordingly, this further necessitates the need for a consistent recognized standard/criteria for purposes of "methodology". Moreover, there should be penalties imposed for using an unacceptable or unrecognized methodology?

Please see the revised standard. The following text in red was added to the standard in support of your suggestion:

R1.3. Consideration of the following:

R1.3.1. Ratings provided by equipment manufacturers.

R1.3.2. Design criteria (e.g., including applicable references to industry Rating practices such as manufacturer's warranty, IEEE, ANSI or other standards).

R1.3.3. Ambient conditions.

R1.3.4. Operating limitations.

R1.3.5. Other assumptions.

As explained in the Executive Overview posted with the last version of this standard, a key element in the development of a Facility's rating is the Equipment Rating provided by the manufacturer. Manufacturers, who establish and use their own rating methodologies based on a variety of assumptions, link their warranties to requirements that owners respect the equipment rating provided by the manufacturer. Establishing Facility Ratings outside those established by the manufacturer may void any warranty. With numerous manufacturers producing the same equipment, Facility Ratings for similar Facilities can vary simply based on which manufacturer's equipment was installed.

Terms such as 'Unacceptable' and 'unrecognized methodologies' are subjective and therefore aren't used in these standards.

Michael C. Calimano – NYISO - #2
Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)

> We are of the opinion that the measures M2 and M3 have no merit if there is no requirement to follow any credible methodology. Accordingly, this further necessitates the need for a consistent recognized standard/criteria re: methodology.

Please see the revised standard. The following text in red was added to the standard in support of your suggestion:

R1.4. Consideration of the following:

R1.4.1. Ratings provided by equipment manufacturers.

R1.4.2. Design criteria (e.g., including applicable references to industry Rating practices such as manufacturer's warranty, IEEE, ANSI or other standards).

R1.4.3. Ambient conditions.

R1.4.4. Operating limitations.

R1.4.5. Other assumptions.

As explained in the Executive Overview posted with the last version of this standard, a key element in the development of a Facility's rating is the Equipment Rating provided by the manufacturer. Manufacturers, who establish and use their own rating methodologies based on a variety of assumptions, link their warranties to requirements that owners respect the equipment rating provided by the manufacturer. Establishing Facility Ratings outside those established by the manufacturer may void any warranty. With numerous manufacturers producing the same equipment, Facility Ratings for similar Facilities can vary simply on the basis of which manufacturer's equipment was installed.

Michael C. Calimano – NYISO - #2

There is no time requirement for the equipment owner to provide the equimpment rating to the requesting entity. All other standards in the group of standards designate a time requirement for submitting requested data.

There is no one schedule that would satisfy everyone – so the standard allows each 'requesting entity' to establish a schedule and requires the owner to provide these according to the schedule (see R 2 and M2 in FAC-009)

Comments on Levels of Non-Compliance in FAC-008-1 – Facility Ratings Methodology:

Robert Rhodes – SPP - #2

The first sentence of 1.2 could be clearer if commas were inserted as shown here: The Transmission Owner and Generator Owner shall each demonstrate compliance, through and on-site audit conducted by the Compliance Monitor, within the first year that the entity commences operation." The way it is currently written it is not completely clear that the one year time frame applies to the Transmission and Generator Owners.

Additionally, this sentence implies that it only applies to those entities that have just started operation. What about those that have been in operation as Control Areas for years? I would assume this applies to them as well but this section does not clearly indicate that.

This was clarified to support the intent of your suggestion.

Replace "made" in 1.4.2 with "replaced, changed or revised".

Agreed. This change was made and is reflected in the proposed standard.

I have concerns about the comparability of the Levels of Non-Compliance. I would propose the following changes:

Level 1: 2.1.3 and 2.4

Level 2: 2.1.1 and 2.1.2

Level 3: 2.2

Level 4: 2.3

Most commenters supported the levels of non-compliance as proposed. Your proposal follows the same general order as the draft posting with one major exception – you've suggested shifting the following from a level four to a level one:

The Facility Ratings Methodology was not made available for inspection within 15 business days of receipt of a request.

Similar to other planning-oriented standards, the required documents should be long established and readily available. If the entity does not make it available for inspection, it is assumed to be non-existent or seriously flawed.

Michael C. Calimano – NYISO - #2

The Compliance section 2.3 states: "three of the required equipment types", when referring to what equipment needs a rating methodology, yet there is no discrete list of "equipment types" in the standard. The list of equipment types given in R.1.2.1 is incomplete.

This was modified to say, '…as identified in R1.2.1.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

In section D 2.1.2; 2.2; and 2.3: The SES recommends further clarification as to which equipment types are being referenced. It may be assumed, the equipment types are intended to be the equipment types referenced in R1.2.1; however, the SES would like the SDT to specifically note the equipment types or provide a reference to R1.2.1.

This was modified to say, '…as identified in R1.2.1.

Other Comments on FAC-008-1 – Facility Ratings Methodology:

John Blazekovich - Exelon Corporation - #1,3,5, 6

Specify that for generators that a Pmax, Pmin and reactive capability must be provided.

Please review the definition of Equipment Ratings. The change you are requesting is encompassed in the definition of Equipment Ratings.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
Michael C. Calimano – NYISO - #2

The designations that have recently been developed and presented to the Standing Committees regarding the Functional Model also need to be incorporated and continued to be coordinated as they are revised.

The SDT was directed to write these standards to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes will be made to the entities identified as being responsible for each of the requirements in this set of standards.

Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)

The designations that have recently been developed and presented to the Standing Committees regarding the Functional Model, once approved, should be incorporated and any further approved changes should continue to be coordinated/incorporated, as they are revised.

The SDT was directed to write these standards to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes will be made to the entities identified as being responsible for each of the requirements in this set of standards.

WECC Reliability Subcommittee: (9 - #1; 2 - #2; 1 - #4; 3 - #?)

Add wording from Version 0 FAC-004-0 R1.3.

The standard was modified as suggested to add, 'relay protective devices' to the list of equipment types in R1.2.1. Here is the language from FAC-004-0_R1.3:

In cases where protection systems and control settings constitute a loading limit on a facility, this limit shall become the rating for that facility.

The definition of the term "Reliability Authority" is in question. Standards should only refer to defined functional authorities. The term should be corrected, removed, or development of the Standard should be put on hold until an agreed upon term is defined.

The SDT was directed to write these standards to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes will be made to the entities identified as being responsible for each of the requirements in this set of standards.

Jeff Mitchell – ECAR - #2

Once approved, will Standard FAC-008-1 replace Standard FAC-004-0? It does not mention a replacement in the Roadmap, cover email for comments, or NERC web site. The new Standard FAC-008-1 is very similar to the current Standard FAC-004-0.

Yes - There is a master file of all V0 Requirements and identification of any associated V1 Standards that may replace those V0 Requirements. This file will be posted on the Standards Web Site so you can see the scope of the proposed replacements.

Comments on FAC-009-1 - Establish and Communicate Facility Ratings:

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

In section A item # 3, it is suggested to add a word ….....to ensure the "proper" determination....

The SDT did not add the word, 'proper' because this word is subjective.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)

Section D -1.3 mentions about retention of documentation for 12 months. What would be duration of retention of non-compliance/audit data for the compliance monitor?

The Standard was modified to include a data retention requirement for the Compliance Monitor.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)

In general, many of the measures are written more like requirements. Measures should be phrased and specified in a manner that they provide evidence for meeting the requirements.

The proposed measures are similar to, but not exact repetitions of the associated requirements. The SDT received several comments suggesting the measures be simplified and this change is reflected in the revised standards.

3. Do you agree with the changes made to Reliability Standard FAC-008-1 to address the technical review of Facility Ratings Methodologies?

Summary Consideration:
While many stakeholders did agree with this change, some did not. In the last posting of the standard, the list of 'Functions' that could submit comments on the methodology did not include all recipients of that methodology. Several stakeholders indicated that all recipients should be allowed to comment on the methodology, and the drafting team made this change. With this change, most commenters should agree with the inclusion of the peer review.

Several stakeholders suggested that the length of time for responding to a peer review should be longer and the drafting team changed this from 30 days to 45 calendar days.

Agree with Change to Add Technical Review of Facility Ratings Methodologies:

Robert Rhodes – SPP - #2
PSC of SC: (8 - #9)
TVA: (7 - #1)
Greg Mason – Dynergy Generation - #5
Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6
Ed Davis – Entergy Services, Inc - #1
Southern Co. Generation: (6 - #5; 1 - #6)
Southern Company Services: (6 - #1; 1 - #3)
William Smith – Allegheny Power - #1
SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)
PG&E: (3 - #1; 1 - #5)
Carissa P. Sedlacek – ISO-NE - #2
John Blazekovich - Exelon Corporation - #1, 3, 5, 6
BPA: (5 - #1)

Comments on Requirements in FAC-008-1 – Facility Ratings Methodology:

Raj Rana – AEP - #1, 3, 5

> The approah is reasonable. However only a RA or PA can challenge an owner's rating methodology.R3 should be expanded to allow adjacent transmission owners to challenge a rating methodology, and expect to get a response.

The standard was modified to address technical comments received from all of the entities that receive a copy of the associated Facility Rating Methodology – however since the adjacent Transmission Owner doesn't have a reliability-related need for the ratings, the adjacent Transmission Owner wasn't added to this list of entities.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

> NPCC Participating Members disagree with the vagueness of the standard. There is no requirement that an owner use an acceptable methodology, nor a standard set of assumptions. The outcome could be a set of ratings that are not useful for real operation and/or planning. The requirement for peer review would therefore not be effective. FERC recommends to have a single line methodology and criteria to be identified. Therefore, this necessitates the need for a consistent recognized standard/criteria for purposes of "methodology".
>
> In the absence of such a recognized/consistent methodolgy, there is a possibility that the ratings could be artificially set so low, as to influence dispatches and flows on other circuits.

As explained in the Executive Overview posted with the last version of this standard, a key element in the development of a Facility's rating is the Equipment Rating provided by the manufacturer. Manufacturers, who establish and use their own rating methodologies based on a variety of

assumptions, link their warranties to requirements that owners respect the equipment rating provided by the manufacturer. Establishing Facility Ratings outside those established by the manufacturer may void any warranty. With numerous manufacturers producing the same equipment, Facility Ratings for similar Facilities can vary simply on the basis of which manufacturer's equipment was installed.

The liability associated with having documented comments suggesting that a Facility Rating Methodology should be modified, will motivate Facility Owners to review their Facility Ratings Methodologies and make modifications if needed.

John Horakh – MAAC - #2

R2 and M2 indicate that the four relevant entities (RA, PA, TOP, and TP) each have access to the Facility Rating Methodologies. However, in R3 and M3, only the RA and PA are allowed to submit written comments. The TOP and TP should also be allowed to submit written comments. These should also be added in Levels of Compliance 2.1.3.

The standard was modified to address technical comments received from all of the entities that receive a copy of the associated Facility Rating Methodology as suggested in the requirements, measures, and levels of non-compliance.

ATC: (4 - #1)

Requirement 3 should be deleted because it offers no clear path to improved methodology and no discernable benefit to the industry. It requires the RA to respond to a comment but does not require the RA to make any changes to the methodology. The only purpose of this might be as a paper trail documenting a disagreement or, possibly, as a resource to help somebody try to assign after the fact culpability for some undesirable, possibly even unrelated, event.

The liability associated with having documented comments suggesting that a Facility Rating Methodology should be modified will motivate Facility Owners to review their Facility Ratings Methodologies and make modifications if needed.

Comments on Measures in FAC-008-1 – Facility Ratings Methodology:

WECC Reliability Subcommittee: (9 - #1; 2 - #2; 1 - #4; 3 - #?)

M2 as written is unclear. Please clarify what constitutes "evidence". Is the intent of M2 that entities provide the methodology within 15 days of request OR that entities have evidence that they provided the methodology within 15 days?

The intent of M2 was to have evidence that the Facility Ratings Methodology was made available for inspection within 15 days of a request

Midwest Reliability Organization: (10 - #2; Plus 31?)

The MRO has mixed feelings about the proposal to require the Transmission Owner and the Generator Owner to respond within 30 days to inquiries from the Reliability Authority and the Planning Authority about rating methodology.

The TO and the GO are the parties that will be harmed if facilities are damaged if facility ratings are not properly set to protect the equipment. To date the industry norm has been that the TO and the GO document their rating methodology, follow the methodology in setting ratings, and that the same ratings are used for the TO and the GO as are used for all other parties. The presumption has been that the TO and the GO will not purposely set the ratings too high and face disproportionate risk. By the same token, the presumption has been that the TO and the GO will not keep its ratings too low resulting in unnecessarily limiting their own use of the system (as well as the use of others.) Besides since most TOs and GOs are required to reveal their methodologies for facility ratings by FERC, there is small chance that TOs and GOs will use faulty

processes in setting facility ratings. This Standard Drafting Team is proposing that the norm needs to be raised such that the Reliability Authority and the Planning Authority technically review rating methodology of TOs and GOs and provide comments and that the TO and GO provide prompt response to such comments. While this process may possibly result in more uniformity in the rating of equipment, the fact is that most equipment today in the industry is largely rated based upon individual equipment pecularities. While substation transformers have substantial cooling capabilities above normal ratings, they often have severely limiting components, such as internal leads, which limit such transformers on an individual equipment piece basis. Transmission lines ratings may be increased by assuming more liberal wind assumptions, none the less on an individual basis typically sag limits and encroachment on Right-of-Way require special segment by segment ratings. Most TOs have significant engineering staffs that build and operate facilities involved in equipment rating efforts. It would seem as if the SDT proposal would require substantial expansion of Planning Authority and Reliability Authority staffs to acquire expertise to properly evaluate rating methodology. Also, such staffing would be unfamiliar with the facilities that were constructed by TO and GO staffs thus resulting in a "technical review" that results in a "learning experience" rather than a beneficial process. Further it seems over kill for the standard to require that the TO and GO respond in a 30 day period and that failure to respond with such speed somehow represents a reliability issue to the interconnected network. While the MRO recognizes the potential benefits of this "technical review", the MRO feels the benefits do not outweigh the costs. The MRO recommends that the provision either be deleted in its entirety or else that at a minimum the standard delete the reference to "its technical review" in R3 and in M3. The TO and GO should make the methodologies available for inspection. What the RA and PA do with this inspection should be up to the RA and the PA. The MRO believes it is better that the standard not require "a technical review". This will mean that all RAs and PAs will gear up for such a tecnnical review. Also, the 30 day response to a comment should be deleted as well. Ratings rarely should be subject to a hurried review. Rather rating changes should be carefully considered.

As proposed, the standard allows for, but does not require peers to conduct a technical review of Transmission Owner and Generator Owner Facility Rating Methodologies.

The TO and GO are not required to change their Facility Ratings Methodologies – only to address inquiries.

In addition, the 30 days was expanded to 45 days for a response to comments on the methodology.

Kenneth A. Goldsmith – Alliant Energy - #1

The philosophy in the past has been that the Transmission and Genertion Owners, as owners of the physical assets would not use ratings that would damage the assets, nor have ratings so low as to curtail their own activity as well as others in the industry.

Agreed. However, peer review provides an opportunity for another set of eyes to provide constructive feedback that might point out shortcomings in a methodology.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

The SES does not agree with the proposal for technical reviews as currently written. While the SES agrees and supports the requirement that TOs and GOs make available any rating methodology developed to other appropriate entities and also supports the obligation to respond to requests for clarification; we do not believe that these entities should be able to request changes or that the TO or GO must explain why the methodology will not be changed. The TO or GO is by definition, the owner of the asset; and as such, is the entity that has a fiduciary responsibility to, the asset owner's shareholders. This responsibility includes (among others) setting the ratings such that warranties and employee/public safety are protected as well as the asset itself is preserved and operated as intended. The TO or GO should not have to justify their respective methodologies to other entities that may have other motivations, such as seeing transfer limits increased for example. However, if the SDT and industry feel that a technical

review is necessary, then the reliability region and NERC would be the appropriate entities to conduct such a review a part of a compliance process. In addition, the SES believes the 30 day period to respond to any comments could potentially place a significant burden on the TO or GO. The SES recommends this requirement be extended to 60 days.

The list of entities that are provided the option of peer review is limited to those entities that have a reliability-related need for the information. The recipients of the methodologies should not be concerned with 'other motivations' such as seeing transfer limits increased.

The 30 days has been extended to 45 calendar days – which is a compromise of the various time periods suggested by commenters.

Comments on Levels of Non-Compliance in FAC-008-1 – Facility Ratings Methodology:

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

FAC-008-1

D1.2: The SES believes the requirement to self-certify every three years implies a requirement to keep the methodology document(s) up-to-date; yet this is not clearly stated. The SES recommends self-certification be required annually. The SES would also like the SDT to clarify the requirement that the Compliance Monitor…may also conduct an on-site audit cycle once every nine years. The use of the word--may--implies that the audit may or even may not be completed. The SES believes that have a rating methodology is a fundamental element of Good Utility Practice and therefore recommends this requirment be revised to read: The Compliance Monitor shall conduct an on-site audit once every five years and an investigation upon complaint to assess performance.

R1 uses the word, 'current' to clarify that the methodology must be 'in use'.

The self-certification requirement was changed to require self-certification at least once every three years. The methodology, if challenged, can be audited at any time as part of an investigation upon complaint.

The compliance monitoring section was further modified to say 'shall … at least once every nine years …'. The methodology is expected to be relatively static, and there may not be much 'new' to look at if audits are conducted more frequently.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

FAC-009-1

CM2: The SDT should provide clarification as to what is meant by…as scheduled by the requesting entities. The TO or GO will generally develop rating data for new facilities when it becomes known, and re-affirm it as built (See Comment on Question 9). Similarly, data for existing equipment is revised when modifications/reratings, etc. is done. All ratings are normally reaffirmed annually with model building processes. Additionally, in the example where the TO and Transmission Planner (TP) are the same entity, what will constitute evidence that the data was provided?

One schedule doesn't work for everyone. It's up to individual entities to determine how to show that the data was provided. Are there mutual operating agreements, procedures, etc?

Alan Adamson – NYSRC – NPCC - #2

We do not agree with the statement that allows "technical review". The Methodology should only be required to be made available as stated, when appropriate confidentilality agreements are in place.

As explained in the Executive Overview posted with the last version of this standard, the SDT added the language regarding peer review in response to a request from the Standards Authorization

Committee, in an attempt to address the FERC Order related to the August 14, 2003 Blackout and Blackout Report Recommendation 27.

The liability associated with having documented comments suggesting that a Facility Rating Methodology should be modified, will motivate Facility Owners to review their Facility Ratings Methodologies and make modifications if needed.

Confidentiality agreements are outside the scope of this standard.

Jeff Mitchell – ECAR - #2 *(No reason provided)*

Michael C. Calimano – NYISO - #2

> The standard in its present form is very vague. For example, there is no requirement for an owner to use an acceptable methodology. In such a scenario, the outcome could be a set of ratings that are not useful for real operation and/or planning. The requirement for peer review would therefore not be effective.

As explained in the Executive Overview posted with the last version of this standard, a key element in the development of a Facility's rating is the Equipment Rating provided by the manufacturer. Manufacturers, who establish and use their own rating methodologies based on a variety of assumptions, link their warranties to requirements that owners respect the equipment rating provided by the manufacturer. Establishing Facility Ratings outside those established by the manufacturer may void any warranty. With numerous manufacturers producing the same equipment, Facility Ratings for similar Facilities can vary simply on the basis of which manufacturer's equipment was installed.

The liability associated with having documented comments suggesting that a Facility Rating Methodology should be modified, will motivate Facility Owners to review their Facility Ratings Methodologies and make modifications if needed. Thus, the peer review process will promote the development of an "acceptable" methodology.

Other Comments on FAC-008-1 – Facility Ratings Methodology:

Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)

> The standard in its present form is very vague. For example, there is no requirement for an owner to use an acceptable methodology. In such a scenario, the outcome could be a set of ratings that are not useful for real operation and/or planning. The requirement for peer review would therefore not be effective. It is worth noting that FERC also recommends that a single line methodology and criteria be identified. Therefore, this necessitates the need for a consistent recognized standard/criteria for purposes of "methodology".
>
> In the absence of such a recognized/consistent methodolgy, there is a possibility that the ratings could be artificially set so low, as to influence dispatches and flows on other circuits.

As explained in the Executive Overview posted with the last version of this standard, a key element in the development of a Facility's rating is the Equipment Rating provided by the manufacturer. Manufacturers, who establish and use their own rating methodologies based on a variety of assumptions, link their warranties to requirements that owners respect the equipment rating provided by the manufacturer. Establishing Facility Ratings outside those established by the manufacturer may void any warranty. With numerous manufacturers producing the same equipment, Facility Ratings for similar Facilities can vary simply on the basis of which manufacturer's equipment was installed.

The liability associated with having documented comments suggesting that a Facility Rating Methodology should be modified, will motivate Facility Owners to review their Facility Ratings Methodologies and make modifications if needed.

FRCC: (1 - #1; 2 - #2; 2 - #5):

Is it intended that Transmission Operators and Transmission Planners do not have the ability to formally comment on Facility Ratings Methodology? Requirement R3 provides for written comments from the RAs and PAs only. TOs and TPs may be better qualified to comment on local system conditions in their areas and therefore, should be able to provide written comments and comment resolution from Transmission Owners and Generator Owners connecting facilities to TOs and TPs local systems.

The SDT may have to modify these standards to incorporate recommendations of the "Functional Model Reliability Standards Coordination Task Force (FMRSCTF)" report and the resulting SARs generated by their recommendations. Recommendations specifically address roles of the transmission operator and functional authority being delegated to a local area "transmission authority".

The standard was modified to allow any entity that receives the Facility Ratings Methodology to provide written technical comments on that methodology.

The SDT was directed to write these standards to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes will be made to the entities identified as being responsible for each of the requirements in this set of standards.

PG&E: (3 - #1; 1 - #5)

The technical review must be limited to the RA, PA, Transmission Planner and Transmission Operators that have a reliability need for the ratings.

The standard was modified to clarify that all entities that receive the Facility Ratings Methodology may provide written technical comments on that methodology. This includes RAs, PAs, TPs, and TOPs.

4. Do you agree with moving the identification of IROLs to this standard (FAC-010-1 System Operating Limits Ratings Methodology)?

Summary Consideration:
Most commenters did agree with this move, and the drafting team kept the identification of IROLs in FAC-010-1.

Several stakeholders questioned whether the Determine Facility Ratings (DFR) drafting team has members that have qualifications needed to address the identification of IROLs. The DFR drafting team includes people with both an operations and a planning background. Some of the DFR drafting team members are also members of the IROL SDT and one of the DFR drafting team members is a member of the Operating Limits Definition Task Force.

Several stakeholders questioned whether the Planning Authority and Transmission Planner have a role in determining SOLs and IROLs. Page 58 of the FMRSC_TF Report in the list of tasks assigned to the Interconnection Planning Coordinator (new term for the Planning Authority):

> 5. Review and determine TTC, IROL and SOL values (generally one year and beyond) as appropriate.

Page 75 of the FMRSC_TF Report in the list of tasks assigned to the Transmission Planner:

> 10. Support the development of IROL and SOL

Agree with Moving Identification of IROLs to FAC-010-1:

Robert Rhodes – SPP - #2

> Seems like a logical fit.

Raj Rana – AEP - #1, 3, 5

> This family of standards is definitional in nature, therefore the identificantion of IROLs belong in this standard.

Midwest Reliability Organization: (10 - #2; plus?)

> The MRO believes that the definition needed to be coordinated with this document. The MRO fully supports this addition.

PSC of SC: (8 - #9)
TVA: (7 - #1)
John Horakh – MAAC - #2
WECC Reliability Subcommittee: (9 - #1; 2 - #2; 1 - #4; 3 - #?)
Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6
Ed Davis – Entergy Services, Inc - #1
Southern Co. Generation: (6 - #5; 1 - #6)
ATC: (4 - #1):
Southern Company Services: (6 - #1; 1 - #3)
William Smith – Allegheny Power - #1
SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)
BPA: (5 - #1)
Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)
FRCC: (1 - #1; 2 - #2; 2 - #5):
Kenneth A. Goldsmith – Alliant Energy - #1
Alan Adamson – NYSRC – NPCC - #2
PG&E: (3 - #1; 1 - #5)
John Blazekovich - Exelon Corporation - #1,3,5, 6

Disagree with Moving Identification of IROLs to FAC-010-1:

P. D. Henderson – IESO - #2
Khaqan Khan – IESO - #2

The FAC and IROL standards need to be closely coordinated in order to ensure that no key component requirement is missed.

Agree. The two teams have had a joint meeting; some members belong to both SDTs; the SDTs have the same Facilitator; and the SDTs have been sharing information with one another as well as with the Operating Limits Definition Task Force.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
Khaqan Khan – IESO - #2

NPCC participating members are concerned that the drafting team makeup may be inappropriate to properly address the determination of IROL (address operational vs. planning issues).

The Determine Facility Ratings (DFR) drafting team includes people with both an operations and a planning background. Some of the DFR drafting team members are also members of the IROL SDT and one of the DFR drafting team members is a member of the Operating Limits Definition Task Force.

Michael C. Calimano – NYISO - #2

The SDT for this group of standards was formed to address the requirements spelled out in the initial SAR. By incorporating the identification of IROL aspects into the standards, does the current SDT membership possess the operational background uniquely necessary to IROL matters?

The Determine Facility Ratings (DFR) drafting team includes people with both an operations and a planning background. Some of the DFR drafting team members are also members of the IROL SDT and one of the DFR drafting team members is a member of the Operating Limits Definition Task Force.

There is also concern with the Planning Authority being involved with the determination of the SOL and IROL limits.

The Planning Authority does need to be involved with the determination of SOLs and IROLs developed for use in the planning horizon. This is supported by the changes under consideration for the Functional Model.

Please note that the Functional Model does not address all tasks – and the two versions of the Functional Model that were approved by the NERC Board did not address responsibility for developing the SOLs and IROLs used in the Planning Horizon. The revisions to the Functional Model that are currently under consideration do assign the Planning Authority a role in developing SOLs and IROLs.

Page 58 of the FMRSC_TF Report in the list of tasks assigned to the Interconnection Planning Coordinator (new term for the Planning Authority):

> 5. Review and determine TTC, IROL and SOL values (generally one year and beyond) as appropriate.

Page 75 of the FMRSC_TF Report in the list of tasks assigned to the Transmission Planner:

> 10. Support the development of IROL and SOL

ISO/RTO Standards Review Committee: (7 - #2):
NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
Khaqan Khan – IESO - #2

There are also concerns with the Planning Authority being involved with the determination of the SOL and IROL limits. Is this intentional?. According to the Functional Model (FM) the Transmission Operator should define the SOL limits and not the Planning Authority. Moreover, as per FM, the RA calculates the IROLs. These roles used in this draft need to be clarified.

The Planning Authority does need to be involved with the determination of SOLs and IROLs developed for use in the planning horizon. This is supported by the changes under consideration for the Functional Model.

Please note that the Functional Model does not address all tasks – and the two versions of the Functional Model that were approved by the NERC Board did not address responsibility for developing the SOLs and IROLs used in the Planning Horizon. The revisions to the Functional Model that are currently under consideration do assign the Planning Authority a role in developing SOLs and IROLs.

Page 58 of the FMRSC_TF Report in the list of tasks assigned to the Interconnection Planning Coordinator (new term for the Planning Authority):

> 5. Review and determine TTC, IROL and SOL values (generally one year and beyond) as appropriate.

Page 75 of the FMRSC_TF Report in the list of tasks assigned to the Transmission Planner:

> 10. Support the development of IROL and SOL

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
ISO/RTO Standards Review Committee: (7 - #2):

> The SAR states that this is a new standard. The IESO is concerned that the Version 1 standards "piecemeal approach" to replace standards that appear in Version 0 may result in confusion by the industry. There may be requirements scattered between Version 0 and Version 1, some approved and some pending. Therefore it is recommended that an implementation Plan be posted with each new Standard to ensure that the necessary coordination and planning has been done to replace/retire the pertinent Version 0 standards or requirements contained therein.

While there may be some confusion when portions of Version 0 Standards are retired or revised as a result of new Standards, that is the process that is in place and each Implementation Plan is designed to make it as clear as possible for the industry to see what is being replaced or revised. The Implementation Plan will be posted with the ballot version of the standard and will identify the sections of Version 0 Standards that should be retired or revised when this set of standards is adopted.

ISO/RTO Standards Review Committee: (7 - #2):
Khaqan Khan – IESO - #2
Michael C. Calimano – NYISO - #2

> The ISO/RTO SRC is of the opinion that version 0 (now called Reliability Standards) should be considered as a baseline set of standards and any applicable incremental changes/additions should be made to base standards to develop a set of new standards, as and where required.

Agree that Version 0 is a baseline set of standards. The Implementation Plan that will be posted with the ballot version of the standard will identify the sections of Version 0 Standards that should be retired or revised when this set of standards is adopted.

Kathleen Goodman – ISO-NE- #2

> It is recommended that an implementation Plan be posted with each new Standard to ensure that the necessary coordination and planning has been done to replace/retire the pertinent Version 0 standards or requirements contained therein.

Agree. The Implementation Plan that will be posted with the ballot version of the standard will identify the sections of Version 0 Standards that should be retired or revised when this set of standards is adopted.

5. What additional changes, if any, should the SDT make to Reliability Standard FAC-010-1 to add more criteria to the requirement for establishing a System Operating Limits Methodology to determine SOLs; and/or to determine which SOLs are also IROLs?

Summary Consideration:

Some stakeholders were concerned that the Planning Authority and Reliability Authority may not be able to come to agreement on the distinction between their planning horizon and operating horizon. To accommodate this concern, the drafting team added a footnote to the standard to indicate that, if mutual agreement cannot be reached, the planning horizon shall be one year and beyond and the operating horizon shall be real-time up to one year.

Several stakeholders questioned why the standard doesn't require all Category 'C' events to be considered in the development of SOLs. There seems to be a misunderstanding between requirements for 'system performance' and requirements for 'system operating limits'. Table 1 (as a part of the TPL-001-0 through TPL-004-0) standards does require that system performance meet Table 1 Category C (events resulting in the loss of two or more elements). These standards (TPL-001 through TPL-004) will not be superceded by FAC 008-1 through FAC 013-1. The existing Version 0 standards do not require entities to establish SOLs to meet consideration of Category C contingencies.

Category C is only applicable when referring to planning studies conducted with a starting point where all facilities are in service. In real-time operations, you operate such that you are always prepared to handle the next contingency. In most instances an element, or multiple elements, may already be out of service so you really are operating to protect the system from a second (or more) contingency and using 'Category C' events beyond that would result in very restrictive operating limits. Planners design the system to have two possible outages; in real-time operations the system may be operated with one or more outages. Planners justify the cost of many new or modified system reinforcements on the basis of computer simulations that have no more elements out of service than those outages listed as Category C; in real-time operations the system must continue to be operated regardless how many outages exist at the time

Several stakeholders indicated that timeframe for responding to a request for information from the compliance monitor need to be extended to be more practical. The drafting team changed this response time from 5 business days to 15 business days.

No Additional Changes Needed:

Raj Rana – AEP - #1, 3, 5
PSC of SC: (8 - #9)
John Horakh – MAAC - #2
Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6
ATC: (4 - #1):
William Smith – Allegheny Power - #1
BPA: (5 - #1)
Alan Adamson – NYSRC – NPCC - #2
PG&E: (3 - #1; 1 - #5)

Comments on Applicability in FAC-010-1 – System Operating Limits Methodology:

Robert Rhodes – SPP - #2

> In prior drafts the responsibility for determining SOLs rested with the Transmission Operators. In this draft that responsibility is taken away from the Transmission Operator and given to the Reliability Authority without regard for input from the Transmission Operator. While I can see a need for some consistency in SOL methodology throughout a Reliability Area, just like a single facility rating methodology doesn't always work in every situation, there is a need for flexibility

across systems within a Reliability Area. I would favor allowances for Transmission Operator input into the SOL methodology and even variations among Transmission Operators.

In the last draft of the standard – the responsibility for establishing SOLs was divided between the Planning Authority, Transmission Operator, Reliability Authority, and Transmission Planner. Many commenters indicated that this assignment of responsibility was unclear and the drafting team revised the standard accordingly. We fully expect as a means of implementation that the RA and PA may delegate much of the determination of SOLs to TPs and TOPs. This is supported by the language in the current version of the standard, which assigns responsibility to the RA and allows the RA to delegate this task to the TOP.

Comments on Requirements in FAC-010-1 – System Operating Limits Methodology:

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

R2: The SES recommends the SDT clarify the criteria to be used to develop the SOLs.

It isn't clear from this comment, what you feel needs clarity. The criteria for developing SOLs must be consistent with R4.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

R3: Allows the planning and operating horizons to be set by the Reliability Authority (RA) and Planning Authority (PA) at their discretion. The SES recommends the SDT identify and define the planning horizon as one year and beyond.

Most commenters did not object to the flexibility provided by the current language, so this was not changed. The demarcation tends to be institutional, and forcing entities to make wholesale changes doesn't seem necessary for reliability. A footnote was added to indicate that if mutual agreement can't be reached, the planning horizon shall be one year and beyond and the operating horizon shall be real-time up to one year.

Midwest Reliability Organization: (10 - #2; Plus 31?)

In R3 there is the implication that the planning and operating horizons should be determined by each Reliability Authority and Planning Authority throughout NERC. The MRO strongly disagrees with this approach. In development of SAR 600, Assess Transmission Future Needs and Develop Transmission Plans, the SAR Drafting Team proposed that the planning horizon for SAR 600 (the Transmission Planning SAR) should be one year and beyond and the operating horizon for these Facility Ratings Standards should be up to one year. The MRO recommends that the drafting team specify the same here. It should be noted that this timing is consistent with the Functional Model which indicates that Transmission Planners prepare plans for one year and longer. Also the definition is consistent with the business environment in the industry with open access: firm transmission requests of one year and longer can be rolled over so that transmission request evaluation must take this into account when reviewing such requests.

Most commenters did not object to the flexibility provided by the current language, so this was not changed. The demarcation tends to be institutional, and forcing entities to make wholesale changes doesn't seem necessary for reliability. A footnote was added to indicate that if mutual agreement can't be reached, the planning horizon shall be one year and beyond and the operating horizon shall be real-time up to one year.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

R4: The SES requires some clarification with regards to R4. Planners are required to ensure the system meets the performance requirments set forth in Table 1 of the Version 0 planning standards. Requirments R4.2.1 - R4.2.3 fall short of compliance with Table 1. As a result, any SOLs developed based on Table 1, may not be compatible with the operationg SOLs.

This is not a 'planning standard' and is not addressing system design. This will be an issue for the Standard that is addressing Assess Transmission Future Needs and Develop Transmission Plans.

SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)
Southern Co. Generation: (6 - #5; 1 - #6)
Southern Company Services: (6 - #1; 1 - #3)
Ed Davis – Entergy Services, Inc - #1

FAC-010-1, section B, paragraphs R4.1 & R4.2 - Both paragraphs require that the system "demonstate transient, dynamic, and voltage stability."

These terms mean different things to different people. The terms need to be defined.

The best course of action would probably be to require each RA and PA define the terms in their SOL & IROL methodology. For example, you could define -instability- in the following ways:

A generating unit pulling out of synchronism

Two or more generating units pulling out of synchronism

Generating units at two or more locations pulling out of synchronism

A generating unit (or units) pulling out of synchronism such that the resulting impedance swing is into the transmission system.

Fast or slow voltage collapse

Poorly damped power oscillations involving units at more than one location

The first two should not be IROLs. They are system limits. However, the last four should be IROLs.

Providing explanatory information as suggested doesn't belong in a standard, but a SAR for establishing definitions or a technical reference may be needed to establish definitions for these terms. R5 does require the PA and RA to each establish a SOL methodology to ensure stability. The standard does not prevent the PA and RA from establishing or defining instability as part of their respective SOL methodologies.

Note that there is a definition for stability in the glossary established for Version 0 Standards.

TVA: (7 - #1)

Need clarification of intent on R4.3.3

R4.1 and R4.2 clearly state that the system must be operated within limits in real-time and following the specified single contingencies.

R4.3.3 appears to allow for manual action/intervention as a response to a single contingency. This could be viewed as the standard permitting the system to operate above limits during the time it takes to manually respond to the contingency event through reconfiguration, redispatch, or other mitigating action. Was this the intent of the drafting team? Also, does reconfiguration in R4.3.3 include generation redispatch?

R4.3 … In determining the system's response to a single Contingency, the following shall be acceptable:

R4.3.3: System reconfiguration through manual or automatic control or protection actions:

R4.3.3 allows manual action/intervention in response to the single contingency but the limits should be set so there is adequate time for the response to occur and prevent exceeding a Facility limit (i.e., if you have a 20 minute emergency rating, manual action can be taken to reduce the Facility loading to the applicable Facility rating (steady state?) before the 20 minute time frame is exceeded). The bottom line is you do not exceed the applicable Facility rating.

The intent of R4.3 is to provide avenues (including generation re-dispatch or other manual operating actions), following a contingency, to prepare the BES for the next contingency.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

R4.3.2: The SES recommend the SDT delete or further explain in more detail the requirement…or if the real time operating conditions are more adverse than anticipated in the corresponding studies. The SES's concern is that the methodology developed is dealing with studies to determine SOLs by defining an acceptible response. Any real-time operating conditions are not known.

The intent of the quoted phrase was to allow the system operator additional actions if that operator determines that the underlying assumptions in pre-determination of SOLs are no longer valid or appropriate for the real-time operating conditions.

Comments on Compliance in FAC-010-1 – System Operating Limits Methodology:

Robert Rhodes – SPP - #2

See my comment 1. in Question 2 regarding the first sentence in Compliance 1.2 in FAC-010-1.

This was modified to 15 business days.

The five-business day response required in Compliance 1.4 is too quick, 10 to 15 business days would be more appropriate.

This was modified to 15 business days.

See my comment 2. in Question 2 regarding Compliance 1.4.3.

See the response to comments on Question 2.

There is a lack of consistency in the use of non-compliance and noncompliance in Compliance 2.

These format errors have been fixed.

I again have concerns about comparability of the Levels of Non-Compliance. I would suggest the following:

Level 1: 2.1.1 and 2.2

Level 2: 2.1.1

Level 3: What is currently shown as Level 2.

Level 4: 2.1.3 and 2.1.4

Most commenters supported the levels of non-compliance as proposed. Your proposal follows the same general order as the draft posting with one major exception – you've suggested shifting the following from a level four to a level one:

- The SOL Methodology was not issued to all required entities.

Not providing the methodology to all entities prevents those entities from concurring with the methodology from their perspective and ensuring that operations are consistent and supportive across areas. Without having the methodology, entities could miss significant changes that may contain flaws or are contrary the adjacent operations.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

D1.4: The SES recommends changing 5 business days to 15 business days. This increase in the number of days makes the compliance request typical with other NERC compliance

requirements. (See FAC-008-1, BR2). This recommendation shall apply throughout our comments on these standards.

This was modified to 15 business days.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

D2.1.3: The SES recommends changing…methodology did not address evaluation… to …methodology did not address a requirement for evaluation.

The standard was modified to support the intent of your suggestion.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

D3.1.1 and D3.1.2: Same comment as for D2.1.3.

The standard was modified to support the intent of your suggestion.

Other Comments on FAC-010-1 – System Operating Limits Methodology:

Kenneth A. Goldsmith – Alliant Energy - #1

We believe the Planning Horizon should be for periods 1 year and beyond, and the Operating Horizon would be less than one year, to be consistent with other standards.

Most commenters did not object to the flexibility provided by the current language, so this was not changed. The demarcation tends to be institutional, and forcing entities to make wholesale changes doesn't seem necessary for reliability. A footnote was added to indicate that if mutual agreement can't be reached, the planning horizon shall be one year and beyond and the operating horizon shall be real-time up to one year.

John Blazekovich - Exelon Corporation - #1,3,5, 6

In the definition of Pre-Contingency State, clarify what is meant by bring the system back to normal. Does this mean that all loadings be within the normal ratings?

The term, 'pre-contingency state' was removed from the standard and is no longer a 'defined' term.

Robert Rhodes – SPP - #2

If we needed an explicit definition for "widespread", why don't we also need one for "normal" as referenced in the definition for Pre-Contingency State?

The terms 'widespread' and 'pre-contingency state' are not defined terms in this set of Standards.

WECC Reliability Subcommittee: (9 - #1; 2 - #2; 1 - #4; 3 - #?)

The definition of the term "Reliability Authority" is in question. Standards should only refer to defined functional authorities. The term should be corrected, removed, or development of the Standard should be put on hold until an agreed upon term is defined.

The SDT was directed to write the standard to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes will be made to the entities identified as being responsible for each of the requirements in this set of standards.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
P. D. Henderson – IESO - #2
Khaqan Khan – IESO - #2
ISO/RTO Standards Review Committee: (7 - #2)
Michael C. Calimano – NYISO - #2

See the comments in question #4 above.

Please see the consideration of your comments in question #4.

FRCC: (1 - #1; 2 - #2; 2 - #5):

See response to question #9

Please see the consideration of your comments in question #9.

6. Do you agree with the changes made to Reliability Standard FAC-010-1 to address the technical review of System Operating Limits Methodologies?

Summary Consideration:
While many stakeholders did agree with this change, some did not. The reasons for rejecting this requirement are the same as provided for rejection of the same requirement relative to the Facility Ratings Methodology. The drafting team did make the following changes to obtain better consensus on the support of the peer-review requirement.

- Several stakeholders suggested that the length of time for responding to a peer review should be longer and the drafting team changed this from 30 days to 45 calendar days.
- Several stakeholders indicated that timeframe for responding to a request for information from the compliance monitor need to be extended to be more practical. The drafting team changed this response time from '5 business days' to '15 business days'.

Agree:

Michael C. Calimano – NYISO - #2

As far as methodology is concerned, perhaps the RRO coordination/arbitration would be preferable.

Based on the comments received, this change was not adopted. If the technical review results in a confrontation that must be resolved by another entity, then this would be addressed by the Compliance Monitor as part of a triggered investigation. If they can't resolve the issue dispute resolution is an option.

Raj Rana – AEP - #1, 3, 5
PSC of SC: (8 - #9)
TVA: (7 - #1)
Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6
John Horakh – MAAC - #2
Ed Davis – Entergy Services, Inc - #1
Southern Co. Generation: (6 - #5; 1 - #6)
Southern Company Services: (6 - #1; 1 - #3)
William Smith – Allegheny Power - #1
SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)
BPA: (5 - #1)
Alan Adamson – NYSRC – NPCC - #2
PG&E: (3 - #1; 1 - #5)
John Blazekovich - Exelon Corporation - #1,3,5, 6

Comments on Requirements in FAC-010-1 – System Operating Limits Methodology:

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

R4: The SDT should clarify what is meant by the intent of …schedule for delivery of those limits.

Question 4 was related to R9 of FAC-010-1. This comment is on R4 of FAC-011-1, not FAC-010-1. The drafting team doesn't understand what you feel is unclear. The schedule would specify dates when the limits would be delivered.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

R4.2: Previous to R4.2, the Transmission Operator (TOp) is not required to calculate SOLs. Therefore, the SES recommends the deletion of R4.2 or provide further clarification as to what responsibility the TOp has with respect to developing SOLs.

Question 4 was related to FAC-010-1 R9, not R4. However, standard FAC-010-1 was modified to clarify that, if the RA has directed (delegated) the TOP to develop SOLs; the TOP must develop SOLs in accordance with the RA's SOL Methodology.

ATC: (4 - #1):

> Requirement 9 should be deleted because it offers no clear path to improved methodology and no discernable benefit to the industry. It requires the RA to respond to a comment but does not require the RA to make any changes to the methodology. The only purpose of this might be as a paper trail documenting a disagreement or, possibly, as a resource to help somebody try to assign after the fact culpability for some undesirable, possibly even unrelated, event.

As explained in the Executive Overview posted with the last version of this standard, the SDT added the language regarding peer review in response to a request from the Standards Authorization Committee, in an attempt to address the FERC Order related to the August 14, 2003 Blackout and Blackout Report Recommendation 27.

The liability associated with having documented comments suggesting that a Facility Rating Methodology should be modified, will motivate Facility Owners to review their Facility Ratings Methodologies and make modifications if needed.

Midwest Reliability Organization: (10 - #2; plus?)

> The MRO applauds the Standards Drafting Team for essentially developing an overall acceptable SOL approach in which the Reliability Authority and the Planning Authority develop SOL approaches which are subject to comment by others. However, again it seems over kill to require the RA and PA to respond to comments from others in 30 days or even to suggest that others need to conduct "technical reviews" of these SOL approaches. The MRO believes it is sufficient to require the RA and the PA to make their approach open for inspection of others. The MRO believes R9 should either be deleted completely or at least the technical review and the 30 day requirement should be deleted from R9. Therfore, the RA and the PA need to respond to comments whatever they are but they have the time to do so and "technical reviews" are not implicity required or encouraged to be conducted by others.

As explained in the Executive Overview posted with the last version of this standard, the SDT added the language regarding peer review in response to a request from the Standards Authorization Committee, in an attempt to address the FERC Order related to the August 14, 2003 Blackout and Blackout Report Recommendation 27.

The liability associated with having documented comments suggesting that a Facility Rating Methodology should be modified, will motivate Facility Owners to review their Facility Ratings Methodologies and make modifications if needed.

As proposed, the standard allows for, but does not require or suggest that peers conduct a technical review of Planning Authority and Reliability Authority SOL Methodologies. Furthermore, the standard does not require the PA and RA to change their SOL Methodologies – only to address inquiries.

In addition, the 30 days was expanded to 45 days for a response to comments on the methodology.

Kenneth A. Goldsmith – Alliant Energy - #1

> We believe the 30 day period should be deleted from the standard. it should be enough to have the processes open for inspection.

The 30 days was expanded to 45 days for a response to comments on the methodology.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

In general, the SES would have the SDT refer to our comments in Question #3 regarding the technical review of methodologies.

Please see the consideration of comments on Question #3.

Comments on Compliance in FAC-010-1 – System Operating Limits Methodology:

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

D1.4: Increase 5 days to 15 days.

This was modified as suggested.

D2.2.2: The proposed standard reads: Some, but not all SOLs were provided in accordance with their respective schedules. The SES recommends the SDT clarify and futher define--some--so as to make this requirement measurable and above individual interpertation. Also the SES would like to see additional definition of the term--schedules-- as discussed in R4 above.

This was modified to ensure that it is measurable.

Other Comments on FAC-010-1 – System Operating Limits Methodology:

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)

As far as methodology is concerned, perhaps the RRO coordination/arbitration would be preferable".

Based on the comments received, this change was not adopted. If the technical review results in a confrontation that must be resolved by another entity, then this would be addressed by the Compliance Monitor as part of a triggered investigation. If they can't resolve the issue, RRO coordination/arbitration is an option.

PG&E: (3 - #1; 1 - #5)

The technical review must be limited to the RA, PA, Transmission Planner and Transmission Operators that have a reliability need for the limits.

R9 refers to documented technical comments of the recipient of the SOL Methodology, which implies the RA, PA, Transmission Planner, Transmission Operators who have a reliability-related need as clearly specified in requirements R6 and R7 and measures M2 and M3.

Robert Rhodes – SPP - #2

See my comment 2 in Question 5 and my response to Question 1.

See the consideration of comments to Question 5 and Question 1.

ISO/RTO Standards Review Committee: (7 - #2)
P. D. Henderson – IESO - #2
Khaqan Khan – IESO - #2

See comments in question #3 above.

See the consideration of comments to Question 3.

FRCC: (1 - #1; 2 - #2; 2 - #5):

See response to question #9 (Integration of the "Transmission Authority").

See the consideration of comments to Question 9.

7. What additional changes, if any, should the SDT make to Reliability Standard FAC-012-1 (Transfer Capability Methodology) to add more criteria to the requirement for establishing a Transfer Capability Methodology?

Summary Consideration:

Most commenters agreed with the criteria for establishing a Transfer Capability methodology.

Several stakeholders noted that the standard should only be applicable to those entities that are required to develop Transfer Capabilities, and this change was made.

No Additional Criteria Needed:

Raj Rana – AEP - #1, 3, 5
PSC of SC: (8 - #9)
TVA: (7 - #1)
Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6
Ed Davis – Entergy Services, Inc - #1
Southern Co. Generation: (6 - #5; 1 - #6)
ATC: (4 - #1)
Midwest Reliability Organization: (10 - #2; Plus 31?)
Southern Company Services: (6 - #1; 1 - #3)
William Smith – Allegheny Power - #1
SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)
Kenneth A. Goldsmith – Alliant Energy - #1
Alan Adamson – NYSRC – NPCC - #2
Michael C. Calimano – NYISO - #2
Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

Comments on Requirements in FAC-012-1 – Transfer Capabilities Methodology:

PG&E: (3 - #1; 1 - #5)

The following comments apply to both FAC-012-1 and FAC-013-1 (Please see also attached file). As written, developing the Transfer Capability methodology and establishing and communicating Transfer Capability are required without regard to whether such quantities would be used in the first instance. So, entities would have to develop the information the need of which has not been first established. In the earlier drafts, the requirements to establish and document the methodology and the transfer capabilities were in effect only if such information were requested in the first place. However, this provision was not carried over to this version. This could lead to inefficient use of resources. For example, WECC has established Path Ratings in Planning, and Operating Transfer Capabilities (OTC) in Operations and with transfer limits defined by nomograms if needed. Both the Path Ratings and the OTCs would satisfy the Requirements set forth in Standards FAC-010-1 and FAC-011-1. However, as a general practice, WECC does not use nor establish Transfer Capability between areas as defined in the NERC Glossary of Terms. We suggest reinserting the earlier provision by changing the Purpose (A.3) and the Requirement R1 in both Standards FAC-012-1 and FAC-013-1 to read:

> Purpose: To ensure the determination of Transfer Capabilities that result in the reliable planning and operation of the Bulk Electric System (BES) if requested by Reliability Authority, Planning Authority, Transmission Planner or Transmission Operators that have a reliability need for the Transfer Capabilities.
>
> R1. The Reliability Authority and Planning Authority shall each document its current methodology used for developing its inter-regional and intra-regional Transfer Capabilities (Transfer Capability Methodology) if requested by Reliability Authority, Planning Authority, Transmission Planner or Transmission Operators that have a reliability need for the Transfer Capabilities.

The standard was modified to clarify that it is only applicable to entities required within their Region to establish inter-regional and intra-regional Transfer Capabilities

BPA: (5 - #1)

WECC ensures the safe and reliable operation of the Western Interconnection through the determination of SOLs. We do not presently utilize or establish TC as other regions may. R1 of this standard states that the RA and PA "shall each document its current (TC) methodology". The standard should be clear that if TC is not used, an entity is not required to develop and document TC Methodology.

The standard was modified to clarify that it is only applicable to entities required within their Region to establish inter-regional and intra-regional Transfer Capabilities

John Horakh – MAAC - #2

In R1.1 and M1.1, : Transfer Capabilities shall respect all applicable SOLs. Since the IROLs subset of SOLs are established as per methodology in FAC-010-1, there should not be a need to review all SOLs when determining Transfer Capability. So just respect the IROLs.

Most commenters agreed with the language in the proposed standard. It is not enough to just respect the IROLs because, depending on the operating condition, operating outside an SOL could also lead to consequences similar to those resulting from violating of IROLs. The proposed standard allows engineering judgment in selecting the applicable SOLs, but not restricting the selection to only IROLs.

John Blazekovich - Exelon Corporation - #1,3,5, 6

In section R1.3 the following items should be added for description in the methodology: Source and sink points used including a discussion of a exclusions. Distribution factor cutoff levels used. Load level studied. Operating steps or redispatch used. Base case adjustments to enhance transfer capability such a phase shifetr settings or generation dispatch. Contingencies that are studied. What areas and voltages are monitored. Are third party limits monitored? Can source directions be changed to increase transfer capability? Define how FCTTC is determined. Decsribe rules for skipping limits.

The details you've suggested are already covered in the four topics encompassed here under R1.3: generation, load and transmission configuration and any other assumptions. These should be included in the methodology as derived by the RA and PA. Adding more detailed information to this list would result in a list that is not appropriate for all entities.

Comments on Compliance in FAC-012-1 – Transfer Capabilities Methodology:

Robert Rhodes – SPP - #2

See my comment 1 in Question 2 regarding the first sentence in Compliance 1.2.

See my comment 2 in Question 2 regarding Compliance 1.4.2.

I again have concerns about comparability of the Levels of Non-Compliance. I would suggest the following:

Level 1: 2.1.1

Level 2: 2.1.2 and 2.4

Level 3: 2.2

Level 4: 2.3

Please see the response to your comments on Questions 1 and 2.

Most commenters agreed with the levels of non-compliance and they were not changed.

Other Comments on FAC-012-1 – Transfer Capabilities Methodology:

WECC Reliability Subcommittee: (9 - #1; 2 - #2; 1 - #4; 3 - #?)

> The definition of the term "Reliability Authority" is in question. Standards should only refer to defined functional authorities. The term should be corrected, removed, or development of the Standard should be put on hold until an agreed upon term is defined.

The SDT was directed to write these standards to be consistent with the current version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes will be made to the entities identified as being responsible for each of the requirements in this set of standards.

FRCC: (1 - #1; 2 - #2; 2 - #5):

> See response to question #9

Please see consideration of your response to question #9.

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
ISO/RTO Standards Review Committee: (7 - #2)
Khaqan Khan – IESO - #2

> Questions are raised whether there is a need for both Transfer Cabability standards and/or SOL related standards re: SOL methodology…establishment. Would it result in duplication? this needs to be clarified.

The need for both was established with the SAR for this standard. The proposed standard has been modified to clarify that the Transfer Capability requirements are only applicable to entities required by their Region to establish inter-regional and intra-regional Transfer Capabilities

8. Do you agree with the changes made to Reliability Standard FAC-012-1 to address the technical review of the Transfer Capability Methodology?

Summary Consideration:
While many stakeholders did agree with this change, some did not. The reasons for rejecting this requirement are the same as provided for rejection of the same requirement relative to the Facility Ratings Methodology. The drafting team did make the following changes to obtain better consensus on the support of the peer-review requirement.

- Several stakeholders suggested that the length of time for responding to a peer review should be longer and the drafting team changed this from 30 days to 45 calendar days.
- Several stakeholders indicated that timeframe for responding to a request for information from the compliance monitor need to be extended to be more practical. The drafting team changed this response time from '5 business days' to '15 business days'.

Several stakeholders noted that the standard should only be applicable to those entities that are required to develop Transfer Capabilities, and this change was made.

Several stakeholders suggested that the methodology be distributed to a broader range of Planning Authorities and this modification was made.

Agree:

Robert Rhodes – SPP - #2
PSC of SC: (8 - #9)
TVA: (7 - #1)
Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6
Ed Davis – Entergy Services, Inc - #1
John Horakh – MAAC - #2
Southern Co. Generation: (6 - #5; 1 - #6)
Southern Company Services: (6 - #1; 1 - #3)
William Smith – Allegheny Power - #1
SERC EC Planning Standards Subcommittee: (7 - #1; 1 - #2; 1 - #3)
Alan Adamson – NYSRC – NPCC - #2
PG&E: (3 - #1; 1 - #5)
John Blazekovich - Exelon Corporation - #1,3,5, 6
Michael C. Calimano – NYISO - #2

Comments on Requirements in FAC-012-1 – Transfer Capabilities Methodology:

Raj Rana – AEP - #1, 3, 5

R3.2 sould be expanded to include that each PA also distribute the methodology to any transmission planner that models that area covered by the PA. this would be comparible to the requirement R2.2 for the RA.

The standard was modified to conform to this suggestion.

ATC: (4 - #1):

Requirement 4 should be deleted because it offers no clear path to improved methodology and no discernable benefit to the industry. It requires the RA to respond to a comment but does not require the RA to make any changes to the methodology. The only purpose of this might be as a paper trail documenting a disagreement or, possibly, as a resource to help somebody try to assign after the fact culpability for some undesirable, possibly even unrelated, event.

As explained in the Executive Overview posted with the last version of this standard, the SDT added the language regarding peer review in response to a request from the Standards Authorization Committee, in an attempt to address the FERC Order related to the August 14, 2003 Blackout and Blackout Report Recommendation 27.

As envisioned, the liability associated with having documented comments suggesting that a Methodology to determine Transfer Capability should be modified will motivate entities to review their Methodologies and make modifications if needed or state the reasoning for not doing so. As such, this practice would offer needed improvement to the methodology without being overly prescriptive.

Midwest Reliability Organization: (10 - #2; Plus 31?)

Again the MRO believes the Standards Drafting Team has developed an overall acceptable Transfer Capability approach in which the Reliability Authority and the Planning Authority develop SOL approaches which are subject to comment by others. However, again it seems over kill to require the RA and PA to respond to comments from others in 30 days or even to suggest that others need to conduct "technical reviews" of these SOL approaches. The MRO believes it is sufficient to require the RA and the PA to make their approach open for inspection of others. The MRO believes R4 should either be deleted completely or at least the technical review and the 30 day requirement should be deleted from R4.

The time period for responding to comments was modified from 30 to 45 calendar days. If the requirement to respond to comments were removed entirely, then there would be no documentation to support peer review. As explained in the Executive Overview posted with the last version of this standard, the SDT added the language regarding peer review in response to a request from the Standards Authorization Committee, in an attempt to address the FERC Order related to the August 14, 2003 Blackout and Blackout Report Recommendation 27.

Kenneth A. Goldsmith – Alliant Energy - #1

As in Question #6, we believe the 30 day requirement should be removed.

The time period for responding to comments was modified from 30 to 45 calendar days. If the time period were removed entirely, then there would be no documentation to indicate that the recipient of the comments took any action to address the comments received.

Standards Evaluation Subcommittee: (3 - #1; 1 - #2; 2 - #9)

In general, the SES would have the SDT refer to our comments in Question #3 regarding the technical review of methodologies.

Please see the consideration of your comments on Question #3.

Other Comments on FAC-012-1 – Transfer Capabilities Methodology:

NPCC CP9 Reliability Standards Working Group: (4 - #1; 5 - #2)
Kathleen Goodman – ISO-NE- #2
ISO/RTO Standards Review Committee: (7 - #2)

See Question 7 above.

Please see the consideration of your comments on Question #7.

P. D. Henderson – IESO - #2
Khaqan Khan – IESO - #2

The redundancies indicated in comments of question #7 above need to be addressed first before a technical review could be made.

Please see the consideration of your comments on Question #7.

PG&E: (3 - #1; 1 - #5)

The technical review must be limited to the RA, PA, Transmission Planner and Transmission Operators that have a reliability need for the limits.

This is what is in the proposed standard.

FRCC: (1 - #1; 2 - #2; 2 - #5):

See response to question #9

Please see the consideration of your comments on Question #9.

9. Please identify any other changes you think the SDT should make to this standard before it goes to ballot.

The Technical Content of the Standard Is Ready to be Submitted for Ballot:

Raj Rana – AEP - #1, 3, 5

> This standard has been under development for 3 years, and has already included comments received from the last two postings. These srandards are definitional and foundational. It is time for the industry to vote on these vary basic standards.

Agree.

PSC of SC: (8 - #9)
John Horakh – MAAC - #2
Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6
William Smith – Allegheny Power - #1
BPA: (5 - #1)

The Following Changes Should be Made to the Standard Before it is Submitted for Ballot:

General Comments:

Michael C. Calimano – NYISO - #2
NPCC CP9 Reliability Standards Working Group

> The FAC and IRO standards need to be closely coordinated and there is concern that a key component requirement may end up missing.

Agree. The two teams have had a joint meeting; some members belong to both SDTs; the SDTs have the same Facilitator; and the SDTs have been sharing information with one another as well as with the Operating Limits Definition Task Force.

NPCC CP9 Reliability Standards Working Group
ISO/RTO Standards Review Committee
Michael C. Calimano – NYISO - #2
IESO

> NPCC's participating members also have expressed concern that the Version 1 standards "piecemeal approach" to replace standards that appear in Version 0 may result in confusion by the industry. There may be requirements scattered between Version 0 and Version 1, some approved and some pending. Therefore it is recommended that an Implementation Plan be posted with each new Standard to ensure that the necessary corrdination and planning has been done to replace/retire the pertinent Version 0 standards or requirements contained therein. Some examples where possible duplication / inconsistency shall be checked are: FAC-004-0 vs FAC-008-1, FAC-005-0 vs FAC-009-1, MOD-001-0 vs FAC-012-1".

While there may be some confusion when portions of Version 0 Standards are retired or revised as a result of new Standards, that is the process that is in place and each Implementation Plan is designed to make it as clear as possible for the industry to see what is being replaced or revised. The Implementation Plan will be posted with the ballot version of the standard and this will identify the sections of Version 0 Standards that should be retired or revised when this set of standards is adopted.

FRCC

The SDT may have to modify these standards to incorporate recommendations of the "Functional Model Reliability Standards Coordination Task Force (FMRSCTF)" report and the resulting SARs generated by their recommendations. Re-alignment of functional roles and responsibilities (changing of names) makes commenting on accountabilities difficult at this time.

Development of this standard should closely monitor activities and actions generated by the newly developed Funtional Model Working Group Plus (FMWG+).

Additionally we would propose some general comments and formatting suggestions.

The SDT was directed to write these standards to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes (i.e. changing of names) will be made for the responsible entities identified for each of the requirements in this set of standards.

In general, "purpose" statements are vague and identical for multiple standards. Standards are setting specific guidelines and criteria and as such, should have specifc, unique and descriptive "purpose" statements.

The SDT did make some modifications to the Purpose statements to make them more standard-specific. The original intent was to have this set of requirements be a single standard.

It may simplify and shorten the standards if instead of duplicating the language of the "Requirements" section in the "Measures" section, the "Measures" section simply refers back to a specific "Requirements" section. For example, in standard FAC-008-1, M1 could be written as follows:

M1. The Transmission Owner or Generator Owner shall have a documented Facility Ratings Methodology that includes all the requirements and sub-requirements of section R1.

The above comment is intended in general terms and should be applied wherever verbatim duplication occurs, within any standard.

The proposed measures in the last posting were similar to, but not exact repetitions of the associated requirements. When these Measures were originally drafted, the intent was to ensure that each Measure were complete and self-supporting such that, if an entity downloaded a report of all Measures associated with a 'Function' then the report, generated from a relational database of all Reliability Standards, would be understandable without the need for additional reports. Thus, the use of 'cross references' to requirements was originally discouraged. (A report that identifies several measures with the same language. Example: several measures all saying, '… as specified in R1.2.' will be meaningless.) However, the use of cross references has become the 'norm' and the standards have been modified as suggested.

An additional general formatting comment applicable throughout several sections of the standards: It would add clarity if the SDT broke out items into numbered sub-sections where multiple "requirements" , "measures" and "compliance" elements are listed under one section. For example, in FAC-010-1, section R1, the first sentence would be drafted as R1 and each of the following sentences could be listed under sub-sections R1.1 through R1.3. In FAC-008-1, compliance section 1.3 could be broken out further, into sub-section 1.3.1 through 1.3.3.

The specific format established for Version 1 Standards is under the direction of the NERC Director-Standards. The SDT agrees that --- in this case --- the suggested format changes to the requirements and measures would simplify the documents.

With respect to the compliance sections, the SDT is following the established NERC template, which does not number the paragraphs in the compliance section of the standards.

FAC-008-1 refers to CM "may also conduct an on-site audit every nine years..". The use of terms like "may" and "complaint" are vague, and should not be used in a compliance section. What is the RRO required or not required to do based on time and "complaint"? Who complains, is it a formal complaint process, initiated by whom?

Many of the details you are requesting need to be supplied by procedures established for administration of the regional Compliance Programs and are outside the scope of the SDT. The word, 'may' was modified to 'shall' to ensure that the Compliance Monitor does conduct at least one audit every 'x' years.

> Overall, the standards seem to be focusing into reasonable and prudent industry consensus requirements, yet the overall FMRSCTF report recommendations will definitely impact the "Applicability" sections along with some of the "Requirements" and "Measures" sections. These standards will require some further refinement and aligning and therefore should not become "enforceable" standards without additional clarification.

The SDT was directed to write these standards to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes (i.e. changing of names) will be made for the responsible entities identified for each of the requirements in this set of standards.

Kenneth A. Goldsmith – Alliant Energy - #1

> Emergency Ratings should be included in the standard, along with the language which defines the requirements for emergency ratings.

The proposed set of standards is more comprehensive and goes beyond requiring that entities specify just normal and emergency ratings.

ISO/RTO Standards Review Committee

> The FAC and IROL standards need to be closely coordinated in order to ensure that no key component requirement is missed.

Agree. The two teams have had a joint meeting; some members belong to both SDTs; the SDTs have the same Facilitator; and the SDTs have been sharing information with one another as well as with the Operating Limits Definition Task Force.

ISO/RTO Standards Review Committee
IESO

> The ISO/RTO SRC is of the opinion that version 0 (now called Reliability Standards) should be considered as a baseline set of standards and any applicable incremental changes/additions should be made to base standards to develop a set of new standards, as and where required.
>
> Based on our comments, and especially in the absence of a clear implementation plan, we are of the opinion that the FAC standard(s) is not acceptable and ready for ballot.

The SDT agrees that Version 0 is a baseline set of standards. The Implementation Plan will be posted with the ballot version of these new standards. This will identify the sections of Version 0 Standards that should be retired or revised when this set of standards is adopted and implemented.

MRO:

> There is no mention of emergency ratings in either the FAC-008-1, FAC-009-1, or in FAC-010-1. Historically, NERC Standards have referred to emergency ratings and also have indicated that such ratings are "applicable for short durations as required to permit operating steps to maintain system control." The MRO recommends that Emergency Ratings be referred to in the standard. The MRO also recommends that the SDT consider including the additional language which defines the requirements for emergency ratings.

The proposed set of standards is more comprehensive and goes beyond requiring that entities have just normal and emergency ratings.

MRO:

The MRO believes that the definition for Cascading needs to be revised to not be so limiting in its definition. The MRO provides details above.

Please see the consideration of the comments submitted on the term, 'cascading' in the comments submitted on definitions.

The MRO believes that the requirements for review of Facility Rating, SOL, and IROL Methodologies should be deleted or at least revised to delete technical reviews and 30 day responses to comments. This seems over kill given the limited benefits expected to be gained. However, the MRO does support the development and cooordination of methodologies with appropriate stakeholders.

The time period for responding to comments was modified to 45 calendar days.

As explained in the Executive Overview posted with the last version of this standard, the SDT added the language regarding peer review in response to a request from the Standards Authorization Committee, in an attempt to address the FERC Order related to the August 14, 2003 Blackout and Blackout Report Recommendation 27.

The SDT believes that requiring a documented response to inquiries or comments on Methodologies from certain entities will properly motivate the Methodology 'owners' to review their Methodologies and make any appropriate modifications.

The MRO recommends that the SDT restore the reference to system components, such as a generator, transmission line, breaker, switch, or other electrical element, to the definition of contingency. The MRO recommends that the SDT consider referring in the definition to multiple elements if the multiple elements are within the same unit of the system. Further, the MRO recommends the SDT use the terminology in the current Version 0 standards for TPL-001-0 through TPL-004-0 which refer to events and contingency elements.

The reference to system components in the definition of 'Contingency' was not restored. The word, 'Components' was replaced with the word, 'Facility to provide the needed clarity. The definition of the word, 'Facility' clarifies that a Facility is a set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.) The changes were made to bring some consistency to the terms used in this set of Standards. Please see the SDT's reasoning for making its changes to the definitions.

The Transmission Planning SAR that was approved by the SAC to be developed into a Version 1 Standard is intended to replace Version 0 TPL-001-0 through TPL-004-0 Standards. Many comments were submitted during the development of Version 0 and during the development of the Transmission Planning SAR that indicated these standards are not sufficiently explicit.

The MRO will not be able to support the WECC Regional Differences. The MRO notes that 1.4 of the WECC Regional Difference to FAC-010-1 seems to give the Western Interconnection license to develop completely different NERC augmentations without voting of the NERC Ballot Body. Without good evidence, the MRO will vote no on the WECC Regional Differences if such differences include 1.4.

Your vote is under your control. However, note that the SDT does not have the authority to change a proposed Regional Difference or otherwise "demand" that WECC modify its proposed Regional Difference.

The MRO recommends the SDT clearly indicate in the standards which Version 0 Standards that the SDT is superceding with proposed Standards FAC-008-1 through FAC-013-1.

The SDT will post its implementation plan with the pre-ballot version of this set of Standards. This implementation plan will identify the Version 0 Requirements that are be deleted or modified when these Version 1 Standards are approved and adopted.

ATC:

> Please provide an implementation plan that clearly indicates the Standard Drafting Team's intention regarding how the existing V0 Reliability Standards, or portions thereof, will be retired following adoption of these six V1 Standards. For example:
> First, it appears that FAC-008-1 and FAC-009-1 can replace FAC-004-0 and FAC-005-0. However, American Transmission Company strongly recommends updating FAC-008-1 and FAC-009-1 to reflect the need for establishing and communicating both Normal and Emergency facility ratings.
> Second, it is not clear whether adoption of FAC-012-1 and FAC-013-1 will lead to the retirement of MOD-001-0 and MOD-002-0, since both pairs of standards address Transfer Capability (TTC/ATC in V0 standards) methodology and establishing TTC and ATC values. However, despite the redundancy in purpose, FAC-012 and FAC-013 are applicable to RA and PA, whereas the MOD-001 and MOD-002 are applicable to the RRO.

The SDT will post its implementation plan with the pre-ballot version of this set of Standards. The implementation plan identifies the Version 0 Requirements that should be deleted or modified when these Version 1 Standards are approved and adopted.

> FAC (Facilities Design, Connections and Maintenance) does not appear to be the most intuitive classification for the standards FAC-010 through FAC-013 considering these standards pertain to system quantities (SOL, IROL and TC). American Transmission Company suggests using the MOD prefix for these four standards since SOL, IROL and TC will invariably be calculated from the Bulk Electric System models for the operating and planning horizon.

The prefix for these Standards, as well as for Version 0, was an administrative decision by NERC. Therefore, making modifications is outside the scope of the SDT.

> American Transmission Company recommends that the Standard Drafting Team incorporate relevant revisions in the Standards to account for the clarifications and recommendations on Functional Model roles, responsibilities, and authorities available in the FM-RSC TF report of March 11, 2005 titled "Recommendations to Facilitate Use of the Functional Model to Guide the Development and Application of Reliability Standards."

The SDT was directed to write these standards to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes (i.e. changing of names) will be made for the responsible entities identified for each of the requirements in this set of standards.

TVA:

> Because of the work involved in implementing these standards, we suggest that they become effective six months following BOT approval, rather than two months.

Since some methodology or process (or set of methodologies or processes) to establish Facility Ratings, System Operating Limits, and Transfer Capabilities already exist, because entities are currently establishing and disseminating these limits and capabilities, the need for the additional time isn't clear.

> "Reliability Authority" is used throughout this standard and this terminology is still in question with regard to the Functional Model.

The SDT was directed to write these standards to be consistent with the version of the Functional Model (FM) adopted by the NERC Board. If the FM changes, conforming changes (i.e. changing of names) will be made for the responsible entities identified for each of the requirements in this set of standards. Please note, the term, Reliability Authority is in the approved version of the FM.

Alan Adamson – NYSRC – NPCC - #2

There is no documentation with the proposed Standards that indicates whether these Standards replace or revise existing Version 0 Standards, such as the removal of Category C Contingency requirements as pointed out above. We, therefore, suggest that an Implementation Plan with this information be included in the next version.

The SDT will post its implementation plan with the pre-ballot version of this set of Standards. The implementation plan identifies the Version 0 Requirements that should be deleted or modified when these Version 1 Standards are approved and adopted.

FAC-008-1 - Facility Ratings Methodology

Comments on Measures in FAC-008-1 – Facility Ratings Methodology:

SERC EC Planning Standards Subcommittee
Ed Davis – Entergy Services, Inc - #1

Although the technical content of FAC-008-1does not require additional revisions, M1 can be simplified. Change M1 FROM:

The Transmission Owner and Generator Owner shall each have a documented Facility Ratings Methodology that includes all of the following:

TO

The Transmission Owner and Generator Owner shall each have a documented Facility Ratings Methodology that includes all of the items listed in Reliability Standard FAC-008-1-R1.1 through R1.3.

When these Measures were originally drafted, the intent was to ensure that each Measure were complete enough so that, if an entity downloaded a report of all Measures associated with a 'Function' then the report, generated from a relational database of all Reliability Standards, would be understandable without the need for additional reports. Thus, the use of 'cross references' to requirements was originally discouraged. As the process of developing standards has evolved, many standards are being drafted with cross references that will nullify the usability of a relational database report. (A report that identifies several measures with the same language. Example: several measures all saying, '… as specified in R1.2.' will be meaningless.) However, the use of cross references has become the 'norm' and the standards have been modified to reduce the redundant language in the measures.

SERC EC Planning Standards Subcommittee

DELETE M1.1 through M1.3. This will eliminate the redundancy since M1.1 through M1.3 has the same wording as R1.1 through R1.3.

For consistency, this type of revision needs to be made to the standards in this series.

The proposed measures in the last posting were similar to, but not exact repetitions of the associated requirements. When these Measures were originally drafted, the intent was to ensure that each Measure were complete enough so that, if an entity downloaded a report of all Measures associated with a 'Function' then the report, generated from a relational database of all Reliability Standards, would be understandable without the need for additional reports. Thus, the use of 'cross references' to requirements was originally discouraged. As the process of developing standards has evolved, many standards are being drafted with cross references that will nullify the usability of a relational database report. (A report that identifies several measures with the same language. Example: several measures all saying, '… as specified in R1.2.' will be meaningless.) However, the use of cross references has become the 'norm' and the standards have been modified to reduce the redundant language in the measures.

Southern Company Services:

FAC-008-1 Since M1.1 through M1.3 has the same wording as the requirements R1.1 through R1.3., consider rewriting the Measures section to make it concise and not be exactly redundant.

The proposed measures in the last posting were similar to, but not exact repetitions of the associated requirements. When these Measures were originally drafted, the intent was to ensure that each Measure were complete enough so that, if an entity downloaded a report of all Measures associated with a 'Function' then the report, generated from a relational database of all Reliability Standards, would be understandable without the need for additional reports. Thus, the use of 'cross references' to requirements was originally discouraged. As the process of developing standards has evolved, many standards are being drafted with cross references that will nullify the usability of a relational database report. (A report that identifies several measures with the same language. Example: several measures all saying, '… as specified in R1.2.' will be meaningless.) However, the use of cross references has become the 'norm' and the standards have been modified to reduce the redundant language in the measures.

MRO:

DELETE M1.1 through M1.3. This will eliminate the redundancy since M1.1 through M1.3 has the same wording as R1.1 through R1.3.

For consistency, this type of revision needs to be made to the standards in this series.

The proposed measures in the last posting were similar to, but not exact repetitions of the associated requirements. When these Measures were originally drafted, the intent was to ensure that each Measure were complete enough so that, if an entity downloaded a report of all Measures associated with a 'Function' then the report, generated from a relational database of all Reliability Standards, would be understandable without the need for additional reports. Thus, the use of 'cross references' to requirements was originally discouraged. As the process of developing standards has evolved, many standards are being drafted with cross references that will nullify the usability of a relational database report. (A report that identifies several measures with the same language. Example: several measures all saying, '… as specified in R1.2.' will be meaningless.) However, the use of cross references has become the 'norm' and the standards have been modified to reduce the redundant language in the measures.

Comments on Compliance in FAC-008-1 – Facility Ratings Methodology:

PG&E

To avoid confusion that en entity must address all required equipment types listed in R1.2.1 even though it is not one of the equipment types that comprises the Facility, we suggest modifying the Levels of Non-compliance: 2.1.3, 2.2 and 2.3 as highlighted below:

> **2.1.**2 The Facility Ratings Methodology does not address one of the required equipment types **that comprise a Facility**.
>
> **2.2. Level 2:** The Facility Ratings Methodology is missing the assumptions used to determine Facility Ratings or does not address two of the required equipment types **that comprise a Facility**.
>
> **2.3. Level 3:** The Facility Ratings Methodology does not address three of the required equipment types **that comprise a Facility**.

The levels of non-compliance were modified to state more specifically what equipment types were being referenced.

SERC EC Planning Standards Subcommittee
Southern Company Services

FAC-008-1, section D, paragraph 1.2 - The first sentence states "...within the first year that the entity commences operation." It is not clear who "the entity" is. Transmission Owners, Generation

Owners, and Compliance Monitors have been in operation for many years. This needs to be defined better.

The compliance monitoring section was modified to clarify that a 'new' Transmission Owner or Generator Owner is an entity that 'commences operation''.

Southern Co. Generation:

FAC-008-1, section D, paragraph 1.2 - The first sentence states ...within the first year that the entity commences operation. Should this say: …within the first year that the entity is required to comply? Transmission Owners, Generation Owners, and Compliance Monitors have been in operation for many years. This needs to be defined better.

The compliance monitoring section was modified to clarify that a 'new' Transmission Owner or Generator Owner is an entity that 'commences operation''.

MRO:

FAC-008-1, section D, paragraph 1.2 - The first sentence states "...within the first year that the entity commences operation." It is not clear who "the entity" is. Transmission Owners, Generation Owners, and Compliance Monitors have been in operation for many years. This needs to be defined better.

The compliance monitoring section was modified to clarify that a 'new' Transmission Owner or Generator Owner is an entity that 'commences operation''.

Standard FAC-008-1, D. Compliance, 1.2 Compliance Monitoring Period and Reset Timeframe states: "The Responsible Entity shall self-certify its compliance to the Compliance Monitor once every three years. The Compliance Monitor may also conduct an on-site once every nine years and an investigation upon complaint to assess performance." The MRO believes that self-certification once every three years an on-site audit once every nine years is not nearly frequent enough. Self-Certification should be an annual occurrence and on-site reviews should be conducted every three years. The intervals that the SDT is suggesting are far too infrequent, a lot can happen in three and nine years respectively.

Most commenters agreed with self-certification for this requirement, on a less frequent basis. The requirement was modified to indicate that self-certification shall be, 'at least' once every three years. This gives the Compliance Monitor the latitude to do self-certification every year if that is deemed necessary. The information in the Methodologies was expected to remain fairly static, so requiring self-certification every year didn't seem needed. For the same reasons, the periodic audits were revised to say that 'shall' be conducted 'at least once' every nine years.

Standard FAC-008-1, D. Compliance, 2. Levels of Non-Compliance 2.1 Level 1 2.1.2 states that "The Facility Ratings Methodology does not address one of the required equipment types." The SDT needs to be specific in indicating what are the required equipment types. For example, are these the equipment types listed in M1.2.1? Are there any other equipment types required?

This was modified to reference back to the requirement that listed the equipment types so there will be no confusion.

FAC-009-1 – Establish and Communicate Facility Ratings

Comments on Requirements in FAC-009-1 - Establish and Communicate Facility Ratings:

TVA:

> FAC-009-1 in section R2, should the Regional Reliability Organization be included?

If the RRO is registered to perform one of the functions identified, they will get a copy of the document. The RRO is the Compliance Monitor and will see the methodology during an audit.

SERC EC Planning Standards Subcommittee
Ed Davis – Entergy Services, Inc - #1

> FAC-009-1, section B, paragraph R2 - The wording is awkward. It should be like the wording in M1.1. Therefore, R2 should read "The Transmission Owner and Generator Owner shall each provide Facility Ratings for its solely and jointly owned Facilities that are existing Facilities, new Facilities, modifications to existing Facilities, and re-ratings of existing Facilities to its associated Reliability Authority(ies), Planning Authority(ies), Transmission Planner(s), and Transmission Operator(s) as scheduled by such requesting entities.

Agreed.

Ed Davis – Entergy Services, Inc - #1
SERC EC Planning Standards Subcommittee

> FAC-009-1, section B, paragraph R2 - Ratings are required to be supplied according to the schedule of the requesting entity. There is no guarantee that the schedule will be reasonable. The wording should be "according to a schedule agreed to among the requesting entities and the Transmission Owner/Generator Owner.

The end-user needs to dictate when the data is needed – if the request is unreasonable, then this needs to be addressed through the appeals process or dispute resolution.

Southern Company Services:
Southern Co. Generation:

> FAC-009-1, section B, paragraph R2 - This paragraph should be reworded. Also, the ratings are required to be supplied according to the schedule of the requesting entity (see number 2 - Levels of Non-Compliance). There is no guarantee that the schedule will be reasonable. The wording should be ---according to a schedule agreed to among the requesting entities and the Transmission Owner/Generator Owner.---

The end-user needs to dictate when the data is needed – if the request is unreasonable, then this needs to be addressed through the appeals process or dispute resolution.

MRO:

> Standard FAC-009-1, B. Requirements, R2 states: “The Transmission Owner and Generator Owner shall each provide Facility Ratings for it’s solely and jointly owned Facilities that are existing, new, modifications to, and re-ratings of, existing Facilities to its associated Reliability Authority(ies), Planning Authority(ies), Transmission Planner(s), and Transmission Operator(s) as scheduled by such requesting entities.” The MRO believes that the SDT needs to specify what that scheduled time period is or state as scheduled per Regional policy. Just to state “as scheduled” is not measurable.

The standard says, ‘as scheduled by the requesting entities’ and this is what is needed – the requesting entities are those that need the information and they should stipulate when the data should be provided.

Measures n FAC-009-1 - Establish and Communicate Facility Ratings:

MRO:

Standard FAC-009-1, C. Measures, M2 states: "The Transmission Owner and Generator Owner shall each have evidence that it provided its Facility Ratings to its associated Reliability Authority(ies), Planning Authority(ies), Transmission Planner(s), and Transmission Operator(s) as scheduled by such requesting entities." The MRO believe that the SDT needs to specify what that scheduled time period is or state as scheduled per Regional policy. Just to state "as scheduled" is not measurable.

The standard says, 'as scheduled by the requesting entities and this is what is needed – the requesting entities are those that need the information and they should stipulate when the data should be provided.

ATC:

FAC-009-1, M2: Suggest that a reasonable timeframe for reporting Facility Ratings (e.g. within 5 business days or a "mutually agreed schedule") be used, rather than "as scheduled by such requesting entities". What if the requestor's schedule is unrealistic and/or unreasonable?

The end-user needs to dictate when the data is needed – if the request is unreasonable, then this needs to be addressed through the appeals process or dispute resolution.

Comments on Compliance in FAC-009-1 - Establish and Communicate Facility Ratings:

Southern Company Services:
Southern Co. Generation:

FAC-009-1, section D, item 1.4 - to require data, not knowing the extent of the request in 5 business days may be difficult for todays very lean staffs. A more reasonable amount would be 10 business days.

This was changed to 15 business days

Robert Rhodes – SPP - #2

Compliance 1.2 states that the Compliance Monitor may conduct an audit once each calendar year. I suggest changing this to requiring an audit once every three years.

Because Facility Ratings are used as the 'base' for other ratings, it is critical that they be developed in accordance with their associated methodologies. The standard allows for an audit every year, but doesn't require one. This is intended to motivate entities to be fully compliant at all times.

The five-business day response time requested in Compliance 1.4 is too quick, 10 to 15 business days would be more appropriate.

This was changed to 15 business days.

I would suggest switching Levels 3 and 4 in the Levels of Non-Compliance.

Most commenters agreed with the levels of non-compliance and they were not changed. Providing ratings that may be somewhat inconsistent with the methodology at least allows operation within a workable range whereas not having ratings at all leaves operations in a void and would require an assumed arbitrary rating that may be completely inappropriate to continue operation.

MRO:

Standard FAC-009-1, D. Compliance, 2. Levels of Non-Compliance, Level 1 states that: "Some, but not all, requested Facility Ratings associated with existing Facilities were provided to the Reliability Authority(ies), Planning Authority(ies), Transmission Planner(s), and Transmission Operator(s) in accordance with their respective schedules." The MRO believes the SDT needs to

change “Some” to a measurable quantity. Some is up to the interpretation of the compliance reviewer. Level 2 Non-Compliance also uses “Some” as the measure; it too needs to be revised to a measurable quantity.

The word, ‘some’ was removed from the levels of non-compliance to make it easier to determine the appropriate level of non-compliance.

FAC-010-1 – System Operating Limits Methodology

TVA:

FAC-010-1 In the definitions section, the abbreviation (IROL) should be included with the spelled out words since it's not done in the body of the standard..eg R1 and R4

This was changed as suggested.

ATC:

First, the Transmission Operator should determine the methodology used to determine SOLs. Although this standard drafting team asked members of the Functional Model Drafting team for a clarification, the Functional Model Drafting team does not have the only authority for the interpretation. The functional model clearly states the following regarding the Transmission Operator: Defines operating limits, develops contingency plans, and monitors operations of the transmission facilities under the Transmission Operator’s control and as directed by the Reliability Authority. The entity that is responsible for creating the methodology is the entity that will define the operating limits. If the Functional Model Drafting Team or this drafting team wishes to change this assigned Responsibility, then the Functional Model should be changed and presented back the industry for review. It is American Transmission Company's position that the methodology developed for determining SOLs should reside with the Transmission Operators and not with the Reliability Authorities. It is also American Transmission Company's position that the Reliability Authorities should be the entities that develop the methodologies used to determine IROLs, as that is clearly stated in the Functional Model.

Second, American Transmission Company is concerned that if this standard is not corrected to allow TOPs the responsibility for developing SOLs, then the TOPs could be required to use a methodology that could be detrimental. The approach taken by the standard drafting team may, on the surface, be reasonable but when looked at more in depth, could lead to bigger problems. Too much authority is being assigned to the RA that is truly burdensome to the TOPs, the Transmission Owners, and their customers. This process currently is performed by the TOPs and this change would be a major change within the industry. As one example, the RA could implement in its methodology that manual intervention, although allowed, will not be considered when developing SOLs. As a second example, the methodology could state that SOLs will be assigned to any Facility that is loaded to 95% of the normal rating or only 24 hr transformer rating can be used.

The section of the Functional Model that you quoted could be interpreted in different ways – it could be interpreted as you’ve suggested, but could also be interpreted to mean that the TOP is responsible for developing SOLS as directed by its RA. This is the interpretation made by the SDT, and confirmed by members of the original Functional Model Review Group. The SDT’s interpretation may be modified in the future, depending upon the changes that result from the work of the latest Functional Model review group.

As modified, the standard allows the TOPs that are required to use the RA’s SOL Methodology, to submit technical comments on that methodology. The RA is required to provide a response back to the TOP that indicates whether a change will be made to the methodology and if no change will be made, the reason for not making the change must be provided.

NPCC CP9 Reliability Standards Working Group

Continued omission of Category C contingencies in the standard would be considered a "show stopper" for many members of NPCC, i.e., "no" when the standard is balloted. Our above review focused on Standard FAC-010-1, which is one of six related standards that have been posted for comment.

This draft continues to omit Category C contingencies. This is of particular concern because:

- The recently adopted Version 0 Standards - specifically Standard TPL-003-0, "System Performance Following Loss of Two or More BES Elements" - includes Category C contingencies, and adoption of FAC-011-1 in its present form without considering these contingencies, we believe, would be inconsistent with Standard TPL-003-0 and a weakening of existing NERC standards.
- To state in this standard that Regions may have more stringent standards covering Category C contingencies does not suffice – NPCC reliability could be impacted if a neighboring system operates to the weaker NERC criteria.

The U.S. - Canada Power System Outage TF Report's Recommendation #25 states: "A strong transmission system designed and operated in accordance with weakened criteria would be disastrous. Instead, a concerted effort should be undertaken to determine if existing reliability criteria should be strengthened…Only through strong standards and careful engineering can unacceptable power failures like August 14, 2003 be avoided in the future." NPCC's participating members do not believe that Draft 3 meets this principle.

- It is curious as to why NERC - if it maintains the principle that Regions may have more stringent criteria than NERC criteria – singles out just one section of this Standard in which to apply the principle, without stating the principle is applicable to the entire standard.

There seems to be a misunderstanding between requirements for 'system performance' and requirements for 'system operating limits'. Table 1 (as a part of the TPL-001-0 through TPL-004-0) standards does require that system performance meet Table 1 Category C (events resulting in the loss of two or more elements). These standards (TPL-001 through TPL-004) will not be superceded by FAC 008-1 to FAC 013-1. The existing Version 0 standards do not require entities to establish SOLs to meet consideration of Category C contingencies.

Category C is only applicable when referring to planning studies conducted with a starting point where all facilities are in service. In real-time operations, you operate such that you are always prepared to handle the next contingency. In most instances an element, or multiple elements, may already be out of service so you really are operating to protect the system from a second (or more) contingency and using 'Category C' events beyond that would result in very restrictive operating limits. Planners design the system to have two possible outages; in real-time operations the system may be operated with one or more outages. Planners justify the cost of many new or modified system reinforcements on the basis of computer simulations that have no more elements out of service than those outages listed as Category C; in real-time operations the system must continue to be operated regardless how many outages exist at the time.

FAC 008-1 through FAC 013-1 state requirements that are mandatory and subject to NERC's Compliance Enforcement. Any Region may develop its own additional requirements; however, such additional requirements aren't enforced through the NERC Compliance Enforcement Program unless they are also included in NERC Reliability Standards.

ISO/RTO Standards Review Committee
IESO

The recently adopted Version 0 Standards - specifically Standard TPL-003-0, "System Performance Following Loss of Two or More BES Elements" - include Category C contingencies.

Adoption of FAC-010-1 &011 in present form without considering these contingencies would be inconsistent with Standard TPL-003-0 and a weakening of existing NERC standards.

To state in this standard that Regions may have more stringent standards covering Category C contingencies does not suffice – some Areas reliability could be impacted if a neighboring system operates to the weaker NERC criteria.

There is a curiousity as to why NERC - if it maintains the principle that Regions may have more stringent criteria than NERC criteria – singles out just one section of this Standard in which to apply the principle, rather than stating that the principle is applicable to the entire standard.

The U.S. - Canada Power System Outage TF Report's Recommendation #25 states: "A strong transmission system designed and operated in accordance with weakened criteria would be disastrous. Instead, a concerted effort should be undertaken to determine if existing reliability criteria should be strengthened…Only through strong standards and careful engineering can unacceptable power failures like August 14, 2003 be avoided in the future." We do not believe that Draft 3 meets this principle.

There seems to be a misunderstanding between requirements for 'system performance' and requirements for 'system operating limits'. Table 1 (as a part of the TPL-001-0 through TPL-004-0) standards does require that system performance meet Table 1 Category C (events resulting in the loss of two or more elements). These standards (TPL-001 through TPL-004) will not be superceded by FAC 008-1 through FAC 013-1. The existing Version 0 standards do not require entities to establish SOLs to meet consideration of Category C contingencies.

Category C is only applicable when referring to planning studies conducted with a starting point where all facilities are in service. In real-time operations, you operate such that you are always prepared to handle the next contingency. In most instances an element, or multiple elements, may already be out of service so you really are operating to protect the system from a second (or more) contingency and using 'Category C' events beyond that would result in very restrictive operating limits. Planners design the system to have two possible outages; in real-time operations the system may be operated with one or more outages. Planners justify the cost of many new or modified system reinforcements on the basis of computer simulations that have no more elements out of service than those outages listed as Category C; in real-time operations the system must continue to be operated regardless how many outages exist at the time.

FAC 008-1 through FAC 013-1 state requirements that are mandatory and subject to NERC's Compliance Enforcement. Any Region may develop its own additional requirements; however, such additional requirements aren't enforced through the NERC Compliance Enforcement Program unless they are also included in NERC Reliability Standards.

Comments on Requirements in FAC-010-1 – System Operating Limits Methodology:

MRO:

FAC-010-1, B. Requirements, R1 states: "The Reliability Authority shall document its methodology for use in developing SOLs (SOL Methodology) within its Reliability Authority Area. The Reliability Authority's SOL Methodology shall be applicable for developing SOLs used in the operations horizon. The Reliability Authority's SOL Methodology shall state that SOLs shall not exceed associated Facility Ratings." The MRO believes that the SDT is implying Normal Facility Ratings when referring to Facility Ratings here. The MRO recommends that the SDT specifically spell out whether Facility Ratings mean Normal Facility Ratings or Emergency Facility Ratings here.

There was never any intent to limit the scope of the standard to normal ratings only. The establishment of normal and emergency ratings, and others, are necessary to ensure reliability of the BES. The proposed set of standards is more comprehensive and goes beyond requiring that entities have just normal and emergency ratings.

ISO/RTO Standards Review Committee
IESO

The standard FAC-010-1 Requirement R2 states as follows: "The PA shall document its SOL methodology for use in developing SOL's within its Planning authority Area. The PA's SOL Methodology shall be applicable for developing SOLs used in the planning horizon. The PA's SOL Methodology shall state that SOLs shall not exceed associated facility ratings".

It is in above context that we feel that there are inconsistencies pertaining to FAC-010-1 and TPL-003-0, resulting in confusion. As per requirement R2 of FAC-010-1 requiring SOL Methodology to be applicable for developing SOL's in planning horizon, questions and concerns arise:

There seems to be a misunderstanding between requirements for 'system performance' and requirements for 'system operating limits'. Table 1 (as a part of the TPL-001-0 through TPL-004-0) standards does require that system performance meet Table 1 Category C (events resulting in the loss of two or more elements). These standards (TPL-001 through TPL-004) will not be superceded by FAC 008-1 through FAC 013-1. The existing Version 0 standards do not require entities to establish SOLs to meet consideration of Category C contingencies.

Category C is only applicable when referring to planning studies conducted with a starting point where all facilities are in service. In real-time operations, you operate such that you are always prepared to handle the next contingency. In most instances an element, or multiple elements, may already be out of service so you really are operating to protect the system from a second (or more) contingency and using 'Category C' events beyond that would result in very restrictive operating limits. Planners design the system to have two possible outages; in real-time operations the system may be operated with one or more outages. Planners justify the cost of many new or modified system reinforcements on the basis of computer simulations that have no more elements out of service than those outages listed as Category C; in real-time operations the system must continue to be operated regardless how many outages exist at the time.

MRO:

FAC-010-1, R3 states: "The Reliability Authority and Planning Authority shall, by mutual agreement identify and document in their respective SOL Methodologies the planning and operating time horizons addressed in one another's SOL Methodologies. The combined horizons shall cover real-time through the end of the planning horizon." The MRO previously indicated that the SDT should adopt a standard operating and planning horizon where the planning horizon is one year and beyond. If the SDT should choose not to adopt the MRO recommendation, then the SDT needs to revise this to say "by mutual written agreement" so that this requirement is measurable,

The proposed standard does require that the RA and PA document the coverage of their horizons.

Most commenters did not object to the flexibility provided by the current language, so this was not changed. The demarcation of these horizons tends to be institutional, and forcing entities to make wholesale changes doesn't seem necessary for reliability. A footnote was added to indicate that if mutual agreement can't be reached, the planning horizon shall be one year and beyond and the operating horizon shall be real-time up to one year.

Alan Adamson – NYSRC – NPCC - #2

R4 of Standard FAC-010-1 should reference Table 1 of the TPL Standards.

There seems to be a misunderstanding between requirements for 'system performance' and requirements for 'system operating limits'. Table 1 (as a part of the TPL-001-0 through TPL-004-0) standards does require that system performance meet Table 1 Category C (events resulting in the loss of two or more elements). These standards (TPL-001 through TPL-004) will not be superceded

by FAC 008-1 through FAC 013-1. The existing Version 0 standards do not require entities to establish SOLs to meet consideration of Category C contingencies.

Category C is only applicable when referring to planning studies conducted with a starting point where all facilities are in service. In real-time operations, you operate such that you are always prepared to handle the next contingency. In most instances an element, or multiple elements, may already be out of service so you really are operating to protect the system from a second (or more) contingency and using 'Category C' events beyond that would result in very restrictive operating limits. Planners design the system to have two possible outages; in real-time operations the system may be operated with one or more outages. Planners justify the cost of many new or modified system reinforcements on the basis of computer simulations that have no more elements out of service than those outages listed as Category C; in real-time operations the system must continue to be operated regardless how many outages exist at the time.

Southern Company Services:
SERC EC Planning Standards Subcommittee
Southern Co. Generation:
Ed Davis – Entergy Services, Inc - #1

> FAC-010-1, section B, paragraph R4 - The requirement for the RA and PA to document their SOL methodologies is already in R1 & R2. There is no need for it to be repeated in R4. Therefore, R4 should be ---Each SOL methodology shall include a requirement that SOLs provide BES performance consistent with the following:....---

The standard has been changed per your comment.

Southern Company Services:

> FAC-010-1, section B, paragraph R4.1 and R4.2 - These two requirements state that for pre-contingency and post-contingency states, the BES should be within their Facility Ratings and thermal ratings, voltage, etc.. Its easy to understand why things need to be within their voltage and stability ratings but most devices such as transformers and transmission lines can withstand short term loadings that exceed their nameplate thermal ratings and not cause any damage to the equipment. Throughout this standard it only refers to -Facility Rating- as the interpretation of a complete line element -----transmission line plus breakers plus line traps, etc-----. Mixing of thermal ratings and facility rating gets confusing.

The reference to thermal has been retained. The standard does not prohibit the Facility Owner from developing a time-dependent rating.

Alan Adamson – NYSRC – NPCC - #2

> In R4.1.1 of this Standard the parenthetical should be changed to: (or group of facilities and/or their associated equipment such as stabilizers and AVRs).

There was no R4.1.1 in standard FAC-010-1

Michael C. Calimano – NYISO - #2

> The NERC proposed minimum requirement for testing single contingencies is troublesome. The language in the Standard FAC-010 needs to be more explicit to ensure that credible, appropriate multiple contingencies are being respected. The language in R4.4 does not cover this issue thoroughly enough.

There seems to be a misunderstanding between requirements for 'system performance' and requirements for 'system operating limits'. Table 1 as a part of the planning standards requires that system performance meet Category C but there are no planning standards that require SOLs to be established to meet consideration of Category C contingencies.

PG&E

R4.3.4 states:

> "To prepare for the next Contingency, system adjustments may be made, including changes to generation, uses of the transmission system, and the transmission system topology."

It is not clear in R4.3.4 if pre-contingency interruption of firm load is permitted in R4.3.4. We suggest adding this clarification.

The term 'uses of the transmission system' was intended to allow curtailment of firm load and firm power schedules.

Alan Adamson – NYSRC – NPCC - #2

Requirement R4 of Standard FAC-010-1 should be expanded to include the requirement that SOLs shall provide BES performance that recognize events resulting in the loss of two or more (multiple) elements. Assessment of these contingencies (referred to as Category C Contingencies in Version 0 Standards TPL-001-0 to TPL-004-0) is presently required under Standard TPL-003-0. Therefore, not considering Category C Contingencies in Standard FAC-010-1 would constitute a WEAKENING of present NERC Standards. Continued omission of this requirement in this proposed Standard would likely be a "show stopper" for the New York State Reliability Council (NYSRC) when the Standard is balloted. Furthermore:

To state in this Standard that Regions may require assessment of more stringent standards (see FAC-010-1 R4, pages 3 and 4), e.g., Category C Contingencies, does not relieve the above NYSRC concerns. To the contrary, NPCC and New York reliability could be impacted if neighboring Regions operate to weaker NERC criteria.

It is curious as to why the SDT - if it agrees with the NERC principle that Regions may have more stringent criteria than NERC criteria – singles out just one section of this Standard (R4 of FAC-010-1) in which to apply this principle (see above item), without stating the principle is applicable to the entire group of FAC Standards.

The U.S. - Canada Power System Outage TF Report's Recommendation #25 states: "A strong transmission system designed and operated in accordance with weakened criteria would be disastrous. Instead, a concerted effort should be undertaken to determine if existing reliability criteria should be strengthened…Only through strong standards and careful engineering can unacceptable power failures like August 14, 2003 be avoided in the future." We do not believe that draft Standard FAC-010-1, because it weakens present NERC criteria, complies with this Recommendation. In accordance with Recommendation #25, consideration should be given to strenghthening the Standard, not weakening it.

In conclusion, the NYSRC believes that weakening of present NERC criteria, in light of 2003 Blackout lessons learned, would be unacceptable - not only for NY reliability - but for the reliability of the entire North American bulk power system. WE STRONGLY URGE the STD to reinstate Category C requirements in this Standard, and that TPL-003-0 requirements not be replaced by this new Standard.

FAC 008-1 through FAC 013-1 state requirements that are mandatory and subject to NERC's Compliance Enforcement. Any Region may develop its own additional requirements; however, such additional requirements aren't enforced through the NERC Compliance Enforcement Program unless they are also included in NERC Reliability Standards.

There seems to be a misunderstanding between requirements for 'system performance' and requirements for 'system operating limits'. Table 1 (as a part of the TPL-001-0 through TPL-004-0) standards does require that system performance meet Table 1 Category C (events resulting in the loss of two or more elements). These standards (TPL-001 through TPL-004) will not be superceded

by FAC 008-1 through FAC 013-1. The existing Version 0 standards do not require entities to establish SOLs to meet consideration of Category C contingencies.

Category C is only applicable when referring to planning studies conducted with a starting point where all facilities are in service. In real-time operations, you operate such that you are always prepared to handle the next contingency. In most instances an element, or multiple elements, may already be out of service so you really are operating to protect the system from a second (or more) contingency and using 'Category C' events beyond that would result in very restrictive operating limits. Planners design the system to have two possible outages; in real-time operations the system may be operated with one or more outages. Planners justify the cost of many new or modified system reinforcements on the basis of computer simulations that have no more elements out of service than those outages listed as Category C; in real-time operations the system must continue to be operated regardless how many outages exist at the time.

SERC EC Planning Standards Subcommittee
Ed Davis – Entergy Services, Inc - #1

FAC-010-1, section B, paragraph R5 - Item 5.4 requires that the SOL methodology include a description of "Any Special Protection Systems or Remedial Action Plans used". The way this requirement is phrased, it is more applicable to establishing SOL, rather than the establishing a methodology. The wording should be changed to the following: "Allowed use of Special Protection Systems or Remedial Action Plans."

The standard has been modified in support of your comment.

PG&E

R5.3 requires that the Reliability Authority's methodology and the Planning Authority's methodology for determining SOLs, include a description along with any reliability margins applied in R5.3m which states:

"R5.3. Accuracy and level of detail of system models used to determine SOLs."

We suggest either delete "accuracy" or define it. As written, it could mean the number of places of decimal of some quantity, or, whether the computer program is single or double precision, or some other meaning.

The standard has been modified in support of your comment.

PG&E

R6 requires that the Reliability Authority issue its SOL Methodology and any changes to that methodology, to entities in R6.1

"R6.1. Each adjacent Reliability Authority and each Reliability Authority that indicated it has a reliability-related need for the methodology."

However, in R7.1 The corresponding requirement for Planning Authority states that it is required to issues its SOL Methodology, and any change to that methodology to entities in R7.1.

"R7.1. Each adjacent Planning Authority."

Why is the Planning Authority not required to provide its SOL methodology also to each Planning Authority that indicated it has a reliability-related need for the methodology"? In an interconnected system, SOLs set in one Planning Authority Area could impact system performance in Planning Authority Areas that are not necessarily "adjacent".

R7.1 has been revised to include each Planning Authority that indicated a reliability based need.

ATC:

FAC-010-1, R6, R7 and M2, M3: Suggest that a reasonable time-frame for reporting any *changes* to the SOL methodology (e.g. within 5 business days of the change, or 30 calendar days prior to the effective date of the change) be included to ensure timely dissemination of information by PA and RA.

Most commenters did not object to existing wording so no change will be made.

ATC:

FAC-010-1, R8: Suggest deleting this requirement because it appears to be redundant after R6 and R7.

R6 and R7 require that the methodology be distributed – R8 requires distribution within a specified time period.

Comments on Measures in FAC-010-1 – System Operating Limits Methodology:

Alan Adamson – NYSRC – NPCC - #2

R2 has no associated measure.

Please see the revised standard – all of the requirements have associated measures.

Southern Company Services:

FAC-010-1, section C, paragraph M1 -- for the RA and PA to provide a statement that ---Facility Ratings--- shall not be exceeded makes no sense, especially in light of R4.1 and R4.2 mixing Facility Ratings and thermal ratings in the requirement. Also, how can anyone say the rating will never be exceeded? There will be events, most likely, that exceed the rating and trip the line or facility. That's what relays are for.

The intent of the statement is to make sure SOLs are developed so that Facility Ratings are not exceeded following the limiting contingency. Emergency limits are allowed. Reliability of the system is the goal and that can be compromised if the applicable Facility Ratings are exceeded.

Southern Company Services:
Southern Co. Generation:

FAC-010-1, section C, paragraph M2.2 -- appears to be overly broad in requiring the RA provide evidence that it issued its SOL methodology to each PA and TP that models any portion of the RAs area. Since the MMWG cases models the entire east coast, does this apply to every utility in the east coast? An appropriate clarification might be: ----Each Planning Authority and Transmission Planner that has responsibility for part of the Reliability Authority's Reliability Authority Area.----

The MMWG is a technical work group, not expected to operate as an RA, PA, TP, or TOP. The intent is to ensure that the methodology gets into the hands of those that need to use it.

PG&E

M2.3 specifies that the Reliability Authority have evidence it issued its SOL Methodology, and any changes to "each Transmission Operator that operates in the Reliability Authority Area" (M2.3). However, there is no corresponding requirement in M.3 for the Planning Authority to have evidence it issued its SOL Methodology and any changes to "each Transmission Planner that works in the Planning Authority Area" as stated in R7.3.

We suggest adding M3.3:

"M3.3. Each Transmission Planner that works in the Planning Authority's Planning Authority Area.

The standard has been modified in support of your suggestion.

SERC EC Planning Standards Subcommittee
Southern Co. Generation:
Southern Company Services:
Ed Davis – Entergy Services, Inc - #1

FAC-010-1, section C, paragraph M3 - A measure M3.3 is needed which says "Each Transmission Planner that works in the Planning Authority's Planning Authority Area" to be consistent with R7.3.

The Standard has been changed as suggested.

ATC:

FAC-010-1, R6, R7 and M2, M3: Suggest that a reasonable time-frame for reporting any *changes* to the SOL methodology (e.g. within 5 business days of the change, or 30 calendar days prior to the effective date of the change) be included to ensure timely dissemination of information by PA and RA.

Most commenters did not object to existing wording so no change will be made.

ATC:

FAC-010-1, M3: Suggest adding measure M3.3 which corresponds to R7.3 and thus ensures that the Transmission Planner is a recipient of the SOL methodology and any changes to it.

The Standard has been changed as suggested.

Comments on Compliance in FAC-010-1 – System Operating Limits Methodology::

Southern Company Services:
Southern Co. Generation:

FAC-010-1, section D, paragraph 1.2 - The first sentence states ...within the first year that the entity commences operation. Again, It is not clear who THE ENTITY is. Should this say: ……within the first year that the entity is required to comply…..?

This section of the standards was modified to clarify what was intended.

TVA:

under section 2.Levels of Non-Compliance, there needs to be a 2.2 in front of "Level 2"…….2.3 in front of "Level 3"….next two sections should be numered 2.3.1, 2.3.2, and 2.4 in front of "Level 4"

Agreed. These typos have been corrected.

MRO:

FAC-010-1, D. Compliance, 1. Compliance Monitoring Process, 1.2. Compliance Monitoring Period and Reset Timeframe states: "The Planning Authority and Reliability Authority shall each demonstrate compliance through an on-site audit conducted by the Compliance Monitor within the first year that the entity commences operation. The Planning Authority and Reliability Authority shall each self-certify its compliance to the Compliance Monitor once every three years. The Compliance Monitor may also conduct an on-site review once every nine years…." The MRO believes that self-certification once every three years an on-site audit once every nine years is not nearly frequent enough. Self-Certification should be an annual occurrence and on-site reviews

should be conducted every three years. The intervals that the SDT is suggesting are far too infrequent, a lot can happen in three and nine years respectively.

Most commenters agreed with self-certification for this requirement, on a less frequent basis. The requirement was modified to indicate that self-certification shall be, 'at least' once every three years. This gives the Compliance Monitor the latitude to do self-certification every year if that is deemed necessary. The information in the Methodologies was expected to remain fairly static, so requiring self-certification every year didn't seem needed. For the same reasons, the periodic audits were revised to say that 'shall' be conducted 'at least once' every nine years.

FAC-011-1 – Establish and Communicate System Operating Limits

TVA:

FAC-011-1 the Transmission Operator is mentioned in R4.1 and R4.2, but wasn't listed in the Applicability section.

This was corrected – the revised standard lists the Transmission Operator as one of the functions responsible for compliance with the standard.

ATC:

FAC-011-1: Applicability of this standard is unclear and confusing. It appears that the standard is intended to be applicable to the Transmission Planner (TP) and the PA (for planning horizon SOLs). Then why is it not applicable to the Transmission Operator (TOP) even though it is applicable to the RA (for operating horizon SOLs)? American Transmission Company strongly recommends including the TOP as an applicable entity for establishing operating horizon SOLs, just as)? American Transmission Company supports retaining the TP as an applicable entity for establishing planning horizon SOLs.)? American Transmission Company suggests adding a requirement similar to R3 for the Transmission Operator.
Please provide the justification for including the TP and excluding the TO in the existing version of the standard. Also, please address the following apparent inconsistencies: R4.2 indicates applicability to the Transmission Operator even though the TO is not listed as an Applicable entity.

This was corrected – the revised standard lists the Transmission Operator as one of the functions responsible for compliance with the standard.

Michael C. Calimano – NYISO - #2

This draft continues to omit Category C contingencies. This is of particular concern because: The recently adopted Version 0 Standards - specifically Standard TPL-003-0, "System Performance Following Loss of Two or More BES Elements" - includes Category C contingencies, and adoption of FAC-011-1 in its present form without considering these contingencies, we believe, would be inconsistent with Standard TPL-003-0 and a weakening of existing NERC standards.

To state in this standard that Regions may have more stringent standards covering Category C contingencies does not suffice – NYCA reliability could be impacted if a neighboring system operates to the weaker NERC criteria.

The U.S. - Canada Power System Outage TF Report's Recommendation #25 states: "A strong transmission system designed and operated in accordance with weakened criteria would be disastrous. Instead, a concerted effort should be undertaken to determine if existing reliability criteria should be strengthened…Only through strong standards and careful engineering can unacceptable power failures like August 14, 2003 be avoided in the future." Draft 3 does not meet this principle.

There seems to be a misunderstanding between requirements for 'system performance' and requirements for 'system operating limits'. Table 1 (as a part of the TPL-001-0 through TPL-004-0)

standards does require that system performance meet Table 1 Category C (events resulting in the loss of two or more elements). These standards (TPL-001 through TPL-004) will not be superceded by FAC 008-1 through FAC 013-1. The existing Version 0 standards do not require entities to establish SOLs to meet consideration of Category C contingencies.

Category C is only applicable when referring to planning studies conducted with a starting point where all facilities are in service. In real-time operations, you operate such that you are always prepared to handle the next contingency. In most instances an element, or multiple elements, may already be out of service so you really are operating to protect the system from a second (or more) contingency and using 'Category C' events beyond that would result in very restrictive operating limits. Planners design the system to have two possible outages; in real-time operations the system may be operated with one or more outages. Planners justify the cost of many new or modified system reinforcements on the basis of computer simulations that have no more elements out of service than those outages listed as Category C; in real-time operations the system must continue to be operated regardless how many outages exist at the time.

Comments on Requirements in FAC-011-1 – Establish and Communicate System Operating Limits:

PG&E

R1, R2 and R3, Measures M1 and M2 and Compliance Section require that the Reliability Authority ensure, and that the Planning Authority and Transmission Planner establish SOLs and IROLs. However, no such requirement is placed on the Transmission Operator. Yet, on the same page, R4.2 states that:

"R4.2. The Transmission Operator shall provide its SOLs to its Reliability Authority and to the Transmission Service Providers that share its portion of the Reliability Authority Area."

We suggest adding a clarifying provision to read:

"R4.2. **If** requested **by its Reliability Authority to establish SOLs**, The Transmission Operator shall provide its SOLs to its Reliability Authority and to the Transmission Service Providers that share its portion of the Reliability Authority Area."

Otherwise, as written, the Transmission Operator would provide to the Reliability Authority SOLs that it has not established.

The standard was modified to include the requirement for the TOP to develop SOLs (as directed by its Reliability Authority).

ISO/RTO Standards Review Committee

IESO

With regards to Requirements R2 and R4.2 of FAC-011-1 standard there are again concerns with the Planning Authority being involved with the determination of the SOL and IROL limits. According to the Functional Model the Transmission Operator should develop the SOL limits not the Planning Authority. Is this intentional? This needs to be clarified.

The Planning Authority does need to be involved with the determination of SOLs and IROLs developed for use in the planning horizon. This is supported by the changes under consideration for the Functional Model.

Please note that the Functional Model does not address all tasks – and the two versions of the Functional Model that were approved by the NERC Board did not address responsibility for developing the SOLs and IROLs used in the Planning Horizon. The revisions to the Functional Model

that are currently under consideration do assign the Planning Authority a role in developing SOLs and IROLs.

Page 58 of the FMRSC_TF Report in the list of tasks assigned to the Interconnection Planning Coordinator (new term for the Planning Authority):

> 5. Review and determine TTC, IROL and SOL values (generally one year and beyond) as appropriate.

PG&E

> R4.1 states, "the Reliability Authority shall provide its SOLs (including the subset of SOLs that are IROLs) to adjacent Reliability Authorities and Reliability Authorities who indicate a reliability-related need for those limits, and to the Transmission Operators, Transmission Service providers and Planning Authorities within its Reliability Authority Area."
>
> Please add Transmission Planner to the list of recipients for this information, as such information is valuable in planning the future system.

The Standard has been modified to include the Transmission Planner in R4.1.

SERC EC Planning Standards Subcommittee
ISO/RTO Standards Review Committee

> FAC-011-1, section B, paragraph R4.2 - This seems to require a Transmission Operator to establish SOLs. This is not consistent with the latest Changes Made Based on Industry Comments document in which it says that "For this standard, the SDT assumed that the RA is responsible for establishing all SOLs for its RA Area — but may delegate part of this activity to its TOPs. Without formal delegation, the TOP is not responsible for developing any SOLs." The wording should be clarified as follows: "The Transmission Operator shall provide any SOLs (for which it has been delegated the responsibility to develop) to its Reliability Authority and to the Transmission Service Providers that share its portion of the Reliability Authority Area."

The standard was modified to include the requirement for the TOP to develop SOLs (as directed by its Reliability Authority). The measure was already there in the last posted version of the standard.

IESO
NPCC CP9 Reliability Standards Working Group

> In FAC-011-1 Requirement 4.1.1 change parenthetical to read (or group of facilties and or their associated equipment such as stabilizers and AVRs)

The definition of Facility seems to address your concern without adding the additional language.

A Facility is defined as: A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)

NPCC CP9 Reliability Standards Working Group

> In FAC-011-1, Requirement 4.1.1, Requirement 4.2 has no associated Measure.

Please see the revised standards. The measures were revised to correct this deficiency.

NPCC CP9 Reliability Standards Working Group
ISO/RTO Standards Review Committee
Michael C. Calimano – NYISO - #2
IESO

> The SDT should be also commended for requiring the distribution of study results in FAC-011-1 (R4) to those entities that have indicated a "reliability related need". However it is not apparent how to determine what a "reliability related need" is. How would an entity know if they are

compliant or not if an the entity refuses a request based on another entities perception of "reliability need" that differs from the limit holders perception of "reliability need"? The bottom line is that a clear or specific criteria is missing. The real requirement to distribute should be defined in explicit terms. That is, those entities in the host Area that perform the Reliability Assessments in planning and real time for the facilities, along with those similar entities in adjoining or other areas that operate facilities that are critical to the limit. (ie move R4.2, R4.3 and R4.4 in front of R4.1).

The entities in the host area are already addressed in the existing requirement that requires the RA to distribute its SOLs "… to the Transmission Operators, Transmission Service Providers and Planning Authorities within its Reliability Authority Area." The language you've suggested as a replacement for the phrase, "…to adjacent Reliability Authorities and Reliability Authorities who indicate a reliability-related need for those limits "doesn't appear to be more measurable – it isn't clear how an objective decision can be made as to what entities are included in the phrase, "…similar entities in adjoining or other areas that operate facilities that are critical to the limit." Words such as 'similar' and 'critical' are rather subjective.

Disagreement as to the reliability need will go through the dispute resolution process.

R4.1.1 does not fully capture the Boundary conditions concept. In addition to the identification and status of the associated Facility critical to the limit, the operators need to be aware of those components within a Facility that are critical to the limit and their required status. If the term "Facility" is applied as defined in FAC-008-1 (a "set of electrical equipment that operates as a single BES element") then by definition, it is quite possible that critical elements can be inadvertently excluded from this knowledge base. For example, it is possible that a generator could be in service with impaired operation of the AVR or stabilizer. If it is the operation of the AVR or Stabilizer that is critical to the limit, and only the generator is deemed critical then it is possible to have a limit in effect that is invalid.

As part of the Boundary conditions, the operators also need to be aware of the electrical area for which the limits cover, any pertinent Minimum and Maximum values any study indicates for the limits to be valid, and as stated above the status of auxiliaries within any facility that are critical to the limit.

The information that must be provided with the SOL (boundary conditions) was provided to the DFR SDT from the IROL SDT. In general, comments received during the last posting of the IROL Standard indicated that the level of detail that you've suggested be provided isn't necessary and under some conditions having too much information isn't practical.

ATC:

FAC-011-1, R1 & R2: Suggest explicitly indicating the applicable time horizon in each requirement as follows: in R1, "RA shall ensure that operating horizon SOLs"; and, in R2, "PA shall ensure that planning horizon SOLs."

FAC-010 section B, R1 specifies that the RA is responsible for SOL methodology in the operations horizon and R2 specifies that the PA is responsible for the SOL methodology in the planning horizon.

Comments on Measures in FAC-011-1 – Establish and Communicate System Operating Limits:

ATC:

FAC-011-1, M2: Suggest that a reasonable time frame for reporting SOLs (e.g. within 5 business days or a "mutually agreed schedule") be used, rather than "in accordance with schedules supplied by the requestors." What if the requestor's schedule is unrealistic and/or unreasonable?

The end-user needs to dictate when the data is needed – if the request is unreasonable, then this needs to be addressed through the appeals process or dispute resolution.

Comments on Compliance in FAC-011-1 – Establish and Communicate System Operating Limits:

MRO:

> FAC-011-1, D. Compliance, 2. Levels of Non-Compliance, 2.2. Level 2 states: "Some, but not all SOLs were provided in accordance with their respective schedules." The MRO believes that the SDT needs to change "Some" to a measurable quantity. Some is up to the interpretation of the compliance reviewer.

The word, 'some' was removed from the levels of non-compliance.

Ed Davis – Entergy Services, Inc - #1

> FAC-011-1, section B, paragraph R4.2 - This seems to require a Transmission Operator to establish SOLs. This is not consistent with the latest Changes Made Based on Industry Comments document in which it says that "For this standard, the SDT assumed that the RA is responsible for establishing all SOLs for its RA Area — but may delegate part of this activity to its TOPs. Without formal delegation, the TOP is not responsible for developing any SOLs." The wording should be clarified as follows: "The Transmission Operator shall provide any SOLs (for which it has been delegated the responsibility to develop) to its Reliability Authority and to the Transmission Service Providers that share its portion of the Reliability Authority Area."

The standard was modified to include the requirement for the TOP to develop SOLs (as directed by its Reliability Authority). The measure was already there in the last posted version of the standard.

TVA:

> in section 4.1, should the Regional Reliability Organization be included?

Assuming this comment refers to R4.1, the RRO would only be included as a by-product if it were performing the functions of an RA, TOP, TSP or PA.

Robert Rhodes – SPP - #2

> All the standards in this draft have an effective date of two months after Board approval. The effective date on this standard is not given. Why? If more than the typical two months is required to allow all entities to reach compliance, why not set this date six months after Board approval?

This was an erroneous omission and has been corrected. The effective date was intended to be two months from the Board adoption.

Since entities are already using some methodology or set of methodologies to establish Facility Ratings, System Operating Limits and Transfer Capabilities – and because entities are establishing and disseminating these limits and capabilities, the need for the additional time isn't clear.

Robert Rhodes – SPP - #2

> See my comment 1 in response to Question 9, FAC-009-1 with regard to Compliance 1.2.
>
> See my comment 2 in response to Question 9, FAC-009-1 with regard to Compliance 1.4.

Please see the consideration of the comments in response to Question #9.

FAC-012-1 – Transfer Capabilities Methodology

ATC:

FAC-012-1, R2, R3 and M2, M3: Suggest that a reasonable time-frame for reporting any *changes* to the TC methodology (e.g. within 5 business days of the change, or 30 calendar days prior to the effective date of the change) be included to ensure timely dissemination of information by PA and RA.

The time frame to provide changes to the TC methodology is covered in R2, which requires that the entities to receive the TC methodology "make a written request that includes a schedule for delivery of such Transfer Capabilities."

PG&E

Transfer Capability, as defined in NERC, Glossary of Terms adopted by NERC Board of Trustees: February 8, 2005 and effective Date: April 1, 2005 states:

> 'The measure of the ability of interconnected electric systems to move or transfer power *in a reliable manner* from one area to another over all transmission lines (or paths) between those areas under specified system conditions. The units of transfer capability are in terms of electric power, generally expressed in megawatts (MW). The transfer capability from "Area A" to "Area B" is *not g*enerally equal to the transfer capability from "Area B" to "Area A."'

As written, developing the Transfer Capability methodology and establishing and communicating Transfer Capability are required without regard to whether such quantities would be used in the first instance. So, entities would have to develop the information the need of which has not been first established. In the earlier drafts, the requirements to establish and document the methodology and the transfer capabilities were in effect only if such information were requested in the first place. However, this provision was not carried over to this version. This could lead to inefficient use of resources. For example, WECC has established Path Ratings in Planning, and Operating Transfer Capabilities (OTC) in Operations and with transfer limits defined by nomograms if needed. Both the Path Ratings and the OTCs would satisfy the Requirements set forth in Standards FAC-010-1 and FAC-011-1. However, as a general practice, WECC does not use nor establish Transfer Capability between areas as defined in the NERC Glossary of Terms. We suggest reinserting the earlier provision by changing the Purpose (A.3) and Requirement R1 in both Standards FAC-012-1 and FAC-013-1 to read:

> **"Purpose:** To ensure the determination of Transfer Capabilities that result in the reliable planning and operation of the Bulk Electric System (BES) **if requested by Reliability Authority, Planning Authority, Transmission Planner, or Transmission Operators that have a reliability need for the Transfer Capabilities.**"
>
> **"R1.** The Reliability Authority and Planning Authority shall each document its current methodology used for developing its inter-regional and intra-regional Transfer Capabilities (Transfer Capability Methodology) **if requested by Reliability Authority, Planning Authority, Transmission Planner or Transmission Operators that have a reliability need for the Transfer Capabilities.**"

The 'applicability' section of the standard was modified to indicate that the requirements are only applicable to entities in Regions that require the development of Transfer Capabilities.

Comments on Requirements in FAC-012-1 – Transfer Capabilities Methodology:

SES:

R2.2 and M2.2: The SES questions how is the RA or the PA to know which specific entities may be modeling any portion of their respective areas. The SES recommends revising this to require distribution of methodologies to entities other than those adjacent to the RA or PA, upon request. This same comment should be considered throughout these standards where appropriate.

The proposed standard has been modified to incorporate your comments.

Southern Company Services:
Southern Co. Generation:
SERC EC Planning Standards Subcommittee
Ed Davis – Entergy Services, Inc - #1

FAC-012-1, section B, paragraph R3.2 - This is very hard to read. It should be changed to the following: ……Each Reliability Authority and Transmission Operator that is responsible for any portion of the Planning Authority's Planning Authority Area….

The language in this section of the requirements was modified to make it easier to read.

SERC EC Planning Standards Subcommittee
Southern Co. Generation:
Ed Davis – Entergy Services, Inc - #1

FAC-012-1, section B, paragraphs R2 & R3 - The wording is awkward. It should be changed to the following: "...shall issue its Transfer Capability Methodology, and any changes to that methodology, prior to the effectiveness of such changes, to all of the following:"

Agreed. The language in the section referenced has been modified as suggested to make it easier to read.

Comments on Measures in FAC-012-1 – Transfer Capabilities Methodology:

SES

CM1: The TP does not have the requirement to have a methodology document. SES assumes the SDT meat Reliability Authority instead based on the context of the standard. The SES recommends revising M1 accordingly.

Agreed. This was a typo and has been corrected.

ATC:

FAC-012-1, M1: Should read "The Planning Authority's and *Reliability Authority's* methodology..... " --- replace Transmission Planner by Reliability Authority's.

Agreed. This was a typo and has been corrected.

ATC:

FAC-012-M3.2: Typo --- replace "Transmission Operator" by "Transmission Planner".

The Transmission Operator 'operates' the Transmission Planner 'plans'. This was correct as presented in the last posting, so no change was made.

Southern Company Services:
SERC EC Planning Standards Subcommittee
Southern Co. Generation:
Ed Davis – Entergy Services, Inc - #1

FAC-012-1, section C, paragraph M3.2 - This is very hard to read. It should be changed to the following: …..Each Reliability Authority and Transmission Operator that is responsible for any portion of the Planning Authority's Planning Authority Area….

Agreed

Southern Company Services:

Southern Co. Generation:
SERC EC Planning Standards Subcommittee
Ed Davis – Entergy Services, Inc - #1

FAC-012-1, section C, paragraph M4 - This repeats the requirements of M2 and M3. Therefore it is not needed and should be deleted.

Agreed.

ATC:

FAC-012-1, M4: Suggest deleting this measure because it appears to be redundant after M2 and M3.

Agreed.

TVA:

Look at the numbering under Section C. Measures…should be M1.3.1, M1.3.2, M1.3.3, M1.3.4

also, M4 seems to be redundant …details already covered in M2 and M3

The erroneous numbering was generated by the Word Template used to format the standard.

M4 was deleted as suggested.

SERC EC Planning Standards Subcommittee

Although the technical content of FAC-012-1 do not require additional revisions, M1 through M3 can be simplified since the measures are a repeat of the corresponding requirements R1 through R3.

Agree. The format has been revised as suggested.

Southern Company Services:

Since M1.1 through M1.3 has the same wording as the requirements R1.1 through R1.3., consider rewriting the Measures section to make it concise and not be exactly redundant.

Agree. The format has been revised as suggested.

Comments on Compliance in FAC-012-1 – Transfer Capabilities Methodology:

SES

D2.1.1; D2.2; and D2.3: The SES recommends the SDT clarify what is specifically being referenced by the phrase…statements or descriptions.

The Standard contains specific references to the appropriate requirements.

FAC-013-1 – Establish and Communicate Transfer Capabilities Methodology

PG&E

We suggest reinserting the earlier provision by changing the Purpose (A.3) and Requirement R1 in both Standards FAC-012-1 and FAC-013-1 to read:

> **"Purpose:** To ensure the determination of Transfer Capabilities that result in the reliable planning and operation of the Bulk Electric System (BES) **if requested by Reliability Authority, Planning Authority, Transmission Planner, or Transmission Operators that have a reliability need for the Transfer Capabilities.**"

Instead of changing the Purpose, the drafting team modified the 'applicability' statements to indicate that the requirements are only applicable to Planning Authorities and Reliability Authorities required by their Region to establish inter-regional and intra-regional Transfer Capabilities. This achieves the same end result and conforms to the same format used in other standards that apply to only a subset of all entities performing a specific Function.

Comments on Requirements in FAC-013-1 – Establish and Communicate Transfer Capabilities Methodology:

TVA:

FAC-013-1 in subsections R2.1 and R2.2 there is mention of NERC. Is this necessary if information is being provided to Regional Reliability Organizaton? If so, it should be in FAC-009-1 and FAC-011-1

The requirement to provide this to NERC has been dropped. If NERC needs the document, NERC can get it from the Regions.

Gerald Rheault – Manitoba Hydro - #1, 3, 5, 6

In FAC-013-1 R2.1 the words "adjacent Reliability Authority(ies), to Reliability Authorities, and to the Transmission Operators" should be changes to "adjacent Reliability Authority(ies), to Reliability Authorities, Transmission Operators". This change will clarify that the second Reliability Authorities referenced in this sentence are ones that work in its Reliability Authority Area. Otherwise this term is unclear as to what is meant by the second "Reliabily Authorities".

A Reliability Authority can't work in another Reliability Authority's Area. For clarification, the term "adjacent Reliability Authority (ies) was changed to '…adjacent and associated Reliability Authorities and the second term 'to Reliability Authorities' was removed.

Robert Rhodes – SPP - #2

I would suggest the following rewrite for R2.1: "The Reliability Authority shall provide its Transfer Capabilities to its associated Regional Reliability Organization(s), the North American Electric Reliability Council, to its adjacent Reliability Authorities and to Reliability Authorities, the Transmission Operators, Transmission Service Providers and Planning Authorities that work in its Reliability Authority Area.

A Reliability Authority can't work in another Reliability Authority's Area. For clarification, the term "adjacent Reliability Authority (ies) was changed to '…adjacent and associated Reliability Authorities and the second term 'to Reliability Authorities' was removed.

SES

R2.1: The SES believes there is a typo in R2.1. We recommend the phrase…to Reliability Authorities,…be deleted as it is confusing and redundant.

For clarification, the term "adjacent Reliability Authority (ies) was changed to '…adjacent and associated Reliability Authorities and the second term 'to Reliability Authorities' was removed.

SERC EC Planning Standards Subcommittee
Southern Co. Generation:
Southern Company Services:
Ed Davis – Entergy Services, Inc - #1

FAC-013-1, section B, paragraph R2.1 - The paragraph contains the following:"...to its adjacent Reliability Authorities, to Reliability Authorities, and...". The second use of "to Reliability Authorities" should be deleted.

For clarification, the term "adjacent Reliability Authority (ies) was changed to '…adjacent and associated Reliability Authorities and the second term 'to Reliability Authorities' was removed.

MRO:

FAC-013-1, B. Requirements, R2.1 states: "The Reliability Authority shall provide its Transfer Capabilities to its associated Regional Reliability Organization(s), the North American Electric Reliability Council, to its adjacent Reliability Authorities, to Reliability Authorities…." The MRO believes this is unclear. Is this supposed to be to all other Reliability Authorities? It's not readily clear why this second reference to Reliability Authorities has been added. The MRO recommends that the SDT clarify this.

For clarification, the term "adjacent Reliability Authority (ies) was changed to '…adjacent and associated Reliability Authorities and the second term 'to Reliability Authorities' was removed.

Southern Company Services:

FAC-013-1, section B, paragraph R2.1 and R2.2 - what timeframe are the TTCs to be provided? Is it yearly, monthly,etc.?

The end-user needs to dictate when the data is needed – if the request is unreasonable, then this needs to be addressed through the appeals process or dispute resolution.

Comments on Measures in FAC-013-1 – Establish and Communicate Transfer Capabilities Methodology:

ATC:

FAC-013-1, M2: Suggest that a reasonable timeframe for reporting Transfer Capabilities (e.g. within 5 business days or a "mutually agreed schedule") be used, rather than "in accordance with schedules supplied by the requestors". What if the requestor's schedule is unrealistic and/or unreasonable?

The end-user needs to dictate when the data is needed – if the request is unreasonable, then this needs to be addressed through the appeals process or dispute resolution.

SES

CM2: The SES offers the same comments as for other standards regarding the need to clarify the phrase…schedules supplied by the requestor…

The end-user needs to dictate when the data is needed – if the request is unreasonable, then this needs to be addressed through the appeals process or dispute resolution.

Comments on Compliance in FAC-013-1 – Establish and Communicate Transfer Capabilities Methodology:

SES

D1.4: The SES recommends changing 5 business days to 15 business days as previously discussed.

This was changed as suggested.

SES

D2.2: The SES recommends the SDT clarify and further define the term--some--as to make it measurable.

The term, 'some' has been deleted from the levels of non-compliance as suggested in other comments submitted by the SES.

Southern Company Services:

FAC-013-1, section D, item 1.4 - to require data, not knowing the extent of the request in 5 business days may be difficult for todays very lean staffs. A more reasonable amount would be 10 business days.

Similar comments were received from others, and this was changed to '15 business days'.

Robert Rhodes – SPP - #2

See my comment 1 in response to Question 9, FAC-009-1 with regard to Compliance 1.2

See my comment 2 in response to Question 9, FAC-009-1 with regard to Compliance 1.4.

I would suggest switching Levels 3 and 4 in the Levels of Non-Compliance.

Please see the response to your comments 1 and 2 in response to Question 9, FAC-009-1.

Most commenters agreed with the proposed levels of non-compliance and these were not changed.