NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL
Princeton Forrestal Village, 116-390 Village Boulevard, Princeton, New Jersey 08540-5731

Monitor and Assess Short-term Transmission Reliability — Operate Within Transmission System Limits Standard Drafting Team Meeting

Wednesday, May 28, 2003 — 8 a.m.–5 p.m.
Thursday, May 29, 2003 — 8 a.m.–5 p.m.

The Radisson Plaza Hotel
Baltimore, Maryland

Agenda

1. Administrative

a. Membership and Guests — Chair
b. Introductions — Chair
c. Organization, Roster, and Survey Contacts List — Secretary
d. Arrangements — Secretary
e. Procedures
    i. Parliamentary Procedures — Chair
    ii. Anti-Trust Compliance Guidelines — Chair

2. Monitor and Assess Short-term Reliability — Operate Within Transmission System Limits Standard Draft, Version 2

a. Respond to Standard Draft Version 1 — Comments
b. Prepare Standard Draft Version 2
c. Prepare Standard Draft Version 2, Comment Form

3. Future Meetings

a. Future Meetings and Conference Calls, to be Determined During the Meeting

1. Administrative

Monitor and Assess Short-term Transmission Reliability — Operate Within Transmission System Limits Standard Drafting Team Meeting

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    i. Parliamentary Procedures — Chair
    ii. Anti-Trust Compliance Guidelines — Chair

Item 1.a Membership and Guests

On behalf of the "Monitor and Assess Short-term Reliability — Operate Within Transmission System Limits" Standard Drafting Team, Chairman Ed Riley welcomes the "Operate Within Limits" SDT members and all guests to Baltimore, Maryland and to this meeting.

Item 1.b Introductions

The Chair will ask members and guests to introduce themselves.

Item 1.c Roster, Contacts List and Attendance Sheet

The Secretary will review the current Roster and Contacts List. Each member is asked to check the data for accuracy. Each meeting attendee is asked to sign and complete the attendance sheet.

Attachment

Roster with Contact Information

Item 1.d Arrangements

Standard Drafting Team Secretary Tom Vandervort will review the meeting arrangements. The Operate Within Limits SDT meetings begin on Wednesday, May 28, 2003, at 8 a.m. and will adjourn by 5 p.m. The SDT will reconvene Thursday, May 29, at 8 a.m. and will adjourn by 5 p.m. Lunch will be served on both days.

Item 1.e Parliamentary Procedures

i. Parliamentary Procedures:

A summary of Parliamentary Procedures is attached for reference. The Secretary will answer questions regarding these procedures.

ii. Anti-Trust Compliance Guidelines:

On June 14, 2002 the NERC Board of Trustees adopted antitrust compliance guidelines for NERC. In adopting the guidelines, the Board passed the following resolution:

RESOLVED, that the Board of Trustees (1) adopts the draft Antitrust Compliance Guidelines attached hereto as Exhibit A and (2) instructs that these Antitrust Compliance Guidelines be included in the agenda package for each meeting of every NERC committee, subcommittee, task force, working group, and other NERC-sponsored activity.

The resolution also applies to workshops, training sessions, and any other NERC-sponsored events. A copy of the NERC Anti-Trust Compliance Guidelines will be included in the agenda package for each meeting of each group or event.

Attachment

Parliamentary Procedures
NERC Anti-Trust Guidelines

2. Monitor and Assess Short-term Transmission Reliability — Operate Within Transmission System Limits Standard Draft, Version 2

a. Respond to Standard Draft Version 1 — Comments
b. Prepare Standard Draft Version 2
c. Prepare Standard Draft Version 2, Comment Form

Item 2.a Respond to Standard Draft Version 1 — Comments

Discussion and Action:

The Standard Drafting Team (SDT) will review and respond to all "Monitor and Assess Short-term Transmission Reliability — Operate Within Transmission System Limits" Draft Standard, Version 1, comments. Maureen Long compiled and categorized the comments by question number. The following SDT members volunteered to draft responses to the comments and distribute them to the SDT:

Ed Riley — Questions 1 through 6
Al DiCaprio — Questions 8 through 9
Gerry Rheault — Questions 10 through 17
Ellis Rankin — Questions 18 through 27
Al DiCaprio — Questions 28 through 41
Chuck Waits — Questions 32 through 43
Ed Riley — Questions 44 through 47

All OWL SDT members are to read all of the OWL public comments and the OWL SDT draft responses prior to the next meeting. The SDT members are to have an understanding of the commenter intention, the respective responses, and alternate responses (if different). The SDT will respond to all comments in accordance with the NERC Reliability Standards Process Manual.

Attachment

a) Monitor and Assess Short-term Transmission Reliability — Operate Within Transmission System Limits, Draft, Version 1 — Comments

Item 2.b Prepare Standard Draft Version 2

The Standard Draft Version 1, comments that are evaluated to be beneficial or appropriate to enhance the standard will be incorporated. Those comments that are evaluated to be insignificant or do not enhance the standard will not be incorporated.

Issues and concerns that cannot be addressed and resolved by the SDT will be added to the list of Parking Lot Issues.

At the last meeting, the OWL SDT adopted the term "Interconnection Reliability Limit (IRL)" proposed by the Operating Limit Definition Task Force (OLDTF) and enhanced the term to "Interconnection Reliability Operating Limit (IROL)" subject to its being defined by the Facility Ratings Team. The Facility Ratings SDT decided not to define this term. The Facility Ratings SDT felt that system operators should monitor all SOLs, not just those that lead to instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. The Facility Ratings SDT is leaving it up to the OWL SDT to define IROLs.

The goal of the OWL SDT is to finalize and post the "Monitor and Assess Short-term Transmission Reliability — Operate Within Transmission System Limits" Draft Standard, Version 2.

Attachment

a) Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission System Limits, Draft, Version 2 — (Work in Progress) from SDT April 29 Meeting

b) Monitor and Assess Short-term Transmission Reliability — Operate Within Transmission System Limits, SAR, SAR ID # OPER_WITHN_LMTS_01_03

c) "Operate Within Limits" SDT Parking Lot Issues

Item 2.c Prepare Standard Draft Version 2, Comment Form

When the "Monitor and Assess Short-term Transmission Reliability — Operate Within Transmission System Limits" Draft Standard, Version 2 is ready to post for another round of comments, an associated comment form will accompany it.

The goal of the OWL SDT is to construct a comment form with the appropriate questions to post along with the standard draft, Version 2.

3. Future Meetings

a. Future Meetings and Conference Calls, to be Determined During the Meeting

Discussion and Action:

The Standard Drafting Team will determine the next time a meeting or conference call will be scheduled to continue drafting the "Operate Within Limits" Standard.

"Operate Within Limits" SDT Roster

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William Thompson	American Electric Power 155 W. Nationwide Blvd. Suite 500 Columbus, OH 43215	614-583-7230 (office) 614-348-8836 (cell) wrthompson@aep.com
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Charles V. Waits Vice President - Operations & Transmission Strategy	Michigan Electric Transmission Company, LLC 540 Avis Drive, Suite H Ann Arbor, Michigan 48108	734-929-1227 (office) cwaits@metcllc.com
List Server for Standard DT		opwinlimsdt@nerc.com

Parliamentary Procedures

Based on Robert's Rules of Order, Newly Revised, 1990 Edition

Motions

Unless noted otherwise, all procedures require a "second" to enable discussion.

When you want to…	Procedure	Debatable	Comments
Raise an issue for discussion	Move	Yes	The main action that begins a debate.
Revise a Motion currently under discussion	Amend	Yes	Takes precedence over discussion of main motion. Motions to amend an amendment are allowed, but not any further. The amendment must be germane to the main motion, and cannot reverse the intent of the main motion.
Reconsider a Motion already approved	Reconsider	Yes	Allowed only by member who voted on the prevailing side of the original motion.
End debate	Call for the Question *or* End Debate	No	If the Chair senses that the committee is ready to vote, he may say "if there are no objections, we will now vote on the Motion." Otherwise, this motion is debatable and subject to 2/3 majority approval.
Record each member's vote on a Motion	Request a Roll Call Vote	No	Takes precedence over main motion. No debate required, but the members must approve by 2/3 majority.
Postpone discussion until later in the meeting	Lay on the Table	Yes	Takes precedence over main motion. Used only to postpone discussion until later in the meeting.
Postpone discussion until a future date	Postpone until	Yes	Takes precedence over main motion. Debatable only regarding the date (and time) at which to bring the Motion back for further discussion.
Remove the motion for any further consideration	Postpone indefinitely	Yes	Takes precedence over main motion. Debate can extend to the discussion of the main motion. If approved, it effectively "kills" the motion. Useful for disposing of a badly chosen motion that ca not be adopted or rejected without undesirable consequences.
Request a review of procedure	Point of order	No	Second not required. The Chair or secretary shall review the parliamentary procedure used during the discussion of the Motion.

Notes on Motions

Seconds. A Motion must have a second to ensure that at least two members wish to discuss the issue. The "seconder" is not recorded in the minutes. Neither are motions that do not receive a second.

Announcement by the Chair. The Chair should announce the Motion before debate begins. This ensures that the wording is understood by the membership. Once the Motion is announced and seconded, the Committee "owns" the motion, and must deal with it according to parliamentary procedure.

Revisions. Technically, revisions to the main motion are accomplished by the Amend procedure. However, immediately after making the motion, and before it is announced by the Chair, another member may ask that the motion be revised. If the original "motion-maker" agrees to the revision, then the revised motion will be the one debated. The original "seconder" need not be consulted, because the original "motion-maker" plus the "reviser" constitute a motion and a second.

Voting

Voting Method	When Used	How Recorded in Minutes
Unanimous Consent	When the Chair senses that the Committee is substantially in agreement, and the Motion needed little or no debate. No actual vote is taken.	The minutes show "by unanimous consent."
Vote by Voice	The standard practice.	The minutes show Approved or Not Approved (or Failed).
Vote by Show of Hands (tally)	To record the number of votes on each side when an issue has engendered substantial debate or appears to be divisive. Also used when a Voice Vote is inconclusive. (The Chair should ask for a Vote by Show of Hands when requested by a member).	The minutes show both vote totals, and then Approved or Not Approved (of Failed).
Vote by Roll Call	To record each member's vote. Each member is called upon by the Secretary,, and the member indicates either "Yes," "No," or "Present" if abstaining.	The minutes will include the list of members, how each voted or abstained, and the vote totals. Those members for which a "Yes," "No," or "Present" is not shown are considered absent for the vote.

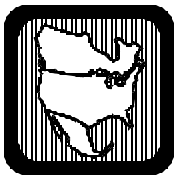
Notes on Voting

(Recommendations from DMB, not necessarily Mr. Robert)

Abstentions. When a member abstains, he is not voting on the Motion, and his abstention is not counted in determining the results of the vote. The Chair should not ask for a tally of those who abstained.

Determining the results. The results of the vote (other than Unanimous Consent) are determined by dividing the votes in favor by the total votes cast. Abstentions are not counted in the vote and shall not be assumed to be on either side.

"Unanimous Approval." Can only be determined by a Roll Call vote because the other methods do not determine whether every member attending the meeting was actually present when the vote was taken, or whether there were abstentions.



NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL

Princeton Forrestal Village, 116-390 Village Boulevard, Princeton, New Jersey 08540-5731

NERC ANTITRUST COMPLIANCE GUIDELINES

I. GENERAL

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

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

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

II. PROHIBITED ACTIVITIES

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

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

Approved by NERC Board of Trustees
June 14, 2002

III. ACTIVITIES THAT ARE PERMITTED

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

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation and Bylaws are followed in conducting NERC business. Other NERC procedures that may be applicable to a particular NERC activity include the following:

- Organization Standards Process Manual
- Transitional Process for Revising Existing NERC Operating Policies and Planning Standards
- Organization and Procedures Manual for the NERC Standing Committees
- System Operator Certification Program

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

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

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

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.

- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.

- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.

- Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

Summary of Comments Form for 1st Posting of Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard

Note to SDT Members:

On the following pages, the comments have been 'cut and pasted' by question number, and then by similar response. There were well over a thousand pages to sift through to condense this material to the document before you.

We had over 50 sets of comments - all the responses to Question 1 appear following Question 1 – the No responses appear first, followed by Yes/No responses, followed by Yes responses. No comments have been omitted in the development of this compilation.

Where practical (meaning where I had time and could see a pattern in the responses) I grouped similar responses under a yellow-shaded subheading.

Where someone submitted a response that told us to refer to a comment submitted on another question, I cut and pasted the response to the earlier question so that it appears in an italic font within brackets, like the example below.

Roman Carter	No
So Co Gen #3,5,6	See answer to question #1.
(6 members)	*I{t is recommended that "data" mean something specific vs. a "very general" reference to items. Being more specific would provide for us to give a more definitive answer on whether we agree or not.}*

For each response I tried to include the name of the person who submitted the comments, along with their company affiliation and Industry Segment(s). Several formal and informal groups submitted comments – in some places the list of people on the group included individuals who had submitted individual sets of comments. In these cases, I listed the number of group members with a question mark.

Index

1. The draft standard uses the term 'data' to allow for real, state-estimated or other calculated values. Do you agree? 4

2. The draft standard uses the term 'Reliability Analysis' to mean those manual or automated studies, and system operator assessments. Reliability analyses includes both real time and operational planning analyses. Do you agree? 7

3. This draft standard assumes that data needed to run reliability analyses has been provided as part of certification for the RA and/or TOP functions. This standard only addresses the changes to this "base data" that occur following the certification award – such as additions, deletions, or other changes to system facilities that would impact the accuracy of models used to monitor and assess the bulk transmission system. The intent is to minimize unnecessary documentation. Do you agree with this assumption? 11

4. The draft standard uses the term "Industry Accepted Format" to mean a generally accepted format used by the electric power industry to specify the parameters that must be addressed in development of the system model and/or to transmit data. Do you agree? 16

5. Based on the above graph, do you agree with the concept that operation within the "yellow zone" is exceeding an operating limit, but not a reportable violation? 19

6. Based on the above graph, do you agree with the concept that operating within the "red zone" is a reportable violation? 24

7. If you feel there are additional terms used in this draft standard that should be formally defined, please list those terms here. If possible, please provide us with a definition for each of these terms. 28

8. Who should provide the RA with generation data needed for system analyses? (This data consists of the generator operational characteristics.) (BA, TOP, Gen, PA) 34

9. Who should provide the TOP with generation data needed for system analyses? (This data consists of the generator operational characteristics.) (RA, BA, Gen, PA) 38

10. Requirement 1 – Do you agree with this requirement and its associated performance/outcome and measure/s? 42

11. Requirement 1 – Do you agree with these levels of non-compliance for this requirement? 47

1. Requirement 2 – Do you agree with this requirement and its associated performance/outcome and measure/s? 54

2. Requirement 2 – Do you agree with these levels of non-compliance for this requirement? 59

3. Requirement 3 – Do you agree with this requirement and its associated performance/outcome and measure/s? 66

4. Requirement 3 – Do you agree with these levels of non-compliance for this requirement? 71

5. Requirement 4 - Do you agree with this requirement and its associated performance/outcome and measure/s? 75

6. Requirement 4 - Do you agree with these levels of non-compliance for this requirement? 80

7. Requirement 5 - Do you agree with this requirement and its associated performance/outcome and measure/s? 84

8. Requirement 5 - Do you agree with these levels of non-compliance for this requirement? 89

9. Requirement 6 - Do you agree with this requirement and its associated performance/outcome and measure/s? 92

10. Requirement 6 - Do you agree with these levels of non-compliance for this requirement? 97

11. Requirement 7 - Do you agree with this requirement and its associated performance/outcome and measure/s? 100

12. Requirement 7 - Do you agree with these levels of non-compliance for this requirement?..... 105
13. Requirement 8 - Do you agree with this requirement and its associated performance/outcome and measure/s? 108
14. Requirement 8 - Do you agree with these levels of non-compliance for this requirement?..... 113
15. Requirement 9 - Do you agree with this requirement and its associated performance/outcome and measure/s? 117
16. Requirement 9 - Do you agree with these levels of non-compliance for this requirement?..... 123
17. Requirement 10 - Do you agree with this requirement and its associated performance/outcome and measure/s? 127
18. Requirement 10 - Do you agree with these levels of non-compliance for this requirement?..... 132
19. Requirement 11 - Do you agree with this requirement and its associated performance/outcome and measure/s? 136
20. Requirement 11 - Do you agree with these levels of non-compliance for this requirement?..... 142
21. Requirement 12 - Do you agree with this requirement and its associated performance/outcome and measure/s? 146
22. Requirement 12 - Do you agree with these levels of non-compliance for this requirement?..... 151
23. Requirement 13 - Do you agree with this requirement and its associated performance/outcome and measure/s? 156
24. Requirement 13 - Do you agree with these levels of non-compliance for this requirement?..... 161
25. Requirement 14 - Do you agree with this requirement and its associated performance/outcome and measure/s? 165
26. Requirement 14 - Do you agree with these levels of non-compliance for this requirement?..... 169
27. Requirement 15 - Do you agree with this requirement and its associated performance/outcome and measure/s? 172
28. Requirement 15 - Do you agree with these levels of non-compliance for this requirement?..... 176
29. Requirement 16 - Do you agree with this requirement and its associated performance/outcome and measure/s? 179
30. Requirement 16 - Do you agree with these levels of non-compliance for this requirement?..... 185
31. Requirement 17 - Do you agree with this requirement and its associated performance/outcome and measure/s? 188
32. Requirement 17 - Do you agree with these levels of non-compliance for this requirement?..... 193
33. ..... Are you aware of any Regional or Interconnection Differences that should be included in this Standard? If so, please identify what you feel should be added..... 196
34. Is the draft standard missing any requirements that should be added. If so, please identify what you feel should be added. 198
35. Which form of the Standard do you prefer?..... 202
36. If you have comments on the format of the standard, please share them with us. 206
37. Please list any other comments you may have in the space below..... 210

1. The draft standard uses the term 'data' to allow for real, state-estimated or other calculated values. Do you agree?

Roman Carter So Co Gen 3,5,6 (6 members)	No It is recommended that "data" mean something specific vs. a "very general" reference to items. Being more specific would provide for us to give a more definitive answer on whether we agree or not.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No 'data' should include real-time, state estimated, calculated or manually monitored values. It should allow a Reliability Coordinator/Transmission Operator/Generator to station an individual at a plant or substation to directly monitor values.
Lee Xanthakos SCE&G #1	No "data" is a subjective term that should be better defined
Raj Rana AEP #1,3,5,6	No "Data" should also include manually monitored values. That is the standard should allow a Reliability Coordinator/Transmission Operator/Generator to station an individual at a plant or substation to directly monitor values.
George Bartlett Entergy Svcs 1	No The Standard should differentiate between real-time data and modeling data. We suggest the definition of "Real-time Data" should be "real-time measured values, state estimator values derived from the measured values, or other calculated values derived from the measured values". "Modeling Data" should be values characteristic of the facilities modeled to determine or estimate the power system performance.
Francis Halpin BPA Bus Line #5,6	No The term 'data' as it applies to this standard should only be applicable to 'real time' or 'actual metered' data. The term "actual" should be removed from the sentence reading "actual real time data associated with those limits". ACTUAL implies REAL and "real" data is only one of the several types of data which are being defined in the footnote as being included as "real time data". Suggestion: Simply use the phrase "real time data". That would make it easier to accept the definition of "data" described in footnote 2 as being "real, state estimated or other...etc".
Doug Hils Mark Peter Cinergy #1	No "Data" should include manually entered values inputed from information received from person stationed at the site to monitor equipment.
Gregory Campoli NY ISO #2	No It is difficult to assess compliance if you are not specific in the intent. For each specific data type a clear requirement needs to be identified. Data types may include real, state-estimated, modeling or other types of data. Another point that needs to be considered is the accruracy and frequency of telemetered data.

Compliance Sub Compl Mgrs	Varying interpretations occur if the term "real" is used in the Standards. Each time the term is used, the "writer" should consider explaining the meaning of the term. The term data should be explicitly defined. In the example above, the writer refers to real data, state-estimated data, and calculated data. State estimated data, calculated data, manually input data, etc. are also real. Consideration should be given to establishing a minimum performance or accuracy and frequency of update criteria for the calculated values and accuracy and frequency criteria of telemetered data values.
Kathleen Goodman ISO NE #2	Yes/No Need to further define what real data means.
FRCC 6-#1, 4-#2, 1-#2	Yes However, we question why the non-compliance levels for the first two requirements require actual data. You should be able to use state estimated or other calculated values as appropriate.
William Smith Allegheny Pwr #1	Yes “Real” should include manually monitored values.
Toni Timberman BPA #1	Yes Define ‘real’
Vern Colbert Dominion #1	Yes Data should be defined
Robert Reed TS (See List) Susan Morris SERC #2	Yes 1) The TS agrees with the term "data" used, but it should be explicitly defined and quantified. 2) Consideration should be given to establishing a minimum performance or accuracy and frequency criteria for the "calculated values" and accuracy and frequency criteria of telemetered data values.
Tom Petrich (5) PG&E #1	Yes There are other references to “actual” data. (For example, Requirement 1 states “The RA shall monitor real time system operating limits and compare these against actual data associated with those limits”.) If “actual” data is the same as “real” data, then we suggest using the term “actual” data throughout the standard to avoid confusion in the future.
Thomas Pruitt Duke #1	Yes The the term "data" should be explicitly defined and quantified. Consideration should be given to establishing a minimum performance or accuracy and frequency criteria for the "calculated values" and accuracy and frequency criteria of telemetered data values. Footnotes should be repeated at least once for each requirement to remind the reader of the definition.
Susan Morris SERC #2	Yes Footnotes should be repeated at least once for each requirement to remind the reader of the definition.
John Blazekovich Exelon #1,3,5,6	Yes With the understanding that the footnote explanations will remain in place
Ed Stein Joanne Borrell Ray Morella Firstenergy #1, 3, 6	Yes As long as specified data includes manually calculated values. Data should include real-time, state estimated, calculated or manually monitored values. It should allow a Reliability Coordinator/Transmission Operator/Generator to station

	an individual at a plant or substation to directly monitor values.
Peter Burke ATC #1	Yes May need better definition as to what "real time" data means (4 second scans, 30 second scans, etc) as this could have an impact on other sections of the standard.
Lloyd Linke MAPP #2	Yes The term data must be qualified as real time when real time data is being compared to short term operational limits.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	Yes We agree however would urge the terms used in the standards be explicitly defined and quantified.
Alan Boesch NPPD #1 Alan Johnson Mirant #6 Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Ed Riley CA ISO #2 Fred Frederick Vectren #3 Gerald Rheault Manitoba #1,3,5,6 James Stanton Calpine #5 Joe Minkstein PG&E #5 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Ken Skroback AL Elec Coop #4 Kim Warren IMO #2 Lee Westbrook Oncor #1 Mike Miller Southern Co #1 OLDTF (9?) 6 - #2 1 - #1,5 Richard Kafka Pepco #1 Richard Schwarz PNSC #2 Sam Jones ERCOT #2 Stuart Goza TVA #1 Todd Lucas (6?) Southern Co #1 Tony Jankowski We-Energies #4	Yes

2. The draft standard uses the term 'Reliability Analysis' to mean those manual or automated studies, and system operator assessments. Reliability analyses includes both real time and operational planning analyses. Do you agree?

Compliance Mgrs Compl Subcomm	No RCs should be required to run (on-line/real-time automated studies and off line operational planning studies to identify and/or forecast bulk reliability concerns, but TOPs should not be subjected to such requirements. What is real time? Need to define "operational planning analysis". There should be some qualifiers that define a NERC minimum periodicity to complete reliability analysis. The RA should establish their particular cycle for doing reliability analysis, and that information should be included in their Certification documentation. Need to define what types of analysis are expected: actual flows versus limits, contingency analysis of all possible contingencies? Analysis of only those conditions defined in the day-ahead or seasonal studies? Is the requirement to do a "reliability analysis" every day? every shift? everytime a change in system configuration demands etc.
Susan Morris SERC #2 Robert Reed TS (See List)	No 1) RAs should be required to run (on-line/real-time) automated studies and off-line operational planning studies to identify and/or forecast bulk reliability concerns, but TOPs should not be subject to such requirements. The standard does not read as though manual analysis is sufficient, as it references "analysis tool" availability and then makes mention of "reliability analysis did not run" in multiple locations. This verbiage indicates that manual reliability analysis is not sufficient. Therefore, modifications should be made to alter this requirement for the TOPs. Expecting every TOP to acquire and maintain on-line reliability analysis tools is too expensive and too obtrusive without adequate reliability benefit to justify such a universal requirement - particularly since the RAs will be required to use such tools anyway. 2) What is the scope of the term "real time"? The footnote appearing on pg.1 of Version A defines "real time" but it is still not clear if this is restricted to data extracted from the Energy Management Systems, and does a reference to "real-time" conceptually imply data, or processes, or both? 3) What is the definition and scope of "operational planning analysis"? 4) It seems the Reliability Analysis definition above is an attempt to conceal the fact that many existing entities performing Reliability Authority Functions do not have a working state estimator. The RA should explain what type of of analysis tool(s), the frequency, the type of input data (off-line or real-time), etc. that is used to perform "reliability analysis". 5) Why are the analysis requirements of the RA and the TOP identical? If this is true, why do we need an RA and a TOP? 6) Why isn't there a standard for the TOP to provide telemetered data? There should be some type of performance standard established to assess the accuracy of telemetered data.
Thomas Pruitt Duke #1	No 1) What is the scope of the term "real time"? The footnote appearing on pg.1 of Version A defines "real time" but it is still not clear if this is restricted to data extracted from the Energy Management Systems, and does a reference to "real-time" conceptually imply data, or processes, or both? 2) What is the definition and scope of "operational planning analysis"?

	3) Why isn't there a standard for the TOP to provide telemetered data? There should be some type of performance standard established to assess the accuracy of telemetered data.
Kathleen Goodman ISO NE #2	No This definition is too vague. Please elaborate to ensure that compliance is achieved. Please give specific examples
Gregory Campoli NY ISO #2	No It is difficult to assess compliance if you are not specific with the type of assessment and the time frame that needs to be address. For each case where a reliability analysis is required for compliance, a specific reference to real time or operational analysis needs to be defined. The references to real time analysis is not adequate, a better definition is required.
Charles Yeung Reliant Energy #6	No Such a broad definition that includes "real-time" and "operational planning" allows for a great amount of variability in what the RA must do to assess the security/reliability of the system. This results in difficulty in assessing and measuring compliance. E.g. - one RA may perform real-time studies whereas another may not. If this broad definition is adopted, then specific references in the standard to a "real time" or "operational planning" time frame as to when these analysis are performed is needed.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No We recommend substituting Reliability Analysis with operational planning analysis and real time assessment as appropriate to short term or long term studies. Also the term real time needs to be explicitly defined. Although the footnote appearing on page one of Version A defines "Real Time" it is still unclear if this is restricted to data extracted from the Energy Management Systems.
Roman Carter So Co Gen 3,5,6 (6 members)	No See answer to question #1. *{It is recommended that "data" mean something specific vs. a "very general" reference to items. Being more specific would provide for us to give a more definitive answer on whether we agree or not.}*
Lloyd Linke MAPP #2	Yes RAs should be required to run (on-line/real-time) automated studies to identify bulk reliability concerns, but TOPs should not be subject to such requirements. I don't believe the Standard reads as though manual analysis is sufficient, as it references "analysis tool" availability and the makes mention of "reliability analysis did not run" in a multiple locations. This verbiage indicates that manual reliability analysis is not sufficient. Therefore, modifications should be made to alter this requirement for the TOPs. Expecting every TOP to acquire and maintain on-line reliability analysis tools is too expensive and too obtrusive without adequate reliability benefit to justify such a universal requirement - particularly since the RAs will be required to use such tools anyway.
FRCC 6-#1, 4-#2, 1-#2	Yes The footnote appearing on pg.1 of Version A defines "real time" but it is not clear if this is restricted to data extracted from the Energy Management Systems, and does a reference to "real-time" conceptually imply data, or processes, or both?
Vern Colbert Dominion #1	Yes Describe what a manual study will consist of. Reliability analysis should only be performed by the RA, not the TOP.
Lee Xanthakos	Yes

SCE&G #1	I agree that the term should include both manual and automated process, however the standard did not read that way to me. Perhaps the drafting team should better clarify their intent in the standard
George Bartlett Entergy Svcs 1	Yes Please define "operational planning analyses" as used in this standard.
Francis Halpin BPA Bus Line #5,6	Yes It is agreed that Reliability Analysis may include consideration of results of planning studies, however this proposal includes language which would require Transmission Operators to conduct these analyses along with RA's. While large RTO's performing TOP functions may have no problem acquiring system models and other tools with which to perform these studies, smaller TOP's such as Coop, PUD's and other non-juristictional TOP's who may operate Transmission Systems may have neither the tools nor the staffing to do anything but use manual monitoring to maintain system reliability. The drafting team should assess the feasibility of this requirement being met by small non RTO participant TOP's.
Todd Lucas (6?) Southern Co #1	Yes Any entity that is operating or has functional control of a transmission system should be required to have offline as well as real time analysis tools.

Alan Boesch NPPD #1 Alan Johnson Mirant #6 Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2 Ed Riley CA ISO #2 Ed Stein Firstenergy Sol #6 Fred Frederick Vectren #3 Gerald Rheault Manitoba #1,3,5,6 James Stanton Calpine #5 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Ken Skroback AL Elec Coop #4 Kim Warren IMO #2 Lee Westbrook Oncor #1 Mike Miller Southern Co #1 OLDTF (9?) 6 - #2 1 - #1,5 Peter Burke ATC #1 Raj Rana AEP #1,3,5,6 Ray Morella FirstEnergy #1 Richard Kafka Pepco #1 Richard Schwarz PNSC #2 Sam Jones ERCOT #2 Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 Toni Timberman BPA #1 Tony Jankowski We-Energies #4 William Smith Allegheny Pwr #1	Yes

3. This draft standard assumes that data needed to run reliability analyses has been provided as part of certification for the RA and/or TOP functions. This standard only addresses the changes to this "base data" that occur following the certification award – such as additions, deletions, or other changes to system facilities that would impact the accuracy of models used to monitor and assess the bulk transmission system. The intent is to minimize unnecessary documentation. Do you agree with this assumption?

Susan Morris SERC #2 Robert Reed TS (See List) Compliance Mgrs Compl Subcomm	No 1) The focus is only on providing specifications for the data required. It appears to be unclear that there is no requirement to actually provide the real-time data. For example, the TOPs are required to specify and require data, but they do not appear to be required to actually PROVIDE data to RAs. 2) The certification process for the RA/TOP is not the proper means to obtain correct modeling data. It may be appropriate for real-time metering data, but much of the static data for system modelling and analysis is the same as the planning function. It should be consistent with those modelling requirements also. 3) The standard does not distinctly identify the areas of responsibility between the Reliability Authority and the Transmission Operator. Application of the standard to multiple parties ("Authorities") should clearly delineate the primary source of responsibility and ownership of any data, information, control and responsibility. What follows in the Standard are many requirements that duplicate the RA and TOP responsibilities -- who has the primary responsibility/requirement/authority for each? 4) The only provision in this standard is that data on new facilities must be provided seven days before it is energized. If operational planning studies have a scope of greater than seven days (possibly one year), then a seven-day notice is inadequate for these studies. There appears to be a requirement to have a standard that requires entities to provide the base data used to populate the models, in addition to the requirement to provide information on changes. 5) All assumptions should be listed in the Standard's document.
Thomas Pruitt Duke #1	No 1) The data assumptions and the intent of this question are not clearly stated 2) The certification process for the RA/TOP is not the proper means to obtain correct modeling data. It may be appropriate for real-time metering data, but much of the static data for system modelling and analysis is the same as the planning function. It should be consistent with those modelling requirements also. 3) All assumptions should be listed in the Standard's document.
Sam Jones ERCOT #2	No It is unclear whether the certification process will address the provision of the data. If it does, then we agree with this. If it does not, then we need to ensure somewhere, perhaps in this standard, that the data is indeed provided.
Charles Yeung Reliant Energy #6	No The certification standard for all NERC Reliability Model functions should rely on the reliability standard itself to describe the particular requirements. A certification standard should only assess on a general level whether a reliability function is capable of performing its intended function(s). The Operating WIthin Limits Standard must - on its own - detail the exact data requirements for all RAs and TOPs and not have to rely on a Certification Standard to provide the data. In fact, the Certification Standard(s) should reference the Operating Within Limits Standard (and other applicable standards) to obtain the needed data for certification.

Gerald Rheault Manitoba #1,3,5,6	No Manitoba Hydro agrees that this Standard has to address the requirement for updating the data in a timely fashion. However we believe that the requirement for "base data" is not and should not be addressed in the certification process. The requirement for the "base data" should be included in this Standard. The process to be defined by the RA and TOP to obtain data for reliability analysis purposes should address both "base data" and changes to this data to ensure accuracy of the models used for reliability analysis.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No The certification process for the RA/TOP is in itself an insufficient vehicle to attain correct modeling data. It is felt that the submission of data reflecting changes to the system may reduce documentation but may unnecessarily restrict the RA's to a potentially incomplete data collection process. For example, in some cases the RA may choose to create study models as new base cases on a seasonal basis. Therefore, the exchange of information has to be handled differently to ensure all parties receive the information in a timely manner such that the operating models in adjoining regions do not lead to different results.
George Bartlett Entergy Svcs 1	No This standard is for assuring the power system is operated within transmission limits. The functional responsibilities should be contained in this standards, not a certification standard. If necessary, the standard for certifying an "entity" to perform certain functions, like operating within transmission limits, should reference this document to assure the entity can be certified to perform those functions. Therefore, this standard should address base data and changes to that data.
Alan Boesch NPPD #1	No This is not included in the scope of the RA certification functions. The RA certification fuction will verify if the processes and procedures are in place to preform the analysis. The certification SAR drafting team will depend the standards to assure that the appropriate data is available.
Tony Jankowski We-Energies #4	No This assumption will not minimize unnecessary documentation. To be able to measure, one would have to identify the "Base Data" in order to determine what has changed. There will need to be documentation on the Base Data as well. The Standard should not assume some required Data is monitored or measured outside the Standard.
Raj Rana AEP #1,3,5,6	No This standard should define the minium type of data that is to be provided to the RA, similar to Policy 4B and Appendix 4B requirements today. Additionally, we disagree with the proposal that TOP functions need to be certified and stated such during the first comment period for the organizational SARs.
John Blazekovich Exelon #1,3,5,6	No Verification of "base data" should be included/required upon request on a case by case basis to validate studies
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No (1) This assumption needs to be clearly stated at the front end of the standard. (2) The standard should define the data that needs to be provided similar to NERC Appendix 4B - Electric System Security Data.
Compliance Mgrs Compl Subcomm	No What is meant by "Real time Monitoring"? Does this refer to computer updated

	data a System Operator will use? If data is updated every 10 minutes, or once an hour, or once a shift, is it Real Time? If a quantity is only updated once a week or once a year, is it considered Real Tim Data? The writer must be able to describe what is meant by "Real time" so that the standard can be consistently measured.
Ken Skroback AL Elec Coop #4	No These assumptions work in the new NERC model but don't apply to a small utility (G & T) that is not separated and serves as its own control area. Since non separated utilities are prevented from receiving data from RA's, some of these studies are conducted by the RA using data provided by us to them
Lee Xanthakos SCE&G #1	No Assumptions should be avoided, and drafting team should better clarify their intent in the document.
Kathleen Goodman ISO NE #2	No Why is it nescessary to make sure that updates are provided for? The RA/TOP certification process should be enough to ensure that the entity is performing the functions including updates. To add this requirement adds a layer of complaince which is redundant and not required.
Gregory Campoli NY ISO #2	No This issue is unclear. It is not clear in the Standard as to the nature of the data required. Is this data static, telemetered or modeling data. We are interpreting one requirement to mean that the RA will identify that data collected and provided for reliability analysis. This is not to say the an RA may request data on an as needed bases to perform the reliability analysis. Where is the role of the Compliance Monitor defined?
Francis Halpin BPA Bus Line #5,6	No In order to accurately model system operations for reliability analysis, the RA should have data relating to the intended actual operation of system facilities. While revisions to the base data will certainly be necessary for system modeling, additional near real time operational data must be considered even if there is no change to facilities or to the base data. The standard should make it clear that additional data, above and beyond that provided as base data may be required of facility owners.
Roman Carter So Co Gen 3,5,6 (6 members)	No See answer to question #1. *It is recommended that "data" mean something specific vs. a "very general" reference to items. Being more specific would provide for us to give a more definitive answer on whether we agree or not.*
FRCC	No The certification process for the RA or TOP is not the place to ensure that correct modeling data is supplied by operating entities. The requirement for obtaining initial data, and future changes to data needs to reside in one standard. In addition the draft standard only requires 7 days prior to the energization of new facilities for data to be submitted. This short time frame may not be enough for operational planning studies that may go out as far as 12 months. Perhaps NERC should not make this requirement, but leave it up to the Region or Reliability Authority to determine what the appropriate notification time is.
Peter Burke ATC #1	Yes Agree as long as there is an acceptable definition provided during the certification studies for the required data needed for analysis. Concern that loss of any data will be seen as a violation when in fact data redundancy inherent in the system

	allows reliable operation of the system even with loss of some data. The attempt to reduce the burden is apprecieated.
Lloyd Linke MAPP #2	Yes The focus is only on providing specifications for the data required. There appears to be a hole in that no requirement to actually provide the real-time data is spelled out. For example, the TOP's are required to specify and require data, but they don't appear to be required to actually PROVIDE data to RAs.
Ray Morella Ed Stein FirstEnergy #1, 6	Yes This assumption needs to be clearly stated at the front end of the standard.
Joseph Buch Madison #4	Yes My understanding of the process is that for a RA or TOP to be certified they would need to demonstrate among other things that they already have the required "base" data. Thus this standard only covers changes/new additions. However, the standard does not define what is existing. Included in the standard should be a definition of existing facilities. It is recommended that the following or something similar be added to clearly define existing facilities. "Facilities that are already energized as of the day the standard is approved or the date the RA or TOP is certified are considered existing facilities."
Darrel Richardson Illinois Power #1, 3	Yes We agree as long as "other changes" includes day-to-day significant changes to the bulk transmission system.
Toni Timberman BPA #1	Yes Need to allow for requesting additional data not previously requested for the original database, but not necessarily associated with a new facility. Very often a State Estimator or Operational Planning studies will identify the need for additional information for an area where the solution is not as good as desired, and additional information for existing facilities to improve the model or additional real-time measurements will be requested to allow a better solution.

Alan Johnson Mirant #6 Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 Ed Riley CA ISO #2 Fred Frederick Vectren #3 James Stanton Calpine #5 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Lee Westbrook Oncor #1 Mike Miller Southern Co #1 Richard Kafka Pepco #1 Roger Green Southern Co #5 Stuart Goza TVA #1 Todd Lucas (6?) Southern Co #1 Tom Petrich (5) PG&E #1 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

4. The draft standard uses the term "Industry Accepted Format" to mean a generally accepted format used by the electric power industry to specify the parameters that must be addressed in development of the system model and/or to transmit data. Do you agree?

Toni Timberman BPA #1 Richard Schwarz PNSC #2	No an "Industry Accepted Format" does not exist.
Roman Carter So Co Gen 3,5,6 (6 members)	No See answer to question #1. *I{t is recommended that "data" mean something specific vs. a "very general" reference to items. Being more specific would provide for us to give a more definitive answer on whether we agree or not.}*
Charles Yeung Reliant Energy #6	No The term "Industry Accepted Format" may be interpreted to be RTO established, Regional Reliabilty Council established or some standards setting organization (non-NERC) established format. The Standard should either specify the format - or if a single format is not applicable for the entire North America, then the Standard should provide enough direction for those who must comply with its requirements as to where/who will specify the format.
Kathleen Goodman ISO NE #2	No Each RA/TOP should use whatever format that is acceptable to its constituancies.
John Blazekovich Exelon #1,3,5,6	No In cases where the data format is not stipulated by tariff or connection requirements, a mutually agreed to format be determined. In cases where parties cannot come to mutual agreement NERC should provide minimum standards.
Gregory Campoli NY ISO #2	No It is not clear who defines the "Industry Accepted Format". It should state that the Industry accepted format should be a mutually agreed upon format defined by the individuals that are exchanging data. This format must not be prescriptive.
Alan Johnson Mirant #6	This term is too vague to be utilized in the standard. At a minimum, the term should reference another standard (developed by NERC and/or NAESB) where the "standard" format is fully described. As the term is used within the standard, it seems that potentially, each RA could specify a different meaning. This is something that must be avoided.
Compliance Mgrs Compliance Sub	Yes …as long as this does not lead to the creation of another "industry accepted format" or require a significant change from the way data has routinely been exchanged in the past. (typically using PSS/e or PSLF powerflow raw-data formats for representational data, etc.)
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel	Yes Yes, however "Industry Accepted Format" must not be overly perscritive and must not preclude mutually agreed upon data exchange methods between adjoining areas. Also how is it proposed to handle "proprietary data"?

Hydro One #1	
Darrel Richardson Illinois Power #1, 3	Yes We agree as long as the term "generally accepted" implies that the format is specific but that the acceptance is by the majority of the industry.
Gerald Rheault Manitoba #1,3,5,6	Yes Manitoba Hydro believes that as much as possible the appropriate Standard should specify what the acceptable format should be. For parameters where this is not possible the term “Industry Accepted Format” should be acceptable.
Francis Halpin BPA Bus Line #5,6	Yes The industry accepted format should be arrived at by industry consensus.
Tom Petrich (5) PG&E #1	Yes Since there are numerous formats that can be qualified as “Industry Accepted Formats”, the entities performing the related RA, BA, TOP, IA, TOW, Generator functions should agree on a set of common formats to be used for data exchange to avoid unnecessary duplication of work.
Robert Reed TS (See List) Susan Morris SERC #2 Thomas Pruitt Duke #1	Yes …as long as this does not lead to the creation of another "industry accepted format" or require a significant change from the way data has routinely been exchanged in the past. (typically using PSS/e or PSLF powerflow raw-data formats for representational data, etc.)
Todd Lucas (6?) Southern Co #1	Yes Agree as long as this does not lead to a new industry accepted format or a change in the currently accepted formats currently used for data exchange.
Ray Morella FirstEnergy #1 Ed Stein Firstenergy Sol #6	Yes This assumption needs to be clearly stated and also should be similar to 4B of NERC policy
Peter Burke ATC #1	Yes Who will develop this "Industry Accepted Format" and what is the timeline for that development? Is there one "Industry Accepted Format" or are we at the mercy of industry giants who may want their "format" used? Is there another team working on development?
George Bartlett Entergy Svcs 1	Yes We agree with the requriement so long as an existing "Industry Accepted Format" is used and a new one is not created.
Fred Frederick Vectren #3	Yes This is an area of concern for many. In the past there was an IEEE standard interchange format to share power flow data. Recently there have been numerous upgrades in power flow modeling programs and their associated data structures. Unfortunately the IEEE standard format has not kept pace. At the other extreme are program developers that insist on changing data structures on nearly a regular basis to provide program "enhancements". This creates conversion problems for those using older or diffferent power flow programs. A standard data interchange data model needs to be developed to allow free interchanging of model data between different programs. The structure would only be changed though committee agreement. If this cannot be acheived, program developers should be required to provide data structure

	information and make it avaiable to any party upon request. The data structure should also allow programs to be backward compatible. That is a newer program should always be able to read an older data format and perform satisfactorily.
Albert M. DiCaprio MAAC #2	Yes The definition could lead some to believe that there is a pre-defined format somewhere. A more acceptable phrase would be “mutually agreeable format”. That way if a new format were to arise that the RA wants to use and the data suppliers are willing to use, then NERC should not care what format is used. As long as the definition recognizes the agreement between the consenting parties to mean ‘Industry accepted” then there is no issue.

Alan Boesch NPPD #1 Bob Burkard NCMPA1 # 3,4,5 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2 Ed Riley CA ISO #2 FRCC 6-#1, 4-#2, 1-#2 James Stanton Calpine #5 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Ken Skroback AL Elec Coop #4 Kim Warren IMO #2 Lee Westbrook Oncor #1 Lee Xanthakos SCE&G #1 Lloyd Linke MAPP #2 Mike Miller Southern Co #1 OLDTF (9?) 6 - #2 1 - #1,5 Raj Rana AEP #1,3,5,6 Richard Kafka Pepco #1 Sam Jones ERCOT #2 Stuart Goza TVA #1 Tony Jankowski We-Energies #4 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

5. Based on the above graph, do you agree with the concept that operation within the "yellow zone" is exceeding an operating limit, but not a reportable violation?

No - Comments indicating we should wait for OLD TF	
FRCC 6-#1, 4-#2, 1-#2	No There are too many "irons in the fire" just now. The NERC OC has a task force working on this particular issue, and as indicated in the March OC meeting highlights, have directed the Reliability Coordinators to "field test" the OLDTF's definition and reporting form.
OLDTF (9?) 6 - #2 1 - #1,5	No Please refer to the Operating Limits Definition Task Force report, "NERC Operating Limit Definitions and Reporting." The Task Force considers this report to be an integral part of its comments to Standard Drafting Team. The OLDTF has defined "Limit Compliance Violation" for reporting IRL violations to the Regional Council and NERC.
Vern Colbert Dominion #1 Thomas Pruitt Duke #1 Susan Morris SERC #2 Robert Reed TS (See List)	No Wait until the OLDTF defines this.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No This aspect of the standard should be coordinated with the NERC OLD, Operating Limit Definition, Task Force . Presenting a standard that doen't represent the current intentions of the OLD TF may produce RS that may be in conflict with the current understanding of the NERC Operating Committee. Therefore we recommend delay of further development of this RS until the work of the OLD TF is complete and approved.
Gregory Campoli NY ISO #2	No Responses to this portion of the standard should be delayed until a response is provided by the NERC Operating Limit Definition TF.
No - Comments about graph details	
Doug Hils Cinergy #1	No The visual is a good follow up to a limit violation but needs text to document what the chart is for, without these questions the chart is of little usage. Chart leaves question as to the actual exceeding of the operating limit, label placement would allow for individual interperation, is the limit the heavy green line, the demark between the green background and the red and yellow areas?
John Blazekovich Exelon #1,3,5,6	No The above graph is not clearly defined, cannot determine what kind of limit(s) are being demonstated (thermal, stability). More clarification needed before the question can be answered. Not sure why this is asked in this standard when one of the Explanations of Terms explains that the definitons of system operation limits and operating limit violations is being developed by the Facility Ratings SAR. Shouldn't the definion of a violation eliminate the need to ask this question?
George Bartlett Entergy Svcs 1	No There is not enough information to understand the chart nor to answer this

	question. Operating above a limit in an event the duration of which is less than the time frame upon which the limit is calculated does not seem to be a reportable violation. We are not sure what the dashed line represents. We agree that an operating limit could be exceeded for a short time, but less than the time frame upon which the limit is based, and not be considered a reportable violation.
Lee Westbrook Oncor #1	Graph needs more information to clarify question.
Bob Burkard NCMPA1 # 3,4,5	The graph needs additional information – axis label, d, etc.
Ken Skroback AL Elec Coop #4	The above graph is unlabeled and I can't tell anything about it.
Karl Kohlrus CWL&P #5	To me the graph is unclear. For someone who has not seen this graph before, it is not obvious what it is trying to show. That is, are the bad areas along the x or y axis? It would be better to have a graph with three regions: the allowable (green) region within a deadband, a yellow region that may need documentation, and a red region that is a reportable violation. For example, if a quantity has a deadband of -100 to +100, a yellow range may go from -110 to -100 and from +100 to +110, while the red range may be anything less than -110 and greater than +110.
Joseph Buch Madison #4	The graph is not clear and does not define whether a normal or emergency operating limit is exceeded. The graph appears to indicate that the loading on a line is not a reportable violation if the load is reduced to the normal or acceptable level within a defined period of time. If the loading on the line is within the yellow range because of normal flows on an intact system and the next single contingency causes the loading to increase to a level that causes instability, uncontrolled separation or cascading outages then I would consider operation within the yellow zone a reportable violation.
No – Comments with suggestions for improving definitions	
Sam Jones ERCOT #2	Yes/No It is unclear which context applies to "reportable violation". If the violation being reported to NERC is the context, then this may be true only if the limit being monitored is an IRL (old OSL). It is true that the graph depicts an operating limit being exceeded. Whether it is reportable depends upon the context of whether it may be internally reportable on a Region basis, or whether it is intended to refer to reportable to NERC.
Yes– Comments with suggestions for improving definitions	
Peter Burke ATC #1	Yes This answer is "yes" but with the qualification that commiting to "yes" depends on the eventual definition of an OSL, which is not available yet and is only now being developed by a different SAR drafting team.
Ray Morella FirstEnergy #1 Joanne Borrell FirstEnergy Sol #3 Ed Stein Firstenergy Sol #6	Yes It would be of value to state that a reportable violation does not exist until the Operating Security Limit has been consecutively violated for tdefined. It would also be of value to state that the exceeding of the operating limit for any period of time must be documented. If in the graph the monitored value dipped below the Operating Security Limit for an instance and then exceeded the limit for the rest of the period and that was still an Operating Security Limit Violation, another loophole will have been addressed. Documenting near misses is also a good idea

William Smith Allegheny Pwr #1	Yes This is an excellent graph, but I am unsure the intent of including it in these comments? The graph depicts an OSL violation involving time and is too simplistic. OSLs could also be violated by exceeding the continuous ratings, or by exceeding emergency ratings for post-contingency flows monitored by state estimators. An OSL violation could also involve exceeding post-contingency voltage limits or stability limits where cascading could result. If OSL violations are going to be defined in this document, then all potential violation should be addressed.
Tom Petrich (5) PG&E #1	Yes Some clarification is needed. The System Operating Limit itself can be defined with a magnitude and a time limit, so the magnitude limit can be a step function. e.g., the allowable loading magnitude "X" for a 1-hour limit would be higher than the allowable loading "Y" for a 4-hour limit, so there should be a violation only if the yellow portion is above "X" for more than 1 hour, or above "Y" for more than 4 hours.
Yes - Comments about graph details	
Toni Timberman BPA #1	Yes A diagram such as this should be part of the Standard, but the green solid line and the blue dashed line should be deleted as they have no relevance and are confusing.
Francis Halpin BPA Bus Line #5,6	Yes But, the lines and arrows look like they need some more accurate placement.
Raj Rana AEP #1,3,5,6	Yes See comments about the graph in the white comment boxes above on the graph. The graph is hard to understand and interprete. - When is to reset? If the actual data drops below the limit for 30 sec., is the time reset to 0 for determining the violation? What if for 3 minutes or 3 seconds? - What is the significance of the dotted blue line? Is this to indicate that if you exceed this level regardless of duration you have a violation? - This section above the yellow shaded area should not be red unless the Facility Ratings Standard defines a SOL violation as having a magnitude component, i..e. if you exceed 110% of a limit even instantaneously, then you have a SOL violation.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	Yes First this graph is a great aid in understanding this standard. I really like it. The following suggestions are for making a good thing better.I voted yes because of my interpretation of the graph. I'm not sure my interpretation is completely correct. I recommend that the graph (and the description of the graph) also be done in various shades of grey because not everybody has a color printer and many operators would get a black and white copy of the graph. The pointers for Dactual, tgood, and limit should be closer to the curve or line that they represent. I don't know why there is a dotted blue line representing the max value of the monitored value; it doesn't seem to be used anywhere. I think it would be of value to state that a reportable violation does not exist until the Operating Security Limit has been consecutively violated for tdefined. I think it would be of value to state that the exceeding of the operating limit for any period of time must be

	documented. Under existing NERC Policy I assume that there would not be a reportable Operating Security Limit Violation if the Operating Security Limit were exceeded for 28 minutes, then it was not exceeded for 1 minute, then it was exceeded for another 28 minutes, then it was not exceeded for 1 minute and this pattern continued for the next 24 hours. I'm teasing a little here because you can't cover every circumstance in detail. In fact I do think that the above example would be a reportable Operating Security Limit Violation. If in the graph the monitored value dipped below the Operating Security Limit for an instance and then exceeded the limit for the rest of the period and that was still an Operating Security Limit Violation, another loophole will have been addressed.
Yes – Misc comments	
Todd Lucas (6?) Southern Co #1	Yes The results from the OLDTF may create the need to review this.
Gerald Rheault Manitoba #1,3,5,6	Yes Based on the above graph the terminology used is correct. However Manitoba Hydro believes that the concept of operation related to operating limits and reportable violations should be defined by the Standard Drafting Team for Standard “Determine Facility Ratings, System Operating Limits, and Transfer Capabilities”. The concepts that they develop should then be integrated in this Standard
Fred Frederick Vectren #3	Yes/No
Ed Riley CA ISO #2	Yes The CAISO agrees with this requirement as long as the term "Documentable" refers to the entities' internal process of documentation.
Charles Yeung Reliant Energy #6	Yes The yellow zone is clearly a region where the operations exceed a stated "safe" limit. To maintain the integrity of that limit, such excursions must be recognized. These should be reported to NERC and recorded though not defined as a "reportable violation".
Albert M. DiCaprio MAAC #2	Yes The idea of ‘documenting’ near-misses and not treating them as non-compliance is a good one. It will ensure that the industry can access such information if needed (for example if there is a question of too many near misses).

Stuart Goza TVA #1 Tony Jankowsk We-Energies #4 Roman Carter So Co Gen 3,5,6 (6 members) Kathleen Goodman ISO NE #2 Joe Minkstein PG&E #5 Kim Warren IMO #2 Richard Kafka Pepco #1 Mike Miller Southern Co #1 Lloyd Linke MAPP #2 Dilip Mahendra SMUD #1 Darrel Richardson Illinois Power #1, 3 Richard Schwarz PNSC #2 James Stanton Calpine #5 Alan Johnson Mirant #6 Alan Boesch NPPD #1	Yes

6. Based on the above graph, do you agree with the concept that operating within the "red zone" is a reportable violation?

No - Comments indicating we should wait for OLD TF	
Vern Colbert Dominion #1Thomas Pruitt Duke #1 Susan Morris SERC #2 Robert Reed TS (See List)	No Wait until the OLDTF work is complete.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No This aspect of the standard should be coordinated with the NERC OLD, Operating Limit Definition, Task Force . Presenting a standard that doen't represent the current intentions of the OLD TF may produce RS that may be in conflict with the current understanding of the NERC Operating Committee. Therefore we recommend delay of further development of this RS until the work of the OLD TF is complete and approved.
Gregory Campoli NY ISO #2	No Responses to this portion of the standard should be delayed until a response is provided by the NERC Operating Limit Definition TF.
No - Comments about concepts	
William Smith Allegheny Pwr #1	No This graph shows the possibility of an OSL violation occurring for a momentary excursion above a limit without exceeding a limit for a period of time (tdefined). I was not aware that this constituted a violation.
Todd Lucas (6?) Southern Co #1	No Operating in such a manner that instability, uncontrolled separation, or cascading outages will not occur to more than a localized area is a non-reportable OSLV
Raj Rana AEP #1,3,5,6	No We agree that operating above the limit and to the right of T-defined is a reportable violation. We do not agree with the concept of having the Facility Ratings Standard adopt a magnitude componet to the definition of a SOL violation. We do not believe a momentary or short term deviation above the dotted blue line should be defined as a reportable event. Further, what should be defined as the "limit?" The goal is to prevent operating above a reliability limit, that if exceeded could lead to instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. So is the "limit" that value as determined by either the Planning Authority or the RA via their analysis or is it the value that the TOP provides and indicates that he is willing to load his equipment to, recognizing that some TOP's may specifiy a value that is less then true reliability limit?
Doug Hils Cinergy #1	No The red area above the yellow background area is not a violation, violation only exist after predetermined time frame above limit is exceeded, tdefined.
ECAR Ops Panel #1 – 8	No I thought that there wasn't an Operating Security Limit Violation until an Operating Security Limit was exceeded for a period of time (tdefined). I

#5 – 1 #2 - 2	wasn't aware of an Operating Security Limit Violation that occurred for an instantaneous exceeding of a limit. Maybe I don't fully understand the Standard. Need to better describe what is a violation versus what is a reportable violation. The concept of a violation in the red zone is confusing.
Mike Miller Southern Co #1	No Operating outside thermal, voltage, or stability criteria that is defined by OSL, but operating such that instability, uncontrolled separation, or cascading outages will not occur to more than localized area as a result of most severe contingency is a non-reportable OSLV.
Peter Burke ATC #1	No Cannot agree to this without some indication of the value of "t" in the graph. If "t" is one minute then the graph does not represent a reasonable reportable violation. If "t" is thirty minutes, then the graph may represent a reasonable standard for reporting.
No - Comments about graph details	
George Bartlett Entergy Svcs 1	No There is not enough information to understand the chart nor to answer this question. What kind of a limit is this? Does violating this limit cause cascading, uncontrolled separation of a significant portion of the Interconnect? If so, then we agree that this is a reportable violation. If this limit is a post-contingent thermal limit that won't cascade far, if at all, then this would not be a reportable violation.
Ken Skroback AL Elec Coop #4	The above graph is unlabeled and I can't tell anything about it
No - Comments already addressed in earlier questions	
John Blazekovich Exelon #1,3,5,6	No Same as comment #5 *{ The above graph is not clearly defined, cannot determine what kind of limit(s) are being demonstated (thermal, stability). More clarification needed before the question can be answered.* *Not sure why this is asked in this standard when one of the Explanations of Terms explains that the definitons of system operation limits and operating limit violations is being developed by the Facility Ratings SAR. Shouldn't the definion of a violation eliminate the need to ask this question?}*
OLDTF (9?) 6 - #2 1 - #1,5	No See comment to Q5 above. *{ Please refer to the Operating Limits Definition Task Force report, "NERC Operating Limit Definitions and Reporting." The Task Force considers this report to be an integral part of its comments to Standard Drafting Team.* *The OLDTF has defined "Limit Compliance Violation" for reporting IRL violations to the Regional Council and NERC.}*
FRCC 6-#1, 4-#2, 1-#2	See comment in question 5. *{ There are too many "irons in the fire" just now. The NERC OC has a task force working on this particular issue, and as indicated in the March OC meeting highlights, have directed the Reliability Coordinators to "field test" the OLDTF's definition and reporting form.}*

Yes – Comments with suggestions for improving graph	
Toni Timberman BPA #1	Yes If you mean the red slashed zone, then yes. The solid red should be removed as it is irrelevant and confusing.
Francis Halpin BPA Bus Line #5,6	Yes But, the lines and arrows look like they need some more accurate placement
Joanne Borrell FirstEnergy Sol #3 Ray Morella FirstEnergy #1 Ed Stein Firstenergy Sol #6	Yes The graph is confusing and additional wording should be added to clarify.
Yes - Comments already addressed in earlier questions	
Sam Jones ERCOT #2	Yes/No See our comments on #5 above. *{ It is unclear which context applies to "reportable violation". If the violation being reported to NERC is the context, then this may be true only if the limit being monitored is an IRL (old OSL). It is true that the graph depicts an operating limit being exceeded. Whether it is reportable depends upon the context of whether it may be internally reportable on a Region basis, or whether it is intended to refer to reportable to NERC.}*
Tom Petrich (5) PG&E #1	Yes See comment in response to Question #5. *{ Some clarification is needed. The System Operating Limit itself can be defined with a magnitude and a time limit, so the magnitude limit can be a step function. e.g., the allowable loading magnitude "X" for a 1-hour limit would be higher than the allowable loading "Y" for a 4-hour limit, so there should be a violation only if the yellow portion is above "X" for more than 1 hour, or above "Y" for more than 4 hours.}* Also, it is not clear what is the basis of the "red zone" above the "yellow" zone in the time period to -tdefined
Gerald Rheault Manitoba #1,3,5,6	Yes see comment for #5. {*Based on the above graph the terminology used is correct. However Manitoba Hydro believes that the concept of operation related to operating limits and reportable violations should be defined by the Standard Drafting Team for Standard "Determine Facility Ratings, System Operating Limits, and Transfer Capabilities". The concepts that they develop should then be integrated in this Standard}*
Yes – Comments with suggestions for improving definitions	
Stuart Goza TVA #1	Yes Assuming that the term "limit" is appropriately defined.
Lloyd Linke MAPP #2	Yes It should further be clarified that operation in such a zone is a violation regardless of whether or not instability/cascading outages happened or could have happened - if the limit was exceeded for the specified time, it is a reportable violation under any prevailing system conditions.
Dilip Mahendra SMUD #1	Yes Provided it is for a facility that is covered by the purpose of this standard. That is,

	if it is violating an operating limit established to prevent instability, uncontrolled separation, or cascading outages that adveresely impact the reliability of the bulk transmission system.	
Charles Yeung Reliant #6	The Red region represents a condition where the system has operated beyond some specified time period in which the industry has agreed it will try to alleviate the excursion. The "reportable violation" is defined in conjunction with both the MW amount and the "t defined". The "t defined" shoud be a value that is proposed and commented on in the development of the Operate Within Limits Standard.	
Ed Riley CA ISO #2 Fred Frederick Vectren #3 James Stanton Calpine #5 Kim Warren IMO #2 Tony Jankowski We-Energies #4 Joe Minkstein PG&E #5 Kathleen Goodman ISO NE #2 Darrel Richardson Illinois Power #1, 3 Alan Johnson Mirant #6 Alan Boesch NPPD #1 Albert M. DiCaprio MAAC #2 Richard Schwarz PNSC #2 Richard Kafka Pepco #1 Roman Carter So Co Gen 3,5,6 (6 members)		Yes

7. If you feel there are additional terms used in this draft standard that should be formally defined, please list those terms here. If possible, please provide us with a definition for each of these terms.

Actual Data	
Actual Telemetered data	
Base Data	
Cascading Outages	
Compliance Reset Period	
Data	
Equipment Ratings	
Generator Owner	
Identified Problem	
Instability	
Local Area	
Non-reportable Operating Security Limit Violation	Operating outside the thermal, voltage, or stability criteria that defines the Operating Security Limit, but operating such that instability, uncontrolled separation, or cascading outages will not occur to more than a localized area as a result of the most severe single contingency.
Operational Analysis	
Operational Planning Studies	
Operating Security Limit Violation	A limit that results in instability, uncontrolled separation, or cascading outages if exceeded for more than one hour.
Occurrence Period	
Planned for Contingencies	
Planning Analysis	
Problem	exceed limits but not for defined time, there for it is not a reportable event
Real	
Real Time	
Real Time Analysis	
Real Time Data	
Real Time Monitoring (address frequency of monitoring)	
Reliability Authority Area	consists of one or more Contriol Areas for which a single Reliability Authority is responsible
Reportable Operating Security Limit Violation	Operating outside the thermal, voltage, or stability criteria that defines the Operating Security Limit, such that instability, uncontrolled separation, or cascading outages could occur to a widespread area as a result of the most severe single contingency.
Self-Certification	

Single Contingency	
Steam Generator	
System Operator Limits	
System Operating Limit	
System Operating Limit Violation	
Technically Accurate	to the extent that the data supplied is consistent with the supplier's documented methodologies and criteria.
Transmission Operator	
Supporting Documentation	
Surrogate	
Uncontrolled Cascading	
Uncontrolled Separation	
Violation	exceed limit for defined time, there for it is a reportable event.
Wide Area	
Wide Area Impact	A Wide Area impact is one that goes beyond the Reliability Authority Area

OLDTF (9?) 6 - #2 1 - #1,5	Instability Uncontrolled Seperation Cascading Outages Widespread Area Local Area The OLDTF has defined these terms in its attached report. The OC has directed the Reliability Coordinators to use these definitions as a "field test" this summer, and to work with the Standard Drafting Team to incorporate these definitions into the Reliability Standard.
Toni Timberman BPA #1	REAL Surrogate (requirement 2) DATA “Problems” (requirement 10)
Todd Lucas (6?) Mike Miller Southern Co #1	Non-reportable Operating Security Limit Violation Reportable Operating Security Limit Violation Non-Reportable OSLV: Operating outside the thermal, voltage, or stability criteria that defines the Operating Security Limit, but operating such that instability, uncontrolled separation, or cascading outages will not occur to more than a localized area as a result of the most severe single contingency. Reportable OSLV : Operating outside the thermal, voltage, or stability criteria that defines the Operating Security Limit, such that instability, uncontrolled separation, or cascading outages could occur to a widespread area as a result of the most severe single contingency.
Susan Morris SERC #2	Real Time Self-Certification

Robert Reed TS (See List)	Instability Cascading Outages Uncontrolled Separation Actual telemetered data, or real-time data? Real-Time Monitoring Frequency of Real-Time Monitoring System Operator Limits System operator limits as defined is appropriate for RAs, but should not be defined as provided for TOPs. For TOPs, system operating limits should not include only those limits which have been identified as leading to cascading outages, instability, or uncontrolled separation. This is a major issue in terms of the scope. As conceived, this standard does not result in any entity assuring that bulk power system is operating within limits. It only results in operating within those limits for which violations result in instability/cascading outage risk. That is inappropriate. Any defined operating limit, which has been identified as potentially threatening bulk reliability and thereby requiring consistent monitoring and adherence, should be covered by this standard.
Thomas Pruitt Duke #1	Real Time Self-Certification Instability Cascading Outages Uncontrolled Separation Actual telemetered data, or real-time data? Real-Time Monitoring Frequency of Real-Time Monitoring System Operator Limits Equipment Ratings For TOPs, system operating limits should not only include those limits which have been identified as leading to cascading outages, instability, or uncontrolled separation, but also local operating limits. This is a major issue in terms of the scope. As conceived, this standard does not result in any entity assuring that the bulk power system is operating within limits. It only results in operating within those limits for which violations result in instability/cascading outage risk. That is inappropriate. Any defined operating limit, which has been identified as potentially threatening bulk reliability and thereby requiring consistent monitoring and adherence, should be covered by this standard.
Stuart Goza TVA #1	NERC OC has a special task force, the Operating Limit Definition Task Force that is specially addressing definitions for System Operating Limit and Interconnected Reliability Limit. The results of this task force, if approved by NERC OC should be reflected in the terminology used in this standard. 1. Define uncontrolled separation 2. Define uncontrolled cascading 3. Define controlled separation 4. Define controlled cascading 5. Define instability 6. Define System Operating Limit Note – I don't' think the highlighted terms are used in the draft standard and I didn't include them on the list to define.

	7. Define System Operating Limit Violation 8. Define Interconnected Reliability Limit 9. Define Interconnected Reliability Limit Violation 10. Facility Rating Methodology and Triggering Criterions for above conditions 11. RA, BA, IA roles need to be clarified
Sam Jones ERCOT #2	Instability Uncontrolled Separation Cascading Outages Widespread Area Local Area ERCOT has been participating in the NERC Operating Limit Definition Task Force. Please refer to the Task Force Report. The NERC OC has endorsed the recommendations of the Task Force and has directed the Reliability Coordinators to use these definitions as a "field test" this summer, and to work with the Standard Drafting Team to incorporate these definitions into the Reliability Standard.
Ray Morella Ed Stein Joanne Borrell FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8, #5 – 1, #2 - 2	(1) Occurrence Period, (2) Operating Security Limit Violation (1) Occurrence Period - Not sure what you mean when you refer to an Occurrence Period, need better defintion (2) Operating Security Limit Violation - A limit that results in instability, uncontrolled separation, or cascading outages if exceeded for more than one hour. We believe this definition is appropriate for the existsing NERC template on Operating Security Limit Violation.
Raj Rana AEP #1,3,5,6	Identified problem Identified problem: Does the term "identified problem" as used in this standard refer to a problem identified through reliability analysis, either for actual conditions or on a first contingency basis, that if it were to occur could lead to instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system or does it also include thermal overloads and voltage conditions that do not lead to instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system?
Peter Burke ATC #1	"Technically accurate" "Single contingency." This standard needs to precisely define "single contingency." This standard, built on the premise of monitoring and assessing short term reliability, nowhere mentions the documentation or reporting of contingencies. Within the Sanctions Table, how, precisely, does the enforcement entity interpret the phrase "greater of 4th consecutive period of violations?" What are the "MW" that the fines per MW are based on? Is this the amount of MW affected or the estimated MW affected in the event of the next contingency? Can a fine be levied for the risk posed by a next contingency that threatens a large region even if the event of concern never occurs? The section "Fixed Dollars," near the end of the standard, describes in very vague language how monetary sanctions may be adjusted. Left unsaid is who makes the adjustments, upon whose approval, and under what circumstances. The whole standard is put at risk of losing its meaning if this section is left in its current form. It would be of value to include brief descriptions of the differt functional areas,

Most comments relate to sanctions table

	along with indication as to who does what, in the standard with a reference to the official definitions that are documented elsewhere. Such a reference would be helpful for someone not intimately involved with the standard or, particularly, the NERC Functional Model. The use of the words "steam generator" in footnote 1 of Version B seems inconsistent with the industry accepted meaning of those words. "Technically accurate" to the extent that the data supplied is consistent with the supplier's documented methodologies and criteria.
Lloyd Linke MAPP #2	Surrogate Value needs to be defined. Supporting Documentation needs to be defined System operator limits as defined herein is appropriate for RAs, but should not be defined as provided herein for TOPs. For TOPs, system operating limits should not include only those limits which have been identified as leading to cascading outages, instability, or uncontrolled separation. This is a major issue in terms of the scope. As conceived herein, this standard does not result in any entity assuring that the bulk power system is operating within limits, it only results in operating within those limits for which violations result in instability/cascading outage risk. That is inappropriate. Any defined operating limit, which has been identified as potentially threatening bulk reliability and thereby requiring consistent monitoring and adherence, should be covered by this standard.
Kim Warren IMO #2	Local Areas Reliability Authority Area Wide Area Clearly differentiate between electrical areas that can cause instability, uncontrolled seperation or cascading outages that advesely impact the reliability of the bulk transmission system and those areas that don't (Local Areas). Reliability Authority Area consists of one or more Contriol Areas for which a single Reliability Authority is responsible. A Wide Area impact is one that goes beyond the Reliability Authority Area.
Kathleen Goodman ISO NE #2	Generator Owner “real" data real-time
Joseph Buch Madison #4	See comments on question 3. *{ My understanding of the process is that for a RA or TOP to be certified they would need to demonstrate among other things that they already have the required “base” data. Thus this standard only covers changes/new additions. However, the standard does not define what is existing. Included in the standard should be a definition of existing facilities. It is recommended that the following or something similar be added to clearly define existing facilities. “Facilities that are already energized as of the day the standard is approved or the date the RA or TOP is certified are considered existing facilities.”}*
John Blazekovich Exelon #1,3,5,6	"Planned for Contingencies" "Planned for Contingencies" as opposed to contingencies beyond criteria need to be included in this standard. It is common practice to only run operational reliability analysis by applying the "Planned for Contingencies" to the current system configuration. By not specifically addressing "Planned for Contingencies" the standard appears to require running multiple contingencies to find the unstable operating point.
ECAR Ops Panel #1 – 8, #5 – 1, #2 - 2	(3) Transmission Operator

Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	Real Time Self-Certification Compliance Reset Period Instability Cascading Outages Uncontrolled Separation The Compliance reset period should be defined as 12 months without a violation from the time of the last violation. Either provide a definition with "actual telemetered data" or replace it with "real time data", throughout this document.
Gregory Campoli NY ISO #2	Real Time Data Self Certification Operational Analysis Planning Analysis Real Time Analysis
George Bartlett Entergy Svcs 1	Operational Planning Studies
Francis Halpin BPA Bus Line #5,6	Self Certification The various types of "data" referred to in the standard. The standard should be very specific about what type of data is acceptable.
Ed Riley CA ISO #2	Problem versus violation Problem = exceed limits but not for defined time, there for it is not a reportable event. Violation = exceed limit for defined time, there for it is a reportable event.
Alan Boesch NPPD #1	Actual data Actual telemetered data

8. Who should provide the RA with generation data needed for system analyses? (This data consists of the generator operational characteristics.) (BA, TOP, Gen, PA)

Comments Listing Just the BA	
Stuart Goza TVA #1 Fred Frederick Vectren #3	BA
Comments Listing Just the Transmission Operator	
Tom Petrich (5) PG&E #1	TOP It would also be acceptable for the generator to provide identical data concurrently to the TOP and the RA. Our recommendation is to minimize any possibility of the TOP and the RA having conflicting data.
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	BA, TOP, Gen, PA In ERCOT, the TOP does not receive all of the generator data; some is provided to the TOP in an Interconnection Agreement, but more is required to be provided to ERCOT in its role as the RA. TheBA may well provide the data if the generators are under a contractual obligation to do so with the BA. The Generator Owner and the Transmission Owner provides data for their facilities.
Joe Minkstein PG&E #5	TOP
Comments Listing Just the Generator	
Joanne Borrell FirstEnergy Sol #3	Gen The Generator is the best possible resource. However, as long as the data is accurately supplied, it doesn't matter who supplies it. I don't think the standard should be too prescriptive on who supplies the data.
Francis Halpin BPA Bus Line #5,6	Gen With regards to this and subsequent references to "Generator"; the Functional Model has recently been expanded (in draft at least) to include Generator Owners and Generator Operators. This standard should refer to those particular entities when making requirements for Generators.
Ed Stein Ray Morella FirstEnergy #1, 6 ECAR Ops Panel #1 – 8, #5 – 1, #2 - 2	Gen The Generator is the entity closest to the physical facilities so he should be the best possible resource. However, the Reliability Coordinator (RC) should use data from the BA, the TOP, or the Planning Authority, if he can't get the data from the Generator. The Generator also may prefer to supply all his data via the BA or the TOP. This should be allowed. As long as the data is accurately supplied, it doesn't matter who supplies it. I don't think the standard should be too prescriptive on who supplies the data.
Joseph Buch Madison #4	Gen There should only be a single area responsible for maintaining data necessary for system analysis. The more often the same data is requested by multiple entities the more likely errors can occur. Also, the more often data is passed from entity to entity the more often errors can also occur. I would recommend that the RA be the central location for all data. All requests for data should go to the RA who would provide all responses.
Gerald Rheault	Gen

Manitoba #1,3,5,6	Manitoba Hydro believes that the generator owner must provide this data since as owner of the asset he is responsible for protecting that asset and establishing ratings consistent with the risk level he is willing to assume.
Lloyd Linke MAPP #2	Gen A single source for this data is desired.
Doug Hils Cinergy #1	Gen Generator would be the best being they are the owners of the data. Standard however should allow for the data to be provided to a TOP and then relayed to the RA.
Alan Boesch NPPD #1	Gen The Generator should be responsible for getting the data to the RA. How it is accomplished should not be an issue. I would guess that in most situations if will be supplied by Planning.
Albert M. DiCaprio MAAC #2	Gen Generator Operator is the responsible party.
Richard Schwarz PNSC #2 Toni Timberman BPA #1	Gen Generator Owner or Operator should provide the unit characteristics and the real time data
Kim Warren IMO #2 Ken Skroback AL Elec Coop #4 William Smith Allegheny Pwr #1 Todd Lucas (6?) Southern Co #1 John Blazekovich Exelon #1,3,5,6 Ed Riley CA ISO #2 Dilip Mahendra SMUD #1 Alan Johnson Mirant #6 James Stanton Calpine #5 Richard Kafka Pepco #1 Kathleen Goodman ISO NE #2	Gen
Comments Listing Just the Planning Authority	
Roger Green Southern Co #5	PA Regardless of who receives and distributes the data, the generator owner should only have to provide the data to one group.
Comments Listing the BA and the Gen	
Vern Colbert Dominion #1 Mike Miller Southern Co #1	BA, Gen
Darrel Richardson Illinois Power #1, 3	BA, Gen Although we checked both the BA and the Generator as possible sources, we feel that the information provided to the RA should be supplied by the Generator with a carbon to the BA.
Comments Listing the BA, Generator and PA	
Roman Carter So Co Gen 3,5,6 (6 members)	BA, Gen, PA

Comments Listing the Generator and Planning Authority	
Gregory Campoli NY ISO #2	Gen, PA The RA should be able to cross check data used by the Planning Authority with current data provided by the Generator.
Tony Jankowski We-Energies #4 Lee Xanthakos SCE&G #1 Lee Westbrook Oncor #1	Gen, PA
Comments Listing the BA, TOP and Generator	
FRCC 6-#1, 4-#2, 1-#2	BA, TOP, Gen
Comments Listing the TOP and Generator	
Susan Morris SERC #2 Robert Reed TS (See List)	TOP, Gen Are you referring to Generator Owner or Generator Operator or both above?
Comments Listing the TOP, Generator and Planning Authority	
Thomas Pruitt Duke #1	TOP, Gen, PA The term generator needs to clearly specify that entity responsible for the generator resources. The real-time generator data should be provided by the generator to the TOP and RA; modeling data should be provided by the generator to the PA and RA.
Raj Rana AEP #1,3,5,6	TOP, Gen, PA The Generator is the best possible resource to provide the data. The Generator must have an interconnection agreement with a TOP, and said agreement should require the Generator to provide this information. Thus, the RA should be able to receive this type of information from the TOP. The PA should also have this information, which they may have received from the TOP or the Generator directly.
Guy Zito (See List) NPCC #2 – 2, NPCC #1 - 5 David Kiguel Hydro One #1	TOP, Gen, PA
Comments Listing the BA, TOP , Generator and PA	
Peter Burke ATC #1	BA, TOP, Gen, PA Generator should supply the current machine capabilities, including derating of MW or MVAR output capability. Planning Authority should supply the full dynamics descriptions to be used in the off-line models. All play a part in providing the proper data and depends upon the NERC Functional Model in place. Experience at ATC has shown this can be difficult with regard to keeping everyone informed and determining who is non-compliant or responsible for declaring an entity in non-compliance. ATC, especially, has had trouble keeping current on ownership of IP generators and working with the Regional Council to obtain timely generator data. The Generator Operator/Owner should have this data and should be responsible for providing it to the RA. The Gen owner will be aware of changes to their equipment that others, including the Transmission Owner/Operator, would not be aware of. Also, from a liability standpoint, if you make someone else responsible for providing the data, what authority do they have to request it and who is liable

	for any costs incurred if the data is lost? In many cases, the TOP will also need the Generation data to perform their duties. In that case, it may be acceptable for the TOP to provide the data to the RA assuming all liability issues have been addressed.
Karl Kohlrus CWL&P #5	BA, TOP, Gen, PA
Other Comments	
George Bartlett Entergy Svcs 1	The question should be restated to conform to the parenthetical statement - Who should provide the RA with generator operational chartacteristic data needed for system analyses? The Generator Owner function (consistent with the Revised Functional Model) should provide the generator data necessary for system analysis and operational performance to any and all functions needing that data, including the RA. If needed, the RA may request the necessary generator data from the Transmission Owner to whom the Generator Owner should be obligated to provide the data as part of its interconnection and operating agreement with the Transmission Owner.
Charles Yeung Reliant Energy #6	The generator operational characteristics are needed for many purposes and this information may be needed by others besides the RA. NERC should require a single coordination point for the submittal of this information. One must not be required to submit this same information repeatedly to different entities or "authorities". E.g. - if there is already a requirement for generator operational characteristics to be supplied to the Planning Authority, then the PA may be authorized to provide it to the RA. Data confidentiality agreements may apply.

9. Who should provide the TOP with generation data needed for system analyse s? (This data consists of the generator operational characteristics.) (RA, BA, Gen, PA)

Comments Listing the RA	
Albert M. DiCaprio MAAC #2	RA **In the framework of the Functional Model, the TOP in its role as TOP does not have the responsibility for doing system analysis. To the extent that the TOP does local analysis that information must come from the RA (unless the TOP has its own agreements to access that data.)**
Alan Johnson Mirant #6	RA Under certain circumstances (for example during the interconnection process) it is probably more efficient for the generator to provide information directly to the TOP. Generally, however, the flow of information should be retained.
Joseph Buch Madison #4	RA See question 8. *{ There should only be a single area responsible for maintaining data necessary for system analysis. The more often the same data is requested by multiple entities the more likely errors can occur. Also, the more often data is passed from entity to entity the more often errors can also occur. I would recommend that the RA be the central location for all data. All requests for data should go to the RA who would provide all responses.}*
Richard Kafka Pepco #1	RA
James Stanton Calpine #5	RA
Comments Listing the BA	
Fred Frederick Vectren #3	**BA**
Stuart Goza TVA #1	BA
Comments Listing the Generator	
Toni Timberman BPA #1 Richard Schwarz PNSC #2	Gen The generator Owner or Operator should provide the unit characteristics and the real-time data.
Joanne Borrell FirstEnergy Sol #3	Gen The Generator is the best possible resource. As long as the data is accurately supplied I don't care who supplies it. I don't think the standard should be too proscriptive on who supplies the data.
Thomas Pruitt Duke #1 Susan Morris SERC #2 Robert Reed TS (See List)	Gen 6 What do you mean by "system analysis"? 2) What type of "system analysis" is the TOP supposed to perform? 3) Are you referring to Generator Owner or Generator Operator or both above?

ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2 Ray Morella Ed Stein FirstEnergy #1, 6	Gen The Generator is the entity closest to the physical facilities so he should be the best possible resource. However, the TOP should use data from the Reliability Coordinator (RC), the BA, or the Planning Authority if he can't get the data from the Generator. The Generator also may prefer to supply all his data via the BA or the RC. This should be allowed. As long as the data is accurately supplied I don't care who supplies it. I don't think the standard should be too proscriptive on who supplies the data.
Raj Rana AEP #1,3,5,6	Gen Should be required via the TOP's interconnection agreement with the Generator.
Lloyd Linke MAPP #2	Gen A single source for this data is desired
Gerald Rheault Manitoba #1,3,5,6	Gen See comment in #8 *{ Manitoba Hydro believes that the generator owner must provide this data since as owner of the asset he is responsible for protecting that asset and establishing ratings consistent with the risk level he is willing to assume.}*
Alan Boesch NPPD #1	Gen The Generator should be responsible for getting the data to the RA. How it is accomplished should not be an issue. I would guess that in most situations if will be supplied by Planning.
Francis Halpin BPA Bus Line #5,6	Gen See #8 re: Gen Operator/Gen Owner *{ With regards to this and subsequent references to "Generator"; the Functional Model has recently been expanded (in draft at least) to include Generator Owners and Generator Operators. This standard should refer to those particular entities when making requirements for Generators.}*
Doug Hils Cinergy #1	Gen Providing data to the TOP would allow redundancy in the communication paths to the RA.
Ed Riley CA ISO #2 Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 Dilip Mahendra SMUD #1 Lee Xanthakos SCE&G #1 Tom Petrich (5) PG&E #1 Todd Lucas (6?) Southern Co #1 FRCC 6-#1, 4-#2, 1-#2 William Smith Allegheny Pwr #1 Kim Warren IMO #2 Kathleen Goodman ISO NE #2 Karl Kohlrus CWL&P #5 Joe Minkstein PG&E #5	Gen
Comments Listing the Planning Authority	
Roger Green Southern Co #5	PA See comment on #8.

	{ Regardless of who receives and distributes the data, the generator owner should only have to provide the data to one group.}
Mike Miller Southern Co #1	PA
Comments Listing the RA and Gen	
John Blazekovich Exelon #1,3,5,6	RA, Gen Either entity is OK
David Kiguel Hydro One #1 Ken Skroback AL Elec Coop #4	RA, Gen
Comments Listing the BA and the Generator	
Darrel Richardson Illinois Power #1, 3	BA, Gen Although we checked both the BA and the Generator as possible sources, we feel that the information provided to the RA should be supplied by the Generator with a carbon to the BA.
Roman Carter So Co Gen 3,5,6 (6 members)	BA, Gen
Comments Listing the RA, BA and Generator	
Vern Colbert Dominion #1	RA, BA, Gen
Comments Listing the Generator and Planning Authority	
Gregory Campoli NY ISO #2	Gen, PA The TOP should be able to cross check data used by the Planning Authority with current data provided by the Generator.
Lee Westbrook Oncor #1 Tony Jankowski We-Energies #4	Gen, PA
Comments Listing the RA, BA, Generator and Planning Authority	
OLDTF (9?) 6 - #2 1 - #1,5	RA, BA, Gen, PA ERCOT performs these analysis as the RA, BA, and Planning Authority. Not certain why the T. Op performs system analyses. That's the RA's function. The RA may or may not accept the T. Op's analysis.
Sam Jones ERCOT #2	RA, BA, Gen, PA ERCOT performs these analyses as the RA, BA, and Planning Authority, although the TOP is not precluded from doing so. The RA must ensure the analyses are performed. In ERCOT, ERCOT performs the analyses. The RA may or may not accept the TOP's analyses.
Peter Burke ATC #1	RA, BA, Gen, PA With respect to the RA, it may be necessary to obtain this data for a unit outside TOP control when the unit has a major effect on the TOP system. As stated above it seems the entity who owns and operates the Generator should be responsible for providing the data needed to maintain the reliability of the system. One would not want to be in a position where the data was delivered to the RA and then to the TOP as this potentially "stale" data could cause problems with the network applications on the EMS. (And it also introduces another point of

	failure in the data supply chain which increases the liklihood that the availability of the data will be less than required.
Other Comments	
George Bartlett Entergy Svcs 1	The question should be restated to conform to the parenthetical statement – Who should provide the TOP or RA with generator operational characteristic data needed for system analyses? The Generator Owner function (consistent with the Revised Functional Model) should provide the generator data necessary for system analyses and operational performance analyses to any and all functions needing that data, including the TOP and RA. If needed, the TOP or RA may request the necessary generator data from the Transmission Owner to whom the Genrator Owner should be obligated to provide the data as part of its interconnection and operating agreement with the Transmission owner.
Charles Yeung Reliant Energy #6	The generator operational characteristics are needed for many purposes and this information may be needed by others besides the RA. NERC should require a single coordination point for the submittal of this information. One must not be required to submit this same information repeatedly to different entities or "authorities". E.g. – if there is already a requirement for generator operational characteristics to be supplied to the Planning Authority, then the PA may be authorized to provide it to the RA. Data confidentiality agreements may apply.

10. Requirement 1 – Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirement and measures need adjustment to focus on monitoring data, not on having data available	
Tom Petrich (5) PG&E #1	No The "requirement", "measures(s)" and "outcome(s)" should state that the RA monitor and take corrective action to ensure the system is operated within the system operating limits. The RA System operating limits can also be established to avoid violating thermal facility limits affecting safety and reliability. Specifying that the system operating limits as "identified to prevent instability, uncontrolled separation or cascading outages" may be interpreted to exclude operating within limits based on other factors such as thermal overload.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No The levels of non-compliance should not be guaged by the availability of telemetered data but should be measured by the RA's ability to monitor System Operating limits.
Gregory Campoli NY ISO #2	No The RA's ability to monitor system operating limits is not limited by actual real time data. A better definition or a better term needs to be considered for actual real time data.
Todd Lucas (6?) Southern Co #1	No Measures should be based on the RA's ability to monitor the appropriate data and operating limits, not necessarily the availability of telemetry data. What does the term "Actual" imply in reference to real time data?
Susan Morris SERC #2 Robert Reed TS (See List)	No The levels of non-compliance should not be determined by the availability of telemetered data; compliance should be based on the RA's capability to monitor System Operating Limits. What do you mean by "actual real-time data"? Does it mean something different than "real-time data"? For consistency, the word actual should be removed from Measure 2.
Joanne Borrell Ed Stein Ray Morella FirstEnergy #1, 3,6	No We agree with the intent of this requirement and associated performance/outcome but the written words need to be changed.
Sam Jones ERCOT #2	No Please refer to the NERC Operating Limit Definition Task Force (OLDTF) report. ERCOT agrees with the contents of that report. The RA must ensure that system operating limits and interconnected reliability limits are established. The measures do not relate to the requirement. The requirement is that the RA shall monitor, not that the limits be available or that data is available. Those measures should pertain to the function(s) responsible for providing the limits and ratings, such as the Generator Owner or the Transmission Owner. The measure should be that the RA did indeed monitor the limits. What's unstated is over what timeframe. Continuous monitoring? Hourly? Other?

OLDTF (9?) 6 - #2 1 - #1,5	Please refer to the OLDTF report. The RA must ensure that the SOLs and IRLs are established. The Measures don't relate to the Requirement. The requirement is that the RA "shall monitor" not that "the limits be available" or "data is available." Those measures should pertain to the function(s) responsible for providing the limits and ratings, such as the Generator Owner or Transmission Owner. The measure should be that the RA did indeed monitor the limits. What's unstated is over what time frame. Continuous monitoring? Hourly?
No – Mix of comments	
ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2	No I agree with the intent of this requirement and associated performance/outcome but the written words need to be changed. (1) Operating Security Limits are not usually monitored in real time. They are usually fixed values that are determined from operating studies. The only limits that might be monitored in real time are those that are dependent on actual weather conditions. It is not a requirement to determine Operating Security Limits based on weather conditions. Actual Operating Measurements are what need to be monitored in real time and compared to the Operating Security Limit. This standard should be updated to reflect the difference between a limit, a monitored value, and a monitored value that exceeds a limit. This concept also needs to be reflected in section 201 (e) Compliance Monitoring Process. (2) Delete the paranthetical phrases, (in real time) and (identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system), in Requirement 1. We have already commented that it was allowable for monitoring to be done via voice communications from a manned substation which is not real time monitoring. The standard needs to add a more detailed definition of an Operating Security Limit. If this were done one of the paranthetical expressions would not be needed. The comments to Question 45 also apply to this question.
Raj Rana AEP #1,3,5,6	No We agree with the intent, but it is not written clearly. The RA should monitor, in real time, the data associated with the facilities that have defined system operating limits that if exceeded for a defined time limit (to be defined by the Facility Ratings Standard) could lead to instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Additionally, the RA should be required to monitor the system and facilities for the impact of the next contingency. This standard requires the RA to only monitor the data associated with facilities that have defined operating limits identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. What about those thermal overloads and voltage conditions that do not result in catastrophic events? Should this standard ignore those thermal overloads and voltage conditions that will not result in instability or catastrophic events?
Kathleen Goodman ISO NE #2	No ISO New England does not believe that we should identify specific limits which must be reported on. Rather, we advocate internally reporting on every violation which does not clear within 30 minutes (as defined in NERC policy). Subsequently, each reported violation will be studied/examined to see if it would

	have caused instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk power transmission system (have an Inter-Area impact outside of the New England Area following next contingency). If so, ISO New England would report this "OSL violation" to NPCC and NERC within 72 hours. If there would not have been an Inter-Area impact (i.e. the impact would have been localized within the offending Control Area's boundary), no external reporting will occur. We suggests this approach be adopted. By restricting reporting to pre-identified limits, NERC may not be getting the information they seek through this Standard. Only through a post-operational assessment, can a true analysis (with the correct system configuration) be performed and an adequate judgement be made on the potenital impact to the bulk power system. We also believe that data should not be archived unless the limit is not cleared within 30 minutes. We do not advocate archiving data for every limit violation if it cleared in less than 30 minutes.
George Bartlett Entergy Svcs 1	No The requirement should read "The RA shall continuously monitor real-time system parameters against system operating limits. System operating limits are established through the standard "Determine Facility Ratings, Operating Limits and Transfer Capabilities". Please define "actual real time data". If it is the same as "real time data" then Measure 2 should read "Real-time Data is available in a form that can be compared to the system operating limits." We use the term "real-time data" as we have defined it in these comments. The "Outcome" should be deleted as it is a restatement of the Requirement and adds nothing to this standard.
Francis Halpin BPA Bus Line #5,6	No In general we agree---but do have some reservations: In the requirements---The terminology related to instability, separation, and cascading outages are more often associated with Operating Security Limits than with System Operating Limits. In the outcomes---The word SHALL sounds too much like a requirement, in fact this whole statement mimics the requirement very closely.The outcome should relate meeting the requirement to its effect and might read something like.."The RA closely monitors the bulk electric system assuring reliable operation. At any rate, the Reliability Authority should be monitoring critical facilities that could cause a violation to the set operating limits – those critical facilities should have already been identified in the operating planning studies. 'Assuring reliability' means that upon a violation of a system limit, actions are taken to move the system back within the correct operating limits.
No – Other comments	
Gerald Rheault Manitoba #1,3,5,6	No Manitoba Hydro believes that the performance requirement objective is correct; however there are instances where real time data is not readily available and may have to be inferred or synthesized from other measurements. The measures section above should be modified to reflect this reality.
Doug Hils Cinergy #1	No The requirement is reversed, the actual real time data that should be monitored and compared to the system operating limits
Thomas Pruitt Duke #1	No 1) What is the data provider's responsibility regarding provision of data to RA? Is

	the RA subject to non-compliance if the data provider's tools fail?
John Blazekovich Exelon #1,3,5,6	No We have concerns with potential effects of thermal overloads, we believe that thermal limits need to be addressed and monitored. The explanatory text in parenthesis appears to exclude thermal limits.
Alan Boesch NPPD #1	Yes/No I am very confused by this Standard. Who is going perform these functions the TOP or the RA. The Standard appears to have both performing the same function. The Standard needs to define the relationship between the RA and TOP. Maybe that could be accomplished in a opening paragraph. The requirements on the limits may be too broad. For example, an operating limit should also protect the safety of the public. If a facility was loaded to the point where it no longer met clearance requirements, the RA should respect these limits. The standards also seem to ignore voltage limits. There are limits to how high or low the voltage should be allowed to go before action is required. In addition to steady-state voltages, there should be a limit on transient voltages as well. It is not clear from this standard that these limits apply.
Yes – Comments indicating additional clarification needed	
Peter Burke ATC #1	Yes Agree assuming the MISO would be the RA for ATC in which case this requirement expresses what MISO would be expected to be doing. Some accommodation should be made for new facilities for which it is sometimes difficult or impractical to have immediate operation of telemetering. There should be a grace period of something like three months following new construction.
Mike Miller Southern Co #1	Yes The operating limits should be associated with the ratings, or both should be defined for clarification.
Lloyd Linke MAPP #2	Yes In the outcome section, actual data should be qualified as actual real time data.
Lee Westbrook Oncor #1	Yes Since limits may specify both magnitude and duration, real time data may need to be integrated to compare to limits. That should be made more apparent here or in the definition of data.
FRCC 6-#1, 4-#2, 1-#2	Yes Real time data is actual data. It would seem that the reference to actual in item 2 is not necessary and may cause confusion. Also, as real time data may be temporarily unavailable from time to time, state estimation or other calculated data should be acceptable.
William Smith Allegheny Pwr #1	Yes I agree with the intent. However, the RA is actually monitoring the actual real time data and comparing it against the system operating limits. A definition of "system operating limits" would allow for the removal of the parenthetical phrases in Requirement 1.
Stuart Goza TVA #1	Yes The applicable term "system operating limit" needs clarification
Toni Timberman BPA #1	Yes Thermal Overloads are not specifically mentioned. Is that assumed to be the cause of the Cascading Outages?

Alan Johnson Mirant #6 Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Ed Riley CA ISO #2 Fred Frederick Vectren #3 James Stanton Calpine #5 Joe Minkstein PG&E #5 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Lee Xanthakos SCE&G #1 Richard Kafka Pepco #1 Richard Schwarz PNSC #2 Roman Carter So Co Gen 3,5,6 (6 members) Tony Jankowski We-Energies #4 Vern Colbert Dominion #1	Yes

11. Requirement 1 – Do you agree with these levels of non-compliance for this requirement?

No – Comments about mismatch between measures and non-compliance	
Albert M. DiCaprio MAAC #2	No The measure has to do with monitoring while the non-compliance has to do with data quality. Monitoring compliance is difficult – how does one say that the system is not being monitored correctly. However, the measures focus on whether or not the monitor is using good data.
Gregory Campoli NY ISO #2	No Levels of non compliance should not be measured by availability of telemetered data. Levels of non compliance should be focused on the ability to monitor current system operating limits and system conditions. In some cases substitute data should be acceptable.
Lee Xanthakos SCE&G #1	No Levels of non-compliance should focus on what the RA does with the data not if it gets it or not.
Roman Carter So Co Gen 3,5,6 (6 members)	No Levels of non-compliance should not be determined by the availability of data. It should be based more on the RA's capability to monitor System Operating Limits and whether they took appropriate action to resolve issues preventing the RA from doing the monitoring.
Doug Hils Cinergy #1	No The levels of Non-compliance are measurements of the communication system not the actual requirement, does not allow for using surrogate values such as state estimation or manually requested values to be used without the RA being at a level of non compliance.
Todd Lucas (6?) Southern Co #1	No The levels of non-compliance should be based on whether you have sufficient and appropriate data regardless of the means for gathering the data to compare and evaluate conditions in terms of operating limits and are you monitoring that data.
George Bartlett Entergy Svcs 1	No Levels of non-compliance should not be be determined by the availibility of telemetered data. Much of the information used to meet Measure 2 is derived from measured values by the state estimator or other calculations. An RAs level of non-compliance should reflect that function's ability to meet the Requirement as reflected in the Measures: 1) have the SOLs available in real time, and 2) real-time data in a form that can be compared to the SOLs. Please revise the Levels of Non-compliance to conform to the Measures.
OLDTF (9?) 6 - #2 1 - #1,5	Please refer to our comments to Q10. *{ The Measures don't relate to the Requirement. The requirement is that the RA "shall monitor" not that "the limits be available" or "data is available." Those measures should pertain to the function(s) responsible for providing the limits and ratings, such as the Generator Owner or Transmission Owner.* *The measure should be that the RA did indeed monitor the limits. What's unstated is over what time frame. Continuous monitoring? Hourly?}* The RA typically cannot control whether the data is provided, but may have acceptable and prudent measures in place to require the data. This comment would apply through the document.
No – Comments about loss of telemetry	

William Smith Allegheny Pwr #1	No There should not be non-compliance at level 1 or 2 when the RA or TOP stations an operator at a substation or plant to monitor operating data if the telecommunications equipment is not working.
Raj Rana AEP #1,3,5,6	No Loss of telemetry should not result in a non-compliance. Taking no action to correct the problem of missing data or to obtain the data via another means, such as requiring the TOP to station an operator at the station or plant to monitor and report the data until such time that telemetry is restored, should be a non-compliance. Addditionally, the problem could be due to a telemetry problem at the TOP, so why would the RA be penalized? Also, the problem could be within the ISN, again not within the direct control of the RA. Define "surrogate value" and "surrogate data" Suggested text: **Requirement 1:** The RA shall monitor (in real time) the data associated with facilities that have defined ~~the~~ system operating limits (identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system). ~~and the actual real-time data associated with those limits.~~ **Measure(s):** 1. System operating limits are defined and available. ~~in real time~~ 2. Actual real time data is available in a form that can be compared to the system operating limits **Outcome(s) (100% Compliance):** The RA shall monitor in real time facilities with system operating limits and compare ~~these against~~ the actual data ~~associated~~ with those limits.
Richard Schwarz PNSC #2	No Levels 1 & 2. The RA has no control as to availability of telemetered data. This responsibility should rest with the providing entity. The RA should monitor the data, be able to monitor the availability of telemetered data and be able to measure availability of data.
Toni Timberman BPA #1	No # 4 is reasonable, but the other levels of non-compliance are related to data availability, not to the requirement that the RA monitor limits and associated data. The responsibility for data availability rests with those providing the data. At the most, the RA should have processes and procedures (and alarms?) in place to make them aware of when the data is bad…ie, when a real-time measurement has not been available for xx minutes, or when a data point value has not changed for xx minutes. (It is possible for the data link to be bad and for data to still be coming in but not updating).
FRCC 6-#1, 4-#2, 1-#2	No There can be legitimate reasons for telemeterd data being unavailable. Perhaps it would be more appropriate to change the timing in item 1 from "for up to 24 hours" to "for 12 to 24 hours". Again, what is wrong with using state estimation data, or other calculated data? These non-compliance levels are not realistic. If item 2 is intended to be a next level of non-compliance, it should be between 24 to 48 hours. You do not ask a question about the compliance monitoring process, but we

	would like to provide comment on that section as well. Section 201 (e) states that the RA will demonstrate compliance thru the self certification process with re-certification on a schedule established by the compliance monitor. We do not agree with the re-certification part of this statement. The compliance monitoring of this standard is not for certification on an entity performing a function. There is no need for any re-certification in connection with this standard. The self certification process is just a way for an entity to provide information to the compliance monitor that will be validated thru spot reviews etc. The re-certification statement appears in every compliance section in this document. It needs to be removed throughout.
Tom Petrich (5) PG&E #1	No Non-compliance Levels 1 and 2 need to include a lower limit before the non-compliance level would be in effect. For example, as written, the RA function would be in Level 1 violation if it misses 1 second of actual telemetered data. This does not seem reasonable. We suggest adding the phrase "and no proper corrective action was taken" to the end of both Levels 1 and 2. Thus: 6 Actual telemetered data needed for monitoring system operating limits unavailable, so surrogate value was monitored for up to 24 hours and no proper corrective action was taken 2. Actual telemetered data needed for monitoring system operating limits was unavailable, so surrogate data was monitored for up to 48 hours and no proper corrective action was taken
Thomas Pruitt Duke #1	No 5) Loss of telemetry for short periods is an unfortunate but routine matter – with all that telemetry equipment in the field, it cannot be expected that none of it ever have downtime. 6) The measures and levels of non-compliance should be re-evaluated to insure the achievement of the overall objective of this requirement.
Kim Warren IMO #2	No Loss of a few telemetered quantites does not constitute an inability of the RA to perform his "monitoring "(and analysis) functions if the State Estimator remains functional. (In fact State estimated quantities are deemed to be often more accurate than telemetered quantities .) Reporting of loss of actual telemetry should only be required when the RA can no longer perform these functions. Furthermore, reporting each actual telemetry loss will create too much overherad for the RA, the Regions and/or NERC. For a loss of the RA's "monitoring function", a minimum time standard should be built into this compliance issue similar to "Exceeding an Operating Limit but Not a Reportable Violation" (question 5 & 6). There should be a time allowance for short term failures (i.e. < 30 minutes) of failure before reporting is required.
Stuart Goza TVA #1	No There should be some realistic acceptable period for failed telemetry before Level 1 violation occurs.
Fred Frederick Vectren #3	No At what point does telemetered data being unavailable constitute non-compliance (1 second, 1minute, 1 hour, etc.)?
Alan Johnson Mirant #6	No May not be reading this correctly, but it seems unreasonable that if some data is missing during a 24-hour period that the RA is deemed to be non-compliant. Seems like there should be allowance for some sort of tolerance before being

	deemed non-compliant.
Peter Burke ATC #1	No Level 1 non-compliance is written "up to 24 hours." This suggests that anything, even a single missed scan, qualifies as non-compliance. As worded there is a significant amount of room for interpretation as to what constitutes non-compliance. If MISO loses the ability to scan one reading from one RTU for a day, this should not be considered a violation. If an RTU is lost for a day, a decision needs to be made as to how critical the data is to reliable operations. If an entire ICCP link is lost, 10 minutes may be too long. That will most likely be a judgement call based on the data supplied via the link that is down and system conditions at the time of the failure (sunny and 65 degrees versus thunderstorms rolling through the system). This needs more work before using it to assign fines for non-compliance.
Sam Jones ERCOT #2	No Please refer to the comments to #10 above. The RA typically can't control whether the data is provided, but may have acceptable and prudent measures in place to require the data. This comment would apply throughout this document. *{ The RA must ensure that system operating limits and interconnected reliability limits are established.* *The measures do not relate to the requirement. The requirement is that the RA shall monitor, not that the limits be available or that data is available. Those measures should pertain to the function(s) responsible for providing the limits and ratings, such as the Generator Owner or the Transmission Owner.* *The measure should be that the RA did indeed monitor the limits. What's unstated is over what timeframe. Continuous monitoring? Hourly? Other?}*
Ray Morella Ed Stein Joanne Borrell FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8, #5 – 1, #2 – 2	No (1) Operating Security Limits are not usually monitored in real time. (2) There should not be a non-compliance at level 1 or 2 when a Reliability Coordinator (RC) or Transmission Operator (TOP) stations an operator at a substation or plant to monitor operating data if the telecommunications equipment is not working. The existing standard forces a non-compliance whenever the telecommunications equipment is not working. (3) Note 1 says – 'Real Time could be continuous analog data or data sampled at a rate greater than or equal to one minute ------'. One minute is a unit of time not a rate. It should say – 'Real time could be continuous analog data or data sampled faster than or equal to once a minute-----'. (4) Requirements 201 and 202 are very similar. Requirement 201 applies to Reliability Coordinators. Requirement 202 applies to Transmission Operators. The requirements are duplicative. The standard should require system conditions to be monitored by either the Reliability Coordinator or the Transmission Operator, but not both of them. There is nothing wrong with both of them doing the monitoring if they so wish, but both of them should not be forced to do so. There is nothing wrong with a Transmission Operator delegating this responsibility to a Reliability Coordinator or a Reliability Coordinator delegating this responsibility to a Transmission Operator.
ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2	No (1) Operating Security Limits are not usually monitored in real time. They are usually fixed values that are determined from operating studies. The only limits that might be monitored in real time are those that are dependent on actual weather conditions. It is not a requirement to determine Operating Security Limits based on weather conditions. Actual Operating Measurements are what need to be monitored in real time and compared to

	the Operating Security Limit. This standard should be updated to reflect the difference between a limit, a monitored value, and a monitored value that exceeds a limit. (2) The description of Level 1 Non-compliance and Level 2 Non-compliance under 'Levels of Non-compliance for this Requirement' should be changed. Level 1 non-compliance should read 'Actual telemetered data or a surrogate for actual telemetered data needed for monitoring deviations from system operating limits was unavailable for 24 hours'. Level 2 non-compliance should read 'Actual telemetered data or a surrogate for actual telemetered data needed for monitoring deviations from system operating limits was unavailable for 48 hours'. There is nothing wrong with using a manual reading phoned in from a substation or using a value calculated from surrounding parameters. A value calculated from surrounding parameters might be better than an incorrect telemetered value. Some State Estimation systems use a value calculated from surrounding parameters instead of the telemetered value for certain circumstances.
Lloyd Linke MAPP #2	No Should read, for example: "Actual telemetered data needed for monitoring system operating limits provided to the RA as specified, but unavailable to the operator, so surrogate value was monitored for up to 24 hours." In each of the first two measures, this caveat noting that the compliance failure should only be considered a failure when the RA is getting the data, but mishandling it. Said another way, if the RA isn't getting the data because the TOPs (or others) are not sending the data, then no non-compliance occurs. Level #1 should be 48 hours, level #2 should be 72 hours, and level #3 should have a 96 hour requirement. In many instances, 24 hours may be impractical especially with reliance on outside communication providers.
Kathleen Goodman ISO NE #2	No This non-compliance matrix is completely inappropriate and ineffective. What is the scope of the telemetering unavailability required to achieve these levels of non-compliance? Is the goal here to achieve compliance with reliability standards or measure the amount of redundant telemetering equipment? It is clearly possible to maintain reliability absent some telemetering as long as an effective State Estimator is in use. Additionally, how much telemetering must be unavailable in order to be non-compliant: One point, five points, 5,000 points, etc.? Compliance should be measured against how many violations that an area had which were not cleared over a specified period of time. Only the RA should make the determination of how much telemetering is enough to have effective limit management.
No – Comments indicating alternate levels of non-compliance needed	
Susan Morris SERC #2 Robert Reed TS (See List) Thomas Pruitt Duke #1	No 6 Levels 1 and 2 imply that use of substitute data is unacceptable. 2) The only important level of non-compliance listed above is level 4. 3) There seems to be no penalty for failing to identify a System Operating Limit. If an entity identifies limits and then does not monitor them, then the entity is subject to a greater penalty than an entity who fails to identify the limits. Need a process to identify SOLs and to assess system conditions, both real-time and forecast. The measures should be: a) do you have the data; b) do you have the limits; c) are you monitoring the data. 4) What does "surrogate value" mean? Levels 1 and 2 should be rewritten to consider the suggested measures listed in these comments.
John Blazekovich	No

Exelon #1,3,5,6	Should be revised to state that as long as limits are observable the RA is compliant. Level 4 needs to be clarified so that momentary telemetry problems (loss of telemetry) does not result in a level 4 violation.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No Level 4 is the most important metric for this Requirement and we feel that Level 1, 2 and 3 are unnecessary.
Gerald Rheault Manitoba #1,3,5,6	No Manitoba Hydro agrees with using a set of levels to define non-compliance. However the set of limits defined here may not be appropriate and should be related to the risk on the system. In the event of loss of data, perhaps a lower set of limits should be applied till the regular data can be re-established.
Charles Yeung Reliant Energy #6	No Level 1 may require a more stringent time frame than a 24 hour loss of telemetered data. RAs should have the most accurate information at all times. There is no apparent check whether the surrogate value is as accurate as the actual telemetered data. Reliability may be greatly jepoardized if the RA employs inaccurate data for a 24 hour period. We recommend for Level 1 compliance that surrogate values not be relied on for more than 4 hours. This provides incentive to recover from the loss of data well within the operating time frame of the wholesale market 8 hour block schedules. For Level 2 compliance, 24 hours is appropriate. As an alternative, there could be some recognition in the suggested compliance levels for the time of day (& day of week) as to when the data is not available. This system visibility that this information provides is most critical when the system is in danger of a operating limit violation.
Alan Boesch NPPD #1	No I am assuming that the RA will not get the data directly but will receive the data from another source. It does not seem appropriate to sanction them for something they do not control. Maybe the non-compliance should be associated with the equipment the RA uses for monitoring the system. In addition the levels of non-compliance use the term “Actual telemetered data” while the footnote to the measures states that real-time, state estimated or calculated data is acceptable. There is at a minimum confusion with the way these terms are stated if not outright conflict. The standard needs to be consistient between the measurement and level of non-compliance.
Other Comments on Compliance	
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.

Bob Burkard NCMPA1 # 3,4,5 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Francis Halpin BPA Bus Line #5,6 James Stanton Calpine #5 Joe Minkstein PG&E #5 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Mike Miller Southern Co #1 Richard Kafka Pepco #1 Vern Colbert Dominion #1	Yes

1. Requirement 2 – Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating this is an RA responsibility	
Richard Kafka Pepco #1	No This is a RA responsibility, although TOP will physically monitor actual conditions.
Toni Timberman BPA #1	No According to the Functional Model, "The Transmission Operator operates and maintains the transmission facilities, and is responsible for local reliability functions. The Transmission Operator under the Reliability Authority's direction can take action, such as implementing voltage reductions, to help mitigate an Energy Emergency." This does not say that the Transmission Operator is responsible for the reliability of the bulk Power System. Does the term "operate" in the functional model include the responsibility to "monitor"?
Susan Morris SERC #2 Robert Reed TS (See List)	No 6 Whose responsibility is it to " . . . monitor (in real time) the system operating limits . . ." – the RA or the TOP? 2) Whose compliance is more significant than the other?
Robert Reed TS (See List)	No 1) 3) This requirement should be for the TOP to provide to the RA telemetry data and to monitor system limits and OSLs under the direction of the RA.
Gregory Campoli NY ISO #2	No It is unclear by this requirement alone, who has jurisdiction for monitoring Operating Limits RA or TOP. The TOP's ability to monitor system operating limits is not limited by actual real time data. A better definition or a better term needs to be considered for actual real time data.
FRCC 6-#1, 4-#2, 1-#2	No This requirement is a duplicate of what was in Requirement 1 for the RA. We are confused as to whose responsibility it is to monitor the system operating limits. Shouldn't the requirement be for the TOP to provide telemetry data to the RA so the RA can monitor and assess the entire area?
Raj Rana AEP #1,3,5,6	No This requirement is duplicative to Requirement 1 for the RA. The standard should require that system conditions be monitored to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. The standard should require either the RA or the TOP to do this, but not require that they both do this. We prefer for the standard to require the RA perform this function, and that this is not a function that the RA can delegate to a TOP. The RA has a bigger picture, and can analysis the impact of one TOP on another TOP better then the TOP's can. Further, the RA has the real-time data required to monitor Regional conditions, that a TOP will not have. This requirement should be re-worded to require that the TOP provide real time data, equipment limits, and model updates to their RA as specified by their RA. This standard requires the TOP to only monitor the data associated with facilities that have defined operating limits identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. What about those thermal overloads and voltage conditions

	that do not result in catastrophic events? Should this standard ignore those thermal overloads and voltage conditions that will not result in instability or catastrophic events?
No – Comments about mismatch between requirement and measures	
Tom Petrich (5) PG&E #1	No System operating limits can also be established to avoid violating thermal facility limits. Specifying that the system operating limits as "identified to prevent instability, uncontrolled separation or cascading outages" may be interpreted to exclude operating within limits based on other factors such as thermal overload.
Todd Lucas (6?) Southern Co #1	No Measures should be based on the TOP's ability to monitor the appropriate data and operating limits, not necessarily the availability of telemetry data.
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	No Same comments as in #10 above. The measures don't relate to the requirement. *{ The RA must ensure that system operating limits and interconnected reliability limits are established.* *The measures do not relate to the requirement. The requirement is that the RA shall monitor, not that the limits be available or that data is available. Those measures should pertain to the function(s) responsible for providing the limits and ratings, such as the Generator Owner or the Transmission Owner.* *The measure should be that the RA did indeed monitor the limits. What's unstated is over what timeframe. Continuous monitoring? Hourly? Other?}*
Comments about revising the phraseology	
Doug Hils Cinergy #1	No First the requirement is reversed, the actual real time data that should be monitored and compared to the system operating limits. Second operating limits set in the SCADA or EMS are not commonly changed from day to day to match current.
Ray Morella Joanne Borrell Ed Stein FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2	No We agree with the intent of this requirement and associated performance/outcome but the written words need to be changed. (1) Operating Security Limits are not usually monitored in real time. They are usually fixed values that are determined from operating studies. The only limits that might be monitored in real time are those that are dependent on actual weather conditions. It is not a requirement to determine Operating Security Limits based on weather conditions. Actual Operating Measurements are what need to be monitored in real time and compared to the Operating Security Limit. This standard should be updated to reflect the difference between a limit, a monitored value, and a monitored value that exceeds a limit. This concept also needs to be reflected in section 202 (e) Compliance Monitoring Process.
ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2	No Delete the paranthetical phrases, (in real time) and (identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system), in Requirement 1. We have already commented that it was allowable for monitoring to be done via voice communications from a manned substation which is not real time monitoring. The standard needs to add a more detailed definition of an Operating Security Limit. If this were done one of the paranthetical expressions would not be needed. The comments to Question 45 also apply to this question.

No – Comments about expanding scope of requirements or measures	
George Bartlett Entergy Svcs 1	No Our comments to Requirement 1 apply to Requirement 2 also. *{ The requirement should read "The RA shall continuously monitor real-time system parameters against system operating limits. System operating limits are established through the standard "Determine Facility Ratings, Operating Limits and Transfer Capabilities".* *Please define "actual real time data". If it is the same as "real time data" then Measure 2 should read "Real-time Data is available in a form that can be compared to the system operating limits." We use the term "real-time data" as we have defined it in these comments.* *The "Outcome" should be deleted as it is a restatement of the Requirement and adds nothing to this standard.}* Requirement 2 should also reflect the requirement that the TOP monitor all facililties to assure the real-time system parameters are under Facility Ratings.
John Blazekovich Exelon #1,3,5,6	No We have concerns with potential effects of thermal overloads, we believe that thermal limits need to be addressed and monitored.
Roger Green Southern Co #5	No This requirement is too subjective. The necessary actions are not identified to assess compliance. Some results, such as voltage outside a defined limit, should require notice to nuclear generators so that regulatory Technical Specification requirements for continued operation can be met. Otherwise, the units could either be forced offline or into limited operation. This standard should include the requirement that a written agreement be established between the RA, TOP and generators identifying the actions to be taken by mutual agreement. Reference IEEE Std 765-2002 Annex A for further details on this proposed change.
No – Comments about telemetry	
David Kiguel Hydro One #1	No The levels of non-compliance should not be guaged by the availability of telemetered data but should be measured by the RA's ability to monitor System Operating limits. Please see our comments under item # 44 (Regional and Interconection Differences).
Gerald Rheault Manitoba #1,3,5,6	No See comment in #10. *{ Manitoba Hydro believes that the performance requirement objective is correct; however there are instances where real time data is not readily available and may have to be inferred or synthesized from other measurements. The measures section above should be modified to reflect this reality.}*
Yes – Comments indicating this is an RA responsibility	
Lee Xanthakos SCE&G #1	Yes/No I agree with requirements, but I do not agree that it written exactly the same as the RAs. As a matter of fact, my opinion of the entire draft is that a distinction is made between the requiremsnt of an RA and a TOP. Why have two entities required doing the same thing?
Alan Boesch NPPD #1	Yes I am very confused by this Standard. Who is going perform these functions the TOP or the RA. The Standard appears to have both performing the same function. The Standard needs to define the relationship between the RA and TOP.

	Maybe that could be accomplished in a opening paragraph. The requirements on the limits may be too broad. For example, an operating limit should also protect the safety of the public. If a facility was loaded to the point where it no longer met clearance requirements, the RA should respect these limits. The standards also seem to ignore voltage limits. There are limits to how high or low the voltage should be allowed to go before action is required. In addition to steady-state voltages, there should be a limit on transient voltages as well. It is not clear from this standard that these limits apply.
Kathleen Goodman ISO NE #2	Yes/No This standard should recognize that the RA, CA and TOP functions may all be performed at one location with primary responsibility enforced at the RA.
Kim Warren IMO #2	Yes/No Yes ,only if it is recognized that in some jurisdictions, the TOP may be the same entity as the RA but does not necessarily perform all of the roles(eg. Switching,maintenance,outage & construction notification) that the Functional Model defines for the TOP. Where the RA and the TOP are different, there needs to be a clear distinction of which system limits each are accountable for. This document should be reworked to be consistent with the recently issued OLD TF report.
Yes – Comments about revising the phraseology	
Mike Miller Southern Co #1	Yes Are Operating limits the same as ratings?
Stuart Goza TVA #1	Yes The applicable term “system operating limit” needs clarification.
Lee Westbrook Oncor #1	Yes See Requirement 1 comment. *{ Since limits may specify both magnitude and duration, real time data may need to be integrated to compare to limits. That should be made more apparent here or in the definition of data.}*
William Smith Allegheny Pwr #1	Yes I agree with the intent. However, the RA is actually monitoring the actual real time data and comparing it against the system operating limits. A definition of “system operating limits” would allow for the removal of the parenthetical phrases in Requirement 1.
No – Comments about expanding scope of requirements or measures	
Francis Halpin BPA Bus Line #5,6	Yes I think what the TOP is monitoring is not the limits but the critical parts of the system to ensure the limits are not violated.
Peter Burke ATC #1	Yes I am not aware of many TOPs that have the tools needed to study voltage stability and/or transient stability for their systems in real time. MISO has these tools and is working to implement them. If the standard is implemented as written it will require a significant investment and development effort at many sites to put the necessary reliability monitoring tools in place. When done, we have duplication of effort and significant costs incurred with a limited benefit to the system. I do believe that the TOP should be capable of monitoring its system and analyzing to make sure it can survive first contingency events and maintain operations within acceptable guidelines. This requires a functioning State Estimator, Security Screening/Contingency Analysis, and Online Power Flow.

Alan Johnson Mirant #6 Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Ed Riley CA ISO #2 Fred Frederick Vectren #3 James Stanton Calpine #5 Joe Minkstein PG&E #5 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Lloyd Linke MAPP #2 Roman Carter So Co Gen 3,5,6 (6 members) Thomas Pruitt Duke #1 Tony Jankowski We-Energies #4 Vern Colbert Dominion #1	Yes

2. Requirement 2 – Do you agree with these levels of non-compliance for this requirement?

No – Comments about mismatch between measures and non-compliance	
George Bartlett Entergy Svcs 1	No Our comments to Requirement 1 apply to Requirement 2 also *{ Levels of non-compliance should not be be determined by the availibility of telemetered data. Much of the information used to meet Measure 2 is derived from measured values by the state estimator or other calculations. An RAs level of non-compliance should reflect that function's ability to meet the Requirement as reflected in the Measures: 1) have the SOLs available in real time, and 2) real-time data in a form that can be compared to the SOLs. Please revise the Levels of Non-compliance to conform to the Measures.}*
Albert M. DiCaprio MAAC #2	See comments to #11 {*The measure has to do with monitoring while the non-compliance has to do with data quality. Monitoring compliance is difficult – how does one say that the system is not being monitored correctly. However, the measures focus on whether or not the monitor is using good data.}*
Todd Lucas (6?) Southern Co #1	No The levels of non-compliance should be based on whether you have sufficient and appropriate data regardless of the means for gathering the data to compare and evaluate conditions in terms of operating limits and are you monitoring that data.
Lee Xanthakos SCE&G #1	No Levels of non-compliance should focus on what the TOP does with the data not if it gets it or not.
Gregory Campoli NY ISO #2	No Levels of non compliance should not be measured by availability of telemetered data. Levels of non compliance should be focused on the ability to monitor current system operating limits and system conditions.
Roman Carter So Co Gen 3,5,6 (6 members)	No See answer to question # 11. *{ Levels of non-compliance should not be determined by the availability of data. It should be based more on the RA's capability to monitor System Operating Limits and whether they took appropriate action to resolve issues preventing the RA from doing the monitoring.}*
Doug Hils Cinergy #1	No Again the Non- compliance levels are is a monitoring of the communication system rather than a measure of how the system is being operated.
Toni Timberman BPA #1	No See response to Requirement 1 *{# 4 is reasonable, but the other levels of non-compliance are related to data availability, not to the requirement that the RA monitor limits and associated data. The responsibility for data availability rests with those providing the data. At the most, the RA should have processes and procedures (and alarms?) in place to make them aware of when the data is bad…ie, when a real-time measurement has not been available for xx minutes, or when a data point value has not changed for xx minutes. (It is possible for the data link to be bad and for data to still be coming in but not updating).}*
Sam Jones	No

ERCOT #2	Same comments as #11 above. {*The RA typically can't control whether the data is provided, but may have acceptable and prudent measures in place to require the data. This comment would apply throughout this document.* *The RA must ensure that system operating limits and interconnected reliability limits are established.* *The measures do not relate to the requirement. The requirement is that the RA shall monitor, not that the limits be available or that data is available. Those measures should pertain to the function(s) responsible for providing the limits and ratings, such as the Generator Owner or the Transmission Owner.* *The measure should be that the RA did indeed monitor the limits. What's unstated is over what timeframe. Continuous monitoring? Hourly? Other?}* It appears that there will likely be numerous Level 1 non-compliances unless a threshhold is established. System Operation experience shows that metering signals fall in and out. If Level 1 indicates that every time a metering signal is lost, you are non-compliant. This needs some reconsideration. The drafting team should consider that state estimators can supply some of the data in a short term.
No – Comments about telemetry	
FRCC 6-#1, 4-#2, 1-#2	No Same comment as provided in response to question 11 for the RA. *{ There can be legitimate reasons for telemeterd data being unavailable. Perhaps it would be more appropriate to change the timing in item 1 from "for up to 24 hours" to "for 12 to 24 hours". Again, what is wrong with using state estimation data, or other calculated data? These non-compliance levels are not realistic.* *If item 2 is intended to be a next level of non-compliance, it should be between 24 to 48 hours.* *You do not ask a question about the compliance monitoring process, but we would like to provide comment on that section as well. Section 201 (e) states that the RA will demonstrate compliance thru the self certification process with re-certification on a schedule established by the compliance monitor. We do not agree with the re-certification part of this statement. The compliance monitoring of this standard is not for certification on an entity performing a function.* *There is no need for any re-certification in connection with this standard. The self certification process is just a way for an entity to provide information to the compliance monitor that will be validated thru spot reviews etc. The re-certification statement appears in every compliance section in this document. It needs to be removed throughout.}*
OLDTF (9?) 6 - #2 1 - #1,5	Same comment at Q11. It appears to that there will likely have numerous Level 1 non-compliances unless a threshold is established. Anyone who has been a system operator knows that metering signals fall in and out. If level 1 indicates that every time you lose a signal for metering you are non-compliant, I think it needs reconsideration. The drafting team should consider that state estimators can supply some of this data in the short term.
William Smith Allegheny Pwr #1	No There should not be non-compliance at level 1 or 2 when the RA or TOP stations an operator at a substation or plant to monitor operating data if the telecommunications equipment is not working.
Tom Petrich (5) PG&E #1	No Non-compliance Levels 1 and 2 need to include a lower limit before the non-

	compliance level would be in effect. For example, as written, the TOP function would be in Level 1 violation if it misses 1 second of actual telemetered data. This does not seem reasonable. We suggest adding the phrase "and no proper corrective action was taken" to the end of both Levels 1 and 2. Thus: 3. Actual telemetered data needed for monitoring system operating limits unavailable, so surrogate value was monitored for up to 24 hours and no proper corrective action was taken 4. Actual telemetered data needed for monitoring system operating limits was unavailable, so surrogate data was monitored for up to 48 hours and no proper corrective action was taken
Thomas Pruitt Duke #1 Susan Morris SERC #2 Robert Reed TS (See List)	No 6 Levels 1 and 2 imply that use of substitute data is unacceptable. 6 The only important level of non-compliance listed above is level 4. 6 Loss of telemetry for short periods is an unfortunate but routine matter – with all that telemetry equipment in the field, it cannot be expected that none of it ever have downtime. 4) If this requirement is changed as suggested above, then there should be some type of measures defined to capture the need for a certain level of observe-ability and accuracy of the telemetry data. The TOP should also have a list of identified limits on the SCADA system that is being monitored on a periodic basis. The TOP should also have a list of "RA assigned" Operating Security Limits identified by the RA and instructions on mitigation actions to perform if the OSL is reached and/or violated.
Stuart Goza TVA #1	No There should be some realistic acceptable period for failed telemetry before Level 1 violation occurs.
Charles Yeung Reliant Energy #6	No Please see comments on Question #11 *{ Level 1 may require a more stringent time frame than a 24 hour loss of telemetered data. RAs should have the most accurate information at all times. There is no apparent check whether the surrogate value is as accurate as the actual telemetered data. Reliability may be greatly jepoardized if the RA employs inaccurate data for a 24 hour period. We recommend for Level 1 compliance that surrogate values not be relied on for more than 4 hours. This provides incentive to recover from the loss of data well within the operating time frame of the wholesale market 8 hour block schedules. For Level 2 compliance, 24 hours is appropriate. As an alternative, there could be some recognition in the suggested compliance levels for the time of day (& day of week) as to when the data is not available. This system visibility that this information provides is most critical when the system is in danger of a operating limit violation.}*
Alan Johnson Mirant #6	No May not be reading this correctly, but it seems unreasonable that if some data is missing during a 24-hour period that the RA is deemed to be non-compliant. Seems like there should be allowance for some sort of tolerance before being deemed non-compliant.
Richard Kafka Pepco #1	No In many cases, state estimator data are an adequate replacement for telemetered data.
Peter Burke ATC #1	No Same as response provided for Question 11.

	{ Level 1 non-compliance is written "up to 24 hours." This suggests that anything, even a single missed scan, qualifies as non-compliance. *As worded there is a significant amount of room for interpretation as to what constitutes non-compliance. If MISO loses the ability to scan one reading from one RTU for a day, this should not be considered a violation. If an RTU is lost for a day, a decision needs to be made as to how critical the data is to reliable operations. If an entire ICCP link is lost, 10 minutes may be too long. That will most likely be a judgement call based on the data supplied via the link that is down and system conditions at the time of the failure (sunny and 65 degrees versus thunderstorms rolling through the system). This needs more work before using it to assign fines for non-compliance.}*
Gerald Rheault Manitoba #1,3,5,6	No See comment in #11 *{Manitoba Hydro agrees with using a set of levels to define non-compliance. However the set of limits defined here may not be appropriate and should be related to the risk on the system. In the event of loss of data, perhaps a lower set of limits should be applied till the regular data can be re-established.}*
Lloyd Linke MAPP #2	No In 1 and 2, the words "for more than 3 hours" should be added after the word unavailable. Loss of telemetry for short periods is an unfortunate but fairly routine matter – with all that telemetry equipement in the field, it can't be expected that none of it ever has down-time. Level #1 should be 48 hours, level #2 should be 72 hours, and level #3 should have a 96 hour requirement. In many instances, 24 hours may be impractical especially with reliance on outside communication providers.
Kim Warren IMO #2	No Loss of a few telemetered quantites does not constitute an inability of the TOP to perform his "monitoring "(and analysis) functions if the State Estimator remains functional. (In fact State estimated quantities are deemed to be often more accurate than telemetered quantities .) Reporting of loss of actual telemetry should only be required when the TOP can no longer perform these functions. Furthermore, reporting each actual telemetry loss will create too much overhead for the TOP, the Regions and/or NERC. For a loss of the TOPs "monitoring function", a minimum time standard should be built into this compliance issue similar to "Exceeding an Operating Limit but Not a Reportable Violation" (question 5 & 6). There should be a time allowance for short term failures (i.e. < 30 minutes) of failure before reporting is required.
Fred Frederick Vectren #3	No At what point does telemetered data being unavailable constitute non-compliance (1 second, 1minute, 1 hour, etc.)?
Ken Skroback AL Elec Coop #4	No I think that there needs to be some way to accommodate short term data outages such as a loss of a transducer, an RTU failure or a telecom failure without causing non-compliance. Maybe a loss of data up to 24 hours would be compliant while those exceeding 24 hours are not. At some point everyone will have some equipment failures
Kathleen Goodman ISO NE #2	No This non-compliance matrix is completely inappropriate and ineffective. What is the scope of the telemetering unavailability required to achieve these levels of non-compliance? Is the goal here to achieve compliance with reliability standards or measure the amount of redundant telemetering equipment? It is clearly

	possible to maintain reliability absent some telemetering as long as an effective State Estimator is in use. Additionally, how much telemetering must be unavailable in order to be non-compliant: One point, five points, 5,000 points, etc.? Compliance should be measured against how many violations that an area had which were not cleared over a specified period of time. Only the RA should make the determination of how much telemetering is enough to have effective limit management.
No – Comments with recommendations for alternate levels of non-compliance	
John Blazekovich Exelon #1,3,5,6	No Should be revised to state that as long as limits are observable the TOP is compliant.
Raj Rana AEP #1,3,5,6	No If the requirement was changed to the TOP providing real time data, equipment limits, and model updates to their RA as specified by their RA, then the levels of non-compliance could be: (1) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for up to 24 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant). (2) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period of 24-36 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant). (3) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period of 36-48 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant). (4) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period greater than 48 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant), or the TOP did not station personnel at the Station or Plant as directed by the RA to provide this data while telemetry was being restored, or the TOP did not provide equipment limits as requested, or The TOP did not provide modeling update information until after the energization of new facilities. Note: the idea is that depending on system conditions, the RA may be able to rely on their previous operational planning analysis (next day analysis) for a day or so. However, if system conditions warrrant, the RA should have the authority to direct the TOP to man the station and if the TOP refuses that should be considered a significant infraction. Need to define “surrogate value” and “surrogate data”.
Comments with a mix of recommendations	
Joanne Borrell Ed Stein Ray Morella FirstEnergy #1, 3,6	No (1) Operating Security Limits are not usually monitored in real time. (2) There should not be a non-compliance at level 1 or 2 when a Reliability Coordinator (RC) or Transmission Operator (TOP) stations an operator at a substation or plant to monitor operating data if the telecommunications

ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2	equipment is not working. The existing standard forces a non-compliance whenever the telecommunications equipment is not working. (3) Requirements 201 and 202 are very similar. Requirement 201 applies to Reliability Coordinators. Requirement 202 applies to Transmission Operators. The requirements are duplicative. The standard should require system conditions to be monitored by either the Reliability Coordinator or the Transmission Operator, but not both of them. There is nothing wrong with both of them doing the monitoring if they so wish, but both of them should not be forced to do so. There is nothing wrong with a Transmission Operator delegating this responsibility to a Reliability Coordinator or a Reliability Coordinator delegating this responsibility to a Transmission Operator.
ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2	No Operating Security Limits are not usually monitored in real time. They are usually fixed values that are determined from operating studies. The only limits that might be monitored in real time are those that are dependent on actual weather conditions. It is not a requirement to determine Operating Security Limits based on weather conditions. Actual Operating Measurements are what need to be monitored in real time and compared to the Operating Security Limit. This standard should be updated to reflect the difference between a limit, a monitored value, and a monitored value that exceeds a limit. The description of Level 1 Non-compliance and Level 2 Non-compliance under 'Levels of Non-compliance for this Requirement' should be changed. Level 1 non-compliance should read 'Actual telemetered data or a surrogate for actual telemetered data needed for monitoring deviations from system operating limits was unavailable for 24 hours'. Level 2 non-compliance should read 'Actual telemetered data or a surrogate for actual telemetered data needed for monitoring deviations from system operating limits was unavailable for 48 hours'. There is nothing wrong with using a manual reading phoned in from a substition or using a value calculated from surrounding parameters. A value calculated from surrounding parameters might be better than an incorrect telemetered value. Some State Estimation systems use a value calculated from surrounding parameters instead of the telemetered value for certain circumstances.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No Level 4 is the most important metric for this Requirement and we feel that Level 1, 2 and 3 are unnecessary.
Comments indicating inconsistent use of terminology	
Alan Boesch NPPD #1	Yes/No The levels of non-compliance use the term "Actual telemetered data" while the footnote to the measures states that real-time, state estimated or calculated data is acceptable. There is at a minimum confusion with the way these terms are stated if not outright conflict. The standard needs to be consistient between the measurement and level of non-compliance.
Other comments	
Ed Riley CA ISO #2	The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.

Bob Burkard NCMPA1 # 3,4,5 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Francis Halpin BPA Bus Line #5,6 James Stanton Calpine #5 Joe Minkstein PG&E #5 Mike Miller Southern Co #1 Tony Jankowski We-Energies #4 Vern Colbert Dominion #1	Yes

3. Requirement 3 – Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating need to better define data	
Joseph Buch Madison #4	No The "data" that is to be rquested is not defined. As part of this standard one should be able to initially define a handful of key data elements that are required. These key elements would include the minimum information required to support reliability analyses. See question 47 for additional comments.
Fred Frederick Vectren #3	No The RA should utilitze exisitng data models whenever available. Collection of data should be coordinated with other data model building efforts to minimize duplication of effforts.
Gregory Campoli NY ISO #2	No The reference to notification of Compliance Monitor should not be specific to this or anyother standard and should be centralized in a compliance document. There also needs to be a clear distinction between data for modeling reliability analysis and data for real time system monitoring.
Raj Rana AEP #1,3,5,6	No There needs to be an industry minimum specification for the type of data required, similar to Appendix 4B "Electric System Security Data." This is required to ensure a minimum standard is set for the type and quality of reliability analysis that the RA's are to perform. Additionally, as worded this requirement is too vague and burdensome to the TOP. Basically, it implies that if the RA requests a piece of information, the TOP is to provide that information regardless of cost or actual benefit to the RA of having the data (though nowhere in this standard is there a requirement for them to explicitly do so). There should be a requirement that the data requested meet an industry reasonability standard for being classified as reliability related data. An update of Appendix 4B could accomplish this. Once the above commnet are addressed, then it is appropriate for the RA to specify and collect the data it needs, within the guidelines set forth in Appendix 4B, to maintian the models needed to support real time monitoring and reliability analysis. There needs to be a requirement in this standard for the BA, IA, Generator and TOP to provide this data to the RA on an ongoing basis and the associated penaties for them if they do not. What good is it for the RA to specify the data they need if the those who have the data are not required to continually supply it? Yes, this requirement does specify that the RA is to notifiy the Complinace Monitor if these entities do not provide the data requested. And yes, Requirement #8 requires the TOP to provide data no less then 7 days prior to energization of new facilities. But where is the requirement that says they must continually provide the data? Additionally, without an industry minimum standard similar in concept to Appendix 4B, how do we resolve the issue where a RA desires individual unit dispatch information but the Generator and BA only desire to provide zonal dispatch data? Also, the requirement of the RA to "collect the data it needs" is too vague. Also, the requirement of the RA specifying when to supply data is too vague. The data supplied should be data that is mutually agreed upon between the RA and respective party along with the timing of the request. The respective party should

	not have to obtain the same hardware and software as RA.
Peter Burke ATC #1	No There needs to be a mechanism in place to ensure that the RA is notified when system changes are made. This addresses the problems we've seen with lack of coordination between the people building/updating/etc.. facilities and the people responsible for the reliable operation of the system. However, there is some concern about the documentation required. The amount of documentation needed to track all of the possible changes in data may overwhelm the RA if it oversees a significant portion of the interconnection. What is meant by "it needs" in the statement "The Reliability Authority shall specify and collect the data it needs. . .?" A standard that imposes sanctions must be more specific about what is needed. In the statement, "The RA shall notify the Compliance Monitor. . .," there's no mention of time frame, no specification of how soon after failure the RA must notify the Compliance Monitor. This requirement should apply to Distribution Providers (DPs) in the same way it applies to BAs, Ias, Generators, TOPs, and "associated RAs."
Comments indicating need to refocus or add to requirements	
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	Yes/No The Requirement should be refocused to state that the RA needs to maintain accurate models and run studies to determine limits rather than directing the RA to collect the data it needs. There should be Requirement for the Transmission Owner, Generation Owner,LSE, and TOP to provide the RA with the data it needs for its studies. Under Requirements 6 and 7, minimum times are specified for provision of "monitoring" data provision. However, no similar minimum time line is stated for this Requirement. For consistency, a minimum time should also be stated. This time specification should provide sufficient time for the RA, etc., to perform data base modelling and development and confirmation of limits.
Susan Morris SERC #2	Yes The collection and processing of the data requirements could be a RA data management responsibility. Isn't there a need to develop a requirement to show that the data is used in the analysis? Instead of evaluating the supply of data, shouldn't the focus be on monitoring and assessing transmission reliability?
Comments indicating need to make changes to improve understanding	
Toni Timberman BPA #1	Yes/No In the text of the Requirement, the term "Generators" is not definitive enough to describe who is responsible for providing the "data". A Generator Operator may not have access to the dynamic model, and the Generator Owner may not have access to the real-time data. TOW needs to be added to the text of the requirement as one of the entities responsible for providing data to the RA. The words "Industry Accepted Format" and "technically accurate" should be deleted from the Measures, since an Industry Accepted Format does not exist, and at times Technically Accurate information is not available. There may not be generator test data available, so default data is used in the studies. Maybe "best

	available data" would be more realistic. Actually, I suggest that the text for measures 1 & 2 be modified to end at 'timeframe', and the rest of the sentence be deleted.
Ed Riley CA ISO #2	Yes Wording in the second paragraph of the Requirements should be changed to read "The RA shall specify when the data is to be supplied"
Joanne Borrell Ed Stein Ray Morella FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8, #5– 1, #2 – 2	Yes We recommend making one change to Measures 1 and 2. Currently Measures 1 and 2 state '---------- timeframe, and notation that data be technically accurate and complete'. We would rewrite these measures to state '------timeframe, and notation that data be accurate and complete'. What is the difference between accurate data and technically accurate date? Is technically accurate data better that accurate data? Is technically accurate date different that accurate data?
Doug Hils Cinergy #1	Yes Defination for technically accurate data needed.
Alan Johnson Mirant #6	Yes Note that this "industry accepted format" must be somehow defined by the industry (via either NERC or NAESB as appropriate), and not vary from RA to RA.
Yes – Comments indicating need to better define data	
Tony Jankowski We-Energies #4	Yes This Requirement should define all data required, not just changes.
Tom Petrich (5) PG&E #1	Yes There needs to be agreement among the various functions on the exact acceptable format and timing for data transfer to void unnecessary duplication of work. The generator function should provide data to the RA through the TOP, instead of to both the RA and the TOP, to avoid unintended inconsistency. Please add "the format and timing for data transfer should be coordinated and agreed to by the impacted parties".
Alan Boesch NPPD #1	Yes/No The standard should state what type of information may be required by the RA. A list similar to that in NERC Operating Policy 4 should be included and the RA could identify what data from this list is required. In addition the RA must make the request with sufficient time for the BA, IA, TOP or other RA to implement the data request.
Gerald Rheault Manitoba #1,3,5,6	Yes Manitoba Hydro agrees with the requirement to provide data to the RA. The accuracy of this data is not referenced here. Generally data should be accurate. There are all sorts of reasons why it may not be accurate and a process should be in place to keep improving the data and having a means to identify bad or questionable data.
George Bartlett Entergy Svcs 1	Yes However, we suggest the requirement be more general stating "..data it needs from all entities using the transmission system to maintain the ..", deleting the list of some but not all functions.
Francis Halpin BPA Bus Line #5,6	Yes The data the RA needs to collect in order to maintain models should be determined through some collaborative process involving the interested parties. The determination of what data to collect should not be based on subjective,

	arbitrary requests but rather on defensible criteria which are consistant across the industry. Confidentiality of third party market sensitive information may be an issue which needs to be addressed.
FRCC 6-#1, 4-#2, 1-#2	Yes However, as stated in an earlier question, this assumes that the initial data is obtained via requirements for certification. We believe that the requirement for specification of data should not depend on if it is initial data, or updates. However, the RA should have a process in place for collecting that data as new facilities come into service or change. The outcome seems to be just a restatement of the requirements. It does not add anything to the standard.
Vern Colbert Dominion #1	Yes Collection of data should be an RA responsibility
Thomas Pruitt Duke #1 Robert Reed TS (See List)	Yes The collection and processing of the data requirements could be a RA data management responsibility.
Kathleen Goodman ISO NE #2	Yes In general we agree with the requirement. However, it is up to the RA when and how the data will be collected and determined to be reliable. The primary issue we have with this requirement is the need to maintain a record of requested data and an identification of data not delivered.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	Yes A form needs to be developed to allow the different authorities to submit this data.

Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Lee Westbrook Oncor #1 Lee Xanthakos SCE&G #1 Lloyd Linke MAPP #2 Mike Miller Southern Co #1 Richard Kafka Pepco #1 Richard Schwarz PNSC #2 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 Todd Lucas (6?) Southern Co #1 William Smith Allegheny Pwr #1	Yes

4. Requirement 3 – Do you agree with these levels of non-compliance for this requirement?

No – Comments about inappropriate levels of non-compliance	
Lloyd Linke MAPP #2	No Level #1 and #2 non-compliance should be level #3 and level #4 non-compliance. Level #1 and level #2 should be changed to “Not Applicable”.
Joseph Buch Madison #4	No Without certain data the RA cannot perform one of it's primary functions, that of reliability ananlysis. I would support a level 4 non-compliance if the RA does not request these key items.
FRCC 6-#1, 4-#2, 1-#2	No The 2nd level is confusing. If data was not requested, perhaps it was not needed. It would seem to go back to what the specification is requiring to be provided. Perhaps a more important level would be if the RA requested data, did not receive it, and did not attempt any further to get it. In the 2nd level statement is says "or there was no record of specification". Isn't that essentially the same as the 1st level? Again, you did not ask about the compliance monitoring section. Please see comment stated earlier about self-certification and re-certification.
Francis Halpin BPA Bus Line #5,6	No Should this be a yes - no answer? What if a party was required to provide 10 parameters and provided 9 of the 10. The current levels would have this be a violation. Should there be two interim levels (3 and 4: over or under 85% of required data for example) which provide a bit of leniency? As written, the compliance levels don't agree with this portion of the standard they are too vague
Tom Petrich (5) PG&E #1	No Non-compliance Level 1 states “data specification(s) was not complete (missing either industry accepted format, timeframe or some data technically inaccurate or incomplete)”. It is not clear why the RA should be held in non-compliance for “technically inaccurate or incomplete” data submitted by other functions. We suggest deleting “or some data technically inaccurate or incomplete”.
Peter Burke ATC #1	No The phrase "some data technically inaccurate or incomplete" in level 1 would not apply to the RA. It would appear from the phrase "notation" in the "Measure(s)" section that level 1 compliance would hinge on whether or not the RA notified the supplier that the data should be accurate and complete, since that is the only part they have control over. This requirement penalizes the RA for not asking for data that it may not know it needs. For example, if a TOP energizes a new station, how is the RA supposed to know that the station exists? If the RA doesn't know, it can't request data and can't tell that it's missing. The RAs do need a standardized way of requesting and receiving updates to allow them to maintain their models in a timely manner. Not sure the penalties as defined get us there.
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	No Please see the first paragraph in our comment to Q14 above. *{The Requirement should be refocused to state that the RA needs to maintain accurate models and run studies to determine limits rather than directing the RA to collect the data it needs. There should be Requirement for the Transmission Owner, Generation Owner,LSE, and TOP to provide the RA with the data it needs*

	for its studies.} The RA typically has no control of whether the data is provided, but may have prudent and acceptable measures in place which require the data.
No – Comments indicating non-compliance doesn't address intent of requirement	
Lee Xanthakos SCE&G #1	There is not compliance level measuring what the RA actually does with the data. Also, the RA should only be measured on things they can affect. For example, would it be the RA's fault if on of its TOPs submitted data that was technically inaccurate or incomplete?
Todd Lucas (6?) Southern Co #1	No Regardless of format, either the RA receives the specified data or not.
Susan Morris SERC #2 Robert Reed TS (See List)	No Regardless of format, either the RA receives the data specified, or it does not. Shouldn't the RA show that the data is being used in the analysis?
Gregory Campoli NY ISO #2	No The compliance levels do not meet the intent of the requirement. The levels of compliance should focus on the RA maintenance of a valid system model representation and the collection of real time data.
Thomas Pruitt Duke #1	No These levels of compliance need additional work. For example, the RA could incur a level 1 violation if it requested only a single data item (of 1000+ items) incorrectly. Higher levels of non-compliance should indicate that an SOL has been misidentified or violated.
Comments about duplicate requirements for RA and TOP	
Joanne Borrell Ray Morella Ed Stein FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8, #5 – 1, #2 - 2	No Requirements 203 and 204 are very similar. Requirement 203 applies to Reliability Coordinators. Requirement 204 applies to Transmission Operators. The requirements are duplicative. The standard should require accurate models to be maintained by either the Reliability Coordinator or the Transmission Operator, but not both of them. There is nothing wrong with both of them maintaining accurate models if they so wish, but both of them should not be forced to do so. There is nothing wrong with a Transmission Operator delegating this responsibility to a Reliability Coordinator or a Reliability Coordinator delegating this responsibility to a Transmission Operator.
No - Other Comments	
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Kathleen Goodman ISO NE #2	See above *{ In general we agree with the requirement. However, it is up to the RA when and how the data will be collected and determined to be reliable. The primary issue we have with this requirement is the need to maintain a record of requested data and an identification of data not delivered.}*
Suggestions to improve wording	
Toni Timberman BPA #1	Yes/No Re-word #1 to remove "Industry accepted format" and "technically inaccurate". Very often the initial data specification will include what is perceived as necessary

	at the time, and later additional data will be requested. I don't think a data request from the RA could ever be considered 'complete', if that means that every bit of information has been specified that ever could possibly be needed. # 2 seems ok.
John Blazekovich Exelon #1,3,5,6	Yes Level 2 "specification" needs to be clarified, is it referring to when, what or both?
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	Yes See previous comment on the term "industry accepted format". We also felt that compliance monitoring doesn't belong in the requirement section of this document but may reside in another document pertaining to compliance.
Gerald Rheault Manitoba #1,3,5,6	Yes Manitoba Hydro believes that the industry accepted format should be more clearly defined in some Standard to ensure minimum acceptable level of quality.
David Kiguel Hydro One #1	Yes See previous comment on the term "industry accepted format". *{. . ."Industry Accepted Format" must not be overly perscritive and must not preclude mutually agreed upon data exchange methods between adjoining areas. Also how is it proposed to handle "proprietary data"?}* We also felt that compliance monitoring doesn't belong in the requirement section of this document but may reside in another document pertaining to compliance.
Yes - Other Comments	
Alan Boesch NPPD #1	Yes There is no compliance measure to track the RA's reporting data that was requested but not received.
Albert M. DiCaprio MAAC #2	The requirements for computing limits comes from the SAR on Facility Ratings et al. This Standard focuses on response and on Model maintenance (in real-time environment)
Darrel Richardson Illinois Power #1, 3	Yes However, this only addresses non-compliance on the part of the RA. There should be a similar non-compliance penalty that would apply to those to whom the request is made. Requirements 6, 7, 8 and 9 do not parallel entities responsibility to provide information on a day-to-day basis.
Roman Carter So Co Gen 3,5,6 (6 members)	Yes Is there a standard or requirement for the TOP, BA, or IA to provide this data to the RA so that the RA is not captive. There needs to be some compliance requirement on those entities to provide the data (Maybe a criteria requirement in the certification SARs).

Alan Johnson Mirant #6 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 Fred Frederick Vectren #3 George Bartlett Entergy Svcs 1 James Stanton Calpine #5 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Mike Miller Southern Co #1 Raj Rana AEP #1,3,5,6 Richard Kafka Pepco #1 Richard Schwarz PNSC #2 Stuart Goza TVA #1 Tony Jankowski We-Energies #4 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

5. Requirement 4 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirement is inappropriate for TOP	
Ken Skroback AL Elec Coop #4	No These assumptions work in the new NERC model but don't apply to a small utility (G & T) that is not separated and serves as its own control area. Since non separated utilities are prevented from receiving data from RA's, some of these studies are conducted by the RA using data provided by us to them. We currently don't receive data from other entities, although we provide data to them, and yet our study needs are being met. Since we have no current need for this data, we have no specifications and we have no record of correspondence. According to these measures we would be level 2 non-compliant, yet our study needs are met. I would like a statement in all three measures that states "as required" or "if needed".
Alan Johnson Mirant #6	No Consistent with the Functional Model, shouldn't the TOP request and receive the necessary data from the RA. It seems as if data requests are flowing in too many directions, which can result in models operating off of different data sets. Also, note that this "industry accepted format" must be somehow defined by the industry (via either NERC or NAESB as appropriate), and not vary from RA to RA.
Peter Burke ATC #1	No My understanding of the future relationship between RA and TOP may be incorrect (I think of the MISO as the RA and ATC as the TOP). However, I think that a TOP should not and will not span multiple RAs. In addition, the RA is given the ultimate responsibility for maintaining system security. Because of these reasons, the TOP should not be getting data from BA, IA, Generator or other TOPs. Rather, the TOP should be getting the data from the RA. So, the requirement should instead enforce that the TOP maintains an accounting of the data it receives from the RA. The majority of the data required by the TOP will be supplied by project/construction/system protection personnel from within the TOP organization unless the TOP is responsible for operation of other transmission systems. (ATC operating ALTW for example) WIll they be required to document internal correspondence required to get the data needed for monitoring? The reason for disagreeing with the requirement is that there's no incentive for the people who know about the changes to inform the TOP unless they work for the same company. If a neighboring utility adds equipment that impacts a different TOP, how does the TOP know this is happening and how does the TOP incent the other company to let the TOP know ahead of time? The opening statement refers to "associated TOPs" but nowhere defines the difference between an associated TOP and any other TOP. This requirement should apply to Distribution Providers (DPs) in the same way it applies to BAs, IAs, Generators, RAs, and "associated TOPs."
Albert M. DiCaprio MAAC #2	No See response to #9 *{ In the framework of the Functional Model, the TOP in its role as TOP does not have the resposibility for doing system analysis. To the extent that the TOP does local analysis that information must come from the RA (unless the TOP has its own agreements to access that data.)*
FRCC	No

6-#1, 4-#2, 1-#2	In requirement 3, the RA has already determined what data it needs for reliability analyses and system monitoring. It appears to be redundant to have the TOP do the same thing. Would it be more appropriate for the TOP to have a requirement to provide the requested data to the RA and then be measured in how they perform that?
Susan Morris SERC #2 Robert Reed TS (See List)	No Suggest measuring the TOP non-compliance at gathering and providing the data to the RA, rather than a redundant requirement for the TOP to collect the data.
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	No Same comments as for #14 above, but with focus on TOP. Also, the TOP does not need to collect any information from the IA. The IA has next-hour bilateral and market interchange information, but it's not of any use to the TOP. *{The Requirement should be refocused to state that the RA needs to maintain accurate models and run studies to determine limits rather than directing the RA to collect the data it needs. There should be Requirement for the Transmission Owner, Generation Owner,LSE, and TOP to provide the RA with the data it needs for its studies.}* Under Requirements 6 and 7, minimum times are specified for provision of "monitoring' data provision. However, no similar minimum time line is stated for this Requirement. For consistency, a minimum time should also be stated. This time specification should provide sufficient time for the RA, etc., to perform database modelling and development/confirmation of limits.
Richard Kafka Pepco #1	No RA builds and maintains models
Vern Colbert Dominion #1	No TOP is not required to gather and provide data to the RA.
No – Comments indicating requirement needs more details	
Tony Jankowski We-Energies #4	No This Requirement should define all data required, not just changes.
Alan Boesch NPPD #1	Yes/No The standard should state what type of information may be required by the TOP. A list similar to that in NERC Operating Policy 4 should be included and the TOP could identify what data from this list is required. In addition the TOP must make the request with sufficient time for the BA, IA, other TOP or RA to implement the data request.
Raj Rana AEP #1,3,5,6	No Comments: Unlike our position on Requirement #3, we support the vagueness of this requirement for the TOP. However, it needs to be reworded such as not to place a burden on the data providers. The data required by the TOP from the Generators will be specified in interconnection agreements between the TOP and Generator. These agreements are individually negotiated by each party, hence the Generator has the ability to minimize the burden of the data request and verify the need for the data via negotiations. Hence the support for keeping this requirement vague so as not to dictate the content of interconnection agreements. There may be an opportunity for an industry standard for the type of data to be provided by the BA and RA to the TOP, similar to Appendix 4B. This would help ensure that a TOP is only receiving data it really needs. Additionally, without an industry minimum standard similar in concept to Appendix

	4B, how do we resolve the issue where a TOP desires individual unit dispatch information but the Generator and BA only desire to provide zonal dispatch data? Also, the requirement of the TOP to "collect the data it needs" is too vague. Also, the requirement of the TOP specifying when to supply data is too vague. The data supplied should be data that is mutually agreed upon between the TOP and respective party along with the timing of the request. The respective party should not have to obtain the same hardware and software as TOP.
Joseph Buch Madison #4	No See comments on question 14. *{ The "data" that is to be rquested is not defined. As part of this standard one should be able to initially define a handful of key data elements that are required. These key elements would include the minimum information required to support reliability analyses. See question 47 for additional comments.}*
James Stanton Calpine #5	No The TOP should collect generator data from the RA.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No I recommend making one change to Measures 1 and 2. Currently Measures 1 and 2 state '---------- timeframe, and notation that data be technically accurate and complete'. I would rewrite these measures to state '------timeframe, and notation that data be accurate and complete'. What is the difference between accurate data and technically accurate date? Is technically accurate data better that accurate data? Is technically accurate data different that accurate data?
Yes – Comments with suggestions for word changes	
Joanne Borrell Ed Stein Ray Morella FirstEnergy #1, 3,6	Yes We recommend making one change to Measures 1 and 2. Currently Measures 1 and 2 state '---------- timeframe, and notation that data be technically accurate and complete'. I would rewrite these measures to state '------timeframe, and notation that data be accurate and complete'.
Toni Timberman BPA #1	Yes In the text of the Requirement, the term "Generators" is not definitive enough to describe who is responsible for providing the "data". A Generator Operator may not have access to the dynamic model, and the Generator Owner may not have access to the real-time data. TOW needs to be added to the text of the requirement as one of the entities responsible for providing data to the TOP. The words "Industry Accepted Format" and "technically accurate" should be deleted from the Measures, since an Industry Accepted Format does not exist, and at times Technically Accurate information is not available. There may not be generator test data available, so default data is used in the studies. Maybe "best available data" would be more realistic. Actually, I suggest that the text for measures 1 & 2 be modified to end at 'timeframe', and the rest of the sentence be deleted.
Yes – Other comments	
Mike Miller Southern Co #1	Yes coordination should be required so that TOP or RA doesn't fall out of step
Todd Lucas (6?) Southern Co #1	Yes Data coordination between the RA & TOP should be required also.

John Blazekovich Exelon #1,3,5,6	Yes Assuming data confidentiality will be addressed in future documents.
Kathleen Goodman ISO NE #2	Yes Same comments as 14 and 15 *{ In general we agree with the requirement. However, it is up to the RA when and how the data will be collected and determined to be reliable. The primary issue we have with this requirement is the need to maintain a record of requested data and an identification of data not delivered.}*
Yes – suggestions to change wording of requirements	
Tom Petrich (5) PG&E #1	Yes There needs to be agreement among the various functions on the exact acceptable format and timing for data transfer to avoid unnecessary duplication of work. The generator function should provide data to the RA through the TOP, instead of to both the RA and the TOP, to avoid unintended inconsistency. Please add "the format and timing for data transfer should be coordinated and agreed to by the impacted parties".
Gregory Campoli NY ISO #2	Yes/No The reference to notification of Compliance Monitor should not be specific to the standard and should be centralized in a compliance document. There also needs to be a clear distinction between data for modeling reliability analysis and for real time monitoring.
Gerald Rheault Manitoba #1,3,5,6	Yes same comment as in #14 but for TOP. *{ Manitoba Hydro agrees with the requirement to provide data to the RA. The accuracy of this data is not referenced here. Generally data should be accurate. There are all sorts of reasons why it may not be accurate and a process should be in place to keep improving the data and having a means to identify bad or questionable data.}*
George Bartlett Entergy Svcs 1	Yes However, we suggest the requirement be more general stating "..data it needs from all entities using the transmission system to maintain the ..", deleting the list of some but not all functions.
Francis Halpin BPA Bus Line #5,6	Yes A qualified YES: The determination of required information should not be done unilaterally by the TOP as this language implies. It should be determined through a collaborative process, and should protect market sensitive information to the greatest extent possible while still maintaining a reliable system.
Yes – Add form for data submission	
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	Yes A form needs to be developed to allow the different authorities to submit this data.
David Kiguel Hydro One #1	Yes A form needs to be developed to allow the different authorities to submit this data. Please see our comments under item # 44 (Regional and Interconection Differences). *{ In general we agree with the requirement. However, it is up to the RA when and how the data will be collected and determined to be reliable. The primary issue we have with this requirement is the need to maintain a record of requested data*

	and an identification of data not delivered.} *{There are differences in some Areas. For example, in Ontario the IMO is solely responsible to determine operating limits and to direct the operation of the IMO-Controlled Grid within these limits. The Transmission owners/operators operate thir respective systems under the IMO's direction. They only provide the IMO with equipment ratings which the IMO must respect. The transmission operators do not determine operating limits or monitor/report their compliance.}*
Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 Ed Riley CA ISO #2 Fred Frederick Vectren #3 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Lee Westbrook Oncor #1 Lee Xanthakos SCE&G #1 Lloyd Linke MAPP #2 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 Thomas Pruitt Duke #1 William Smith Allegheny Pwr #1	Yes

6. Requirement 4 - Do you agree with these levels of non-compliance for this requirement?

No – Comments indicating non-compliance doesn't address intent of requirement	
Gregory Campoli NY ISO #2	No The compliance levels do not meet the intent of the requirement. The levels of compliance should focus on the TOP's maintenance of a valid model representation and the collection of real time data.
Albert M. DiCaprio MAAC #2	No This Matrix is for data handling not for operations.
FRCC 6-#1, 4-#2, 1-#2	No Based on our comment to question 16, we would recommend that compliance for the TOP be built around providing the requested data to the RA.
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	Please see comment for Q 15. *{The Requirement should be refocused to state that the RA needs to maintain accurate models and run studies to determine limits rather than directing the RA to collect the data it needs. There should be Requirement for the Transmission Owner, Generation Owner,LSE, and TOP to provide the RA with the data it needs for its studies.}* *{The RA typically has no control of whether the data is provided, but may have prudent and acceptable measures in place which require the data.}*
Tom Petrich (5) PG&E #1	No Non-compliance Level 1 states "data specification(s) was not complete (missing either industry accepted format, timeframe or some data technically inaccurate or incomplete)". It is not clear why the TOP should be held in non-compliance for "technically inaccurate or incomplete" data submitted by other functions. We suggest deleting "or some data technically inaccurate or incomplete".
Peter Burke ATC #1	No This requirement penalizes the TOP for not asking for data that it may not know it needs. For example, if a neighboringTOP energizes a new station, how is the TOP supposed to know that the station exists? If the affected TOP doesn't know, it can't request data and can't tell that it's missing. The RAs should be receiving this information and should be required to disseminate to parties as needed. If this requirement is maintained as is, then the same comment made in response to question #15 applies. That is, the TOP should be non-compliant for not notifying suppliers of data that the information must be technically accurate and complete. The TOP has no control over whether or not the data supplied is accurate and complete and, therefore, level 1 compliance should be altered.
Lee Xanthakos SCE&G #1	No There is not compliance level measuring what the TOP actually does with the data. Also, the TOPs should only be measured on things they can affect. For example, would it be the TOP's fault if on of its BAs submitted data that was technically inaccurate or incomplete?
No – Comments about inappropriate levels of non-compliance	
Todd Lucas (6?) Southern Co #1	No Regardless of format, the TOP receives the specified data or not
Susan Morris SERC #2	No 1) Either the TOP provided the data, or it did not provide the data to the RA. 2)

Robert Reed TS (See List)	Compliance monitoring does not belong in the requirement section of this document. It may belong in another document pertaining to compliance.
Lloyd Linke MAPP #2	No Level #1 and #2 non-compliance should be level #3 and level #4 non-compliance. Level #1 and level #2 should be changed to "Not Applicable".
Francis Halpin BPA Bus Line #5,6	No There seems to be some middle ground between yes and no which should fill in levels 3 and 4 as above.
No – Other comments	
Ed Stein Ray Morella Joanne Borrell FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No Requirements 203 and 204 are very similar. Requirement 203 applies to Reliability Coordinators. Requirement 204 applies to Transmission Operators. The requirements are duplicative. The standard should require accurate models to be maintained by either the Reliability Coordinator or the Transmission Operator, but not both of them. There is nothing wrong with both of them maintaining accurate models if they so wish, but both of them should not be forced to do so. There is nothing wrong with a Transmission Operator delegating this responsibility to a Reliability Coordinator or a Reliability Coordinator delegating this responsibility to a Transmission Operator.
Ken Skroback AL Elec Coop #4	No See #16 above. *{ These assumptions work in the new NERC model but don't apply to a small utility (G & T) that is not separated and serves as its own control area. Since non separated utilities are prevented from receiving data from RA's, some of these studies are conducted by the RA using data provided by us to them. We currently don't receive data from other entities, although we provide data to them, and yet our study needs are being met. Since we have no current need for this data, we have no specifications and we have no record of correspondence. According to these measures we would be level 2 non-compliant, yet our study needs are met. I would like a statement in all three measures that states "as required" or "if needed".}*
Alan Johnson Mirant #6	No No, only because I don't concur with requirement 16.
Joseph Buch Madison #4	No See comments on question 15. *{The "data" that is to be rquested is not defined. As part of this standard one should be able to initially define a handful of key data elements that are required. These key elements would include the minimum information required to support reliability analyses. See question 47 for additional comments.}*
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Vern Colbert Dominion #1 Thomas Pruitt Duke #1 Richard Kafka Pepco #1	No

Yes – Comments suggesting better clarity needed	
Toni Timberman BPA #1	Yes/No Re-word #1 to remove “Industry accepted format” and “technically inaccurate”. Very often the initial data specification will include what is perceived as necessary at the time, and later additional data will be requested. I don’t think a data request from the RA could ever be considered ‘complete’, if that means that every bit of information has been specified that ever could possibly be needed. # 2 seems ok.
Gerald Rheault Manitoba #1,3,5,6	Yes Same comment as in #15. *{ Manitoba Hydro believes that the industry accepted format should be more clearly defined in some Standard to ensure minimum acceptable level of quality.}*
Yes – Comments about appropriateness of levels of non-compliance	
John Blazekovich Exelon #1,3,5,6	Yes Level 1 non compliance appears to be saying that anytime errors are found and corrected the entity correcting the errors must be found non-compliant for the period before the error was found. Is that the objective of this requirement?
Alan Boesch NPPD #1	Yes There is no compliance measure to track the TOP's reporting data that was requested but not received.
Yes – Other comments	
Roman Carter So Co Gen 3,5,6 (6 members)	Yes However, my comments to question #15 applies here also. *{ Is there a standard or requirement for the TOP, BA, or IA to provide this data to the RA so that the RA is not captive. There needs to be some compliance requirement on those entities to provide the data (Maybe a criteria requirement in the certification SARs).}*
Kathleen Goodman ISO NE #2	Yes Same comments as 14 and 15 *{In general we agree with the requirement. However, it is up to the RA when and how the data will be collected and determined to be reliable. The primary issue we have with this requirement is the need to maintain a record of requested data and an identification of data not delivered.}*
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	Yes See previous comment on the term "industry accepted format". We also felt that compliance monitoring doesn't belong in the requirement section of this document but may reside in another document pertaining to compliance. { . . Industry Accepted Format" must not be overly perscritive and must not preclude mutually agreed upon data exchange methods between adjoining areas. Also how is it proposed to handle "proprietary data"?}
Darrel Richardson Illinois Power #1, 3	Yes However, this only addresses non-compliance on the part of the TOP. There should be a similar non-compliance penalty that would apply to those to whom the request is made. Requirements 6, 7, 8 and 9 do not parallel entities responsibility to provide information on a day-to-day basis.

Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 Fred Frederick Vectren #3 George Bartlett Entergy Svcs 1 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Mike Miller Southern Co #1 Raj Rana AEP #1,3,5,6 Stuart Goza TVA #1 Tony Jankowski We-Energies #4 William Smith Allegheny Pwr #1	Yes

7. Requirement 5 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments regarding 7 days	
George Bartlett Entergy Svcs 1	No The RA should provide data when requested, not 7 days prior to energization. Please delete the phrase "no less than 7 days prior to the energization of new facilities or changes to existing facilities" from both the Requirements and the Measures.
Doug Hils Cinergy #1	No Model updates are extremely necessary, howerer there may be times that temporary changes are made to get some equipment back in service by reconfiguring the system. Would there be a violation if that equipment was placed back in service before the 7 day notification took place?
Bob Burkard NCMPA1 # 3,4,5	No Emergency changes to existing facilities should be exempted with a requirement to coordinate with the above entities.
Toni Timberman BPA #1	No The requirement for providing data should rest with the entity energizing the new equipment. Maybe should change the “no less than 7 days” language to say “as specified by the requesting entity, but no less than 7 days”. The RA may not legally be able to pass data that it received from one TOP to another TOP because of confidentiality requirements. A TOP that needs data from another TOP should make arrangements to get that data directly. The RA to RA link is ok. Also, data requests may not necessarily be limited to “new facilities or changes to existing facilities”.
Todd Lucas (6?) Southern Co #1	No A seven day lead time may not, in many cases, be sufficient lead time to incorporate new facilities or changes to existing facilities in models or perform revised analysis. There should also be a requirement to provide data in real time with measures related to timeliness and accuracy.
Roman Carter So Co Gen 3,5,6 (6 members)	No A 7 day lead time is not adequate. It would be better for coordination to require no less than 1 month lead time.
Francis Halpin BPA Bus Line #5,6	No 7 days is too short a period to fully evaluate the impact of new facilities on system. Six months seems a more reasonable time frame.
Alan Boesch NPPD #1	No Seven days prior to energization may be an unrealistic expectation. What type of data will the RA be providing to another RA or TOP on new or modified facilities? Will the data originate with the RA? If not the standard should be that the RA pass the data on within a specified period of time, but the requirement to provide the data belongs to the entity that owns the facility. Depending on the type of data you are talking about 7 days might be realistic.
Vern Colbert Dominion #1	No Seven days is not enough time.
No – Comments requesting more details in requirements	
Alan Johnson	No

Mirant #6	Agree conceptually, but need some clarification as to what is meant by "…changes to existing facilities". What types of changes are intended here?
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No What is the difference between accurate data and technically accurate date? Is technically accurate data better that accurate data? Is technically accurate data different than accurate data?
David Kiguel Hydro One #1	No It is not clear what type of data is being referred to in this requirement and clarification is needed if it is data derived from testing or some realtime operation or if it is engineering data, manufacturer's data, etc.
Kim Warren IMO #2	No The data needs to be defined before we can say yes. It could well be that the requested data is not readily available in the EMS or telemetered and may take much longer and could be costly if the providing RA did not feel it was important for his own purposes. See also comments in questions 20, 22, 24 and 26. To meet this requirement the RA needs the data sooner (say in 10 days). *{Requirement "5" states that the RA has to notify other associated RA's and TOP's no less than 7 days prior to energization of new/changed facilities. If the Balancing Authority has the same time line requirement and gives the minimum notice (7 days) this does not allow time for the RA to complete their requirements of passing on the information to the associated RA's and TOP's. Therefore I suggest increasing the Transmission Operating Authority (Interchange Authority)(Transmission Owner) (Generator Owners) time line to 10 days.}*
Thomas Pruitt Duke #1	No Define "associated". The language is not clear enough. For example, some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.
Susan Morris SERC #2 Robert Reed TS (See List)	No The language is not clear enough. For example some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.
Gregory Campoli NY ISO #2	No This requirement is unclear. There is confusion as to the type of data required. We agree if we assume that this requirement is for operational/scheduling information for performing a reliability assessment for operations planning. This does not work for data being provided for the first time from new facilities for planning studies.
Lloyd Linke MAPP #2	This is too vague - provide what data? Who is receiving and providing required data should also be clarified. Is this just tied to telemetry, or is it more broad than that? Depending on what data this is, 7 days may be too short. The industry will need to change its current business practices in order to comply

	with requirement.
No – Mixed comments	
Ray Morella Ed Stein Joanne Borrell FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No Change the Requirement from 'providing specified data no less than 7 days prior to the energization of new facilities' to 'providing specified data prior to the energization of new facilities'. (Change 'by an (associated) RA' to 'by another RA'. Less words, more descriptive. Change 'industry accepted format, timeframe, and technically accurate and complete' to 'industry accepted format, accurate and complete'. Timeframe is already specified in the standard. It doesn't need to be repeated. Delete the description of 'technically'.
FRCC 6-#1, 4-#2, 1-#2	No This requirement seems backwards. Shouldn't the TOP be the entity to provide data on new facilities to the RA? Also, submitting data 7 days prior to the energization of new facilities may not be long enough, especially for operational planning studies that may go out as far as 12 months. Perhaps NERC should not make this requirement, but leave it up to the Region, or Reliability Authority to determine what the appropriate notification time is.
Richard Schwarz PNSC #2	No The entity who owned the information should provide it to who needs it. The RA may be constrained due to confidentiality agreements from passing the data on to entities other than another RA. The RA should be able to request data at any time, not just prior to energization of new facilities.
Raj Rana AEP #1,3,5,6	No A RA should have to share data (modeling information) with their TOPs and any other RA that requests the information. The requirement needs to be clear that a TOP that desires data from an RA other then its own RA should ask their own RA for that data and then their RA would ask the other RA. The other RA (the RA with the data) then should have to notify and receive approval from the owner of the data (TOP or Generator) before providing the data for use by a non-associated TOP. Why 7 days? If the intent is to ensure the requestor knows about the new facilities and can update their model before energization of the new facilities, then more then 7 days notice should be required. If the intent is to ensure the requestor is recieiving the real-rime data associated with the new facilities, then 7 days may be adequate. Generally speaking, the TOP and Generator should be required to push data up to the RA, BA, and IA. The RA, BA, and IA should be required to specify the data they require within industry guidelines for reasonability.

Peter Burke ATC #1	No Three concerns with this requirement: 1. TOP should not make requests, per response to question #16. Rather, the RA should make the requests and then hand that data down to the TOP. 2. This requirement and the others like it for the BA, IA, Generator and Transmission Owner (TOW) all state that the data should be supplied "as requested". That is needed but there should also be a requirement that RAs, IAs, BAs, Generators and TOWs should supply this information to one another, without a request, if the data has to do with major/critical facilities (i.e. an entity may not realize they should make a request.) 3. The requirement directs that data must be provided no less than 7 days in advance. Some new facilities can be significant so that 7 days in advance is not enough time for receiving data. In some cases, data for significant new facilities would be needed a season or a year in advance. 4. Estimated or approximate data should be acceptable prior to energization. "As built" data would be provided when available or when required telemetry is complete.
Joseph Buch Madison #4	No See comments on question 26. *{ The standard does not spell out the "data" required. There are certain key items which at a minimum are necessary to perform reliability analysis. These should be enumerated and a part of this standard. See further comments in questions 14 and 47.}*
Fred Frederick Vectren #3	No
Yes – Comments about 7 days	
Kathleen Goodman ISO NE #2	Yes/No Seven days advanced notice may not be feasible for updates to real-time (EMS) systems due to the impact to operations during 'cut-over' activities. The time-frame requirement may vary widely depending on database requirements, support staffing, impact to real-time operations, etc. We believe the timing should be left to the RAs.
Lee Xanthakos SCE&G #1	Yes/No I agree with the requirement, but I question the value of making a hard 7-day rule. Why not 14 days or 21 days????
Gerald Rheault Manitoba #1,3,5,6	Yes Manitoba Hydro questions the 7 day period specified. Some processes would require significantly more lead time than that while some require less; how was the 7 day time chosen. The issue is one of supplying data on a timely basis. Isn't that covered by another requirement.
John Blazekovich Exelon #1,3,5,6	Yes Estimated data that describes equipment should be provided several months in advance of energization so that operational planning studies (12 months in advance) can be performed. Estimated data is probably adequate for the equipment energization provided as-built data is provided within a reasonable amount of time. We suggest one month after energization as a reasonable time frame for providing as-built data. "Estimated" versus "as-built" data should be defined.

Yes – Comments indicating more details needed	
Mike Miller Southern Co #1	Yes Energization is testing or commercial date, needs definition.
Tom Petrich (5) PG&E #1	Yes "Data" is open-ended. If the "data" refer to system parameters, then they would have to be calculated data and not "actual" or "state estimated". If the requirement is for test data, some of them may not be available until after energization. We suggest adding qualifications to limit the universe of "data" required.
Yes – Other comments	
Ed Riley CA ISO #2	Yes The text of the Requirement should be changed to read "The RA shall specify data to be provided"
Tony Jankowski We-Energies #4	Yes Concern: If this is real-time operational data, the communication links may take 30-90 days to establish. Requirement #3 and Requirement #4 require RA and TOP to request specific data requirements. This must be timely to achieve this Requirement #5.
Albert M. DiCaprio MAAC #2	Yes By allowing the RA to define the data required for its needs properly places the responsibility on the RA and avoids the problem of developing a standard that includes identifying specific data. The need to exclude the TOP is still noted.
Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Lee Westbrook Oncor #1 OLDTF (9?) 6 - #2 1 - #1,5 Richard Kafka Pepco #1 Sam Jones ERCOT #2 Stuart Goza TVA #1 William Smith Allegheny Pwr #1	Yes

8. Requirement 5 - Do you agree with these levels of non-compliance for this requirement?

No – Comments indicating identifying levels of non-compliance is premature/inappropriate	
Gregory Campoli NY ISO #2	No Premature to define levels of non compliance
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Kim Warren IMO #2	No The data needs to be defined before we can say yes. It could well be that the requested data is not readily available in the EMS or telemetered and may take much longer and could be costly if the providing RA did not feel it was important for his own purposes.
No – Comments indicating non-compliance needs to better match requirements	
Joseph Buch Madison #4	No See comments on question 27. *{ There is only 1 level of non-compliance, level 4 and no definition of the data required. If certain key items of "data" were defined as part of the standard and they were not provided, a level 4 non-compliance would be appropriate. If these items were provided, however they were only provided 2 days before energization a level 3 non-compliance might be appropriate. Similarily, if the data on the key items were provided 3 to 7 days before energization a level 2 non-compliance might be appropriate. See further comments in question 47.}*
John Blazekovich Exelon #1,3,5,6	No Level of non-compliance should be tied to the impact of changes to the system. As stated the level of non-compliance is equal for major and minor changes in transmission system configuration, levels of non-compliance should recognize the difference. Non compliance should be tied to the standard time frame for supplying data. Data maintenance is an on-going activity, the drafting team should recognize and address data maintenance and compliance implementation.
Francis Halpin BPA Bus Line #5,6	No There should be levels of compliance based upon notification and collaboration with affected parties
FRCC 6-#1, 4-#2, 1-#2	No Requirements 4 and 5 need to be combined and focus on the TOP providing data to the RA when appropriate or requested. The RA needs to have a process in place for obtaining the data it needs which would include the timeframe for submitting data as well as the specification of what data is needed.
Todd Lucas (6?)	No The RA should be required to cooperate with entities requesting data and should

Southern Co #1	provide the "agreed upon" data in a timely manner. The RA should not be required to blindly provide data without an understanding of the need.
George Bartlett Entergy Svcs 1	No There probably should be more than one level of non-compliance and not supplying requested data should not be the highest level of violation. The first level should be "Data for new/revised facilities not provided to TOPs and associated RAs when the data was . The second level should be "Data for new/revised facilities was not provided as requested". The fourth level of non-compliance should be "Data not supplied to TOPs or associated RAs resulted in SOL violations".
No – Comments indicating levels are inappropriate	
Alan Johnson Mirant #6	No Not sure that non-compliance should jump right to level 4.
Alan Boesch NPPD #1	No The level of non-compliance does not seem appropriate. Start at level one and then escalate up through the different levels depending on how late it is seems to be more appropriate.
Susan Morris SERC #2 Robert Reed TS (See List)	No In general there should be at least two levels of non-compliance identified. Why does the data have to be requested? How often should an entity request data? Should data requests be a one time declaration in writing asking for data on new facilities? Is this requirement needed since there is not enough detail to assess non-compliance?
Lee Xanthakos SCE&G #1	No Seems like there should be more than one level of non-compliance. What if the data was incomplete for example? Shouldn't merit some non-compliance penalty?
Raj Rana AEP #1,3,5,6	No What if they provide the data, but it is 3 days prior to energization? Or they provide it 3 days after energization? Or 3 weeks after energization? What if they provide only partial data? Or only incorrect data? Are all these non-compliance events truly equal?
Peter Burke ATC #1	No Levels of non-compliance would be better if defined something like: 1. Data for new/revised facilities was provided less than seven days prior to energization. 2. Data for new/revised facilities was provided before one month after but not before energization. 3. Data for new/revised facilities was provided before three months but not before one month after energization. 4. Data for new/revised facilities was not provided within three months after energization.
No – Comments suggesting additional changes to requirements	
Karl Kohlrus CWL&P #5	No There should be a reminder sent out if the data is not sent initially before going directly to Level 4.

Thomas Pruitt Duke #1 Fred Frederick Vectren #3	No
Yes – Comments suggesting additional changes to requirements	
Richard Schwarz PNSC #2	Yes This requirement should be for any data request, not just for new or revised facilities.
Toni Timberman BPA #1	Yes Again, a data request may not necessarily pertain to new or revised facilities. Requirement must be made more generic.
Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2 Ed Stein Firstenergy Sol #6 Gerald Rheault Manitoba #1,3,5,6 James Stanton Calpine #5 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 Kathleen Goodman ISO NE #2 Mike Miller Southern Co #1 OLDTF (9?) 6 - #2 1 - #1,5 Ray Morella FirstEnergy #1 Richard Kafka Pepco #1 Roman Carter So Co Gen 3,5,6 (6 members) Sam Jones ERCOT #2 Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 Tony Jankowski We-Energies #4 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

9. Requirement 6 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments about appropriateness of requirement	
Albert M. DiCaprio MAAC #2	No The Functional Model only assigns the BA responsibility for Balancing not for facility data.
Richard Kafka Pepco #1	No BA is not responsible for facility data
Tony Jankowski We-Energies #4	No The RA/TOP should already have all required data as stated in Requirement #3 and Requirement #4.
Tom Petrich (5) PG&E #1	We are not sure what kind of data the BA function can provide before energization. An example would be helpful.
John Blazekovich Exelon #1,3,5,6	No Do not understand the need for this requirement
No – Comments about scope of requirement	
FRCC 6-#1, 4-#2, 1-#2	No This requirement should not just focus on new facilities or changes to exisiting facilities. As we have stated for the TOP, the BA should have requirements for providing the data to the RA as specified by the RA and in the timeframe the RA needs.
Kim Warren IMO #2	No Requirement "5" states that the RA has to notify other associated RA's and TOP's no less than 7 days prior to energization of new/changed facilities. If the Balancing Authority has the same time line requirement and gives the minimum notice (7 days) this does not allow time for the RA to complete their requirements of passing on the information to the associated RA's and TOP's. Therefore I suggest increasing the Transmission Operating Authority time line to 10 days.
Peter Burke ATC #1	No Same concerns as expressed in reply to Question 18. One entity may not know it should request information from another entity. There should also be a requirement on the entity where the change is occurring to provide that data, unrequested, to the other entities if it involves major/critical facilities.
No – Comments about 7 days	
Francis Halpin BPA Bus Line #5,6	No 7 days is too short a period to fully evaluate the impact of new facilities on system. Six months seems a more reasonable time frame.
Doug Hils Cinergy #1	No Model updates are extremely necessary, howerer there may be times that temporary changes are made to get some equipment back in service by reconfiguring the system. Would there be a violation if that equipment was placed back in service before the 7 day notification took place?
Vern Colbert Dominion #1	No Seven days is not enough time.
Roman Carter So Co Gen 3,5,6	No More lead time should be required such as 1 month.

(6 members)	
Todd Lucas (6?) Southern Co #1	No See comments for #18. *{ A seven day lead time may not, in many cases, be sufficient lead time to incorporate new facilities or changes to existing facilities in models or perform revised analysis. There should also be a requirement to provide data in real time with measures related to timeliness and accuracy.}*
George Bartlett Entergy Svcs 1	No The BA should provide data when requested, not 7 days prior to energization. Please delete the phrase "no less than 7 days prior to the energization of new facilities or changes to existing facilities" from both the Requirements and the Measures.
Bob Burkard NCMPA1 # 3,4,5	No Emergency changes to existing facilities should be exempted with a requirement to coordinate with the above entities.
Alan Boesch NPPD #1	No Seven days prior to energization may be an unrealistic expectation. What type of data will the BA be providing to an associated RA or TOP on new or modified facilities? Will the data originate with the BA? If not the standard should be that the BA pass the data on within a specified period of time, but the requirement to provide the data belongs to the entity that owns the facility. Depending on the type of data you are talking about 7 days might be realistic.
Kathleen Goodman ISO NE #2	Yes/No Seven days advanced notice may not be feasible for updates to real-time (EMS) systems due to the impact to operations during 'cut-over' activities. The time-frame requirement may vary widely depending on database requirements, support staffing, impact to real-time operations, etc. We believe the timing should be left to the RAs.
No – Comments asking for more details in requirement	
Alan Johnson Mirant #6	No Agree conceptually, but need some clarification as to what is meant by "…changes to existing facilities". What types of changes are intended here?
Raj Rana AEP #1,3,5,6	No It is not clear whether the BA must supply this data to any requesting RA or just ot the RA that has jurisdication over the BA's area. We propose that the BA should only have to supply this information to his RA. Other RA's should contact the BA's RA for the information. Further, we suggest this requirement be changed similar to our comments provided on Requirement #2 under our response to question #13. *{ If the requirement was changed to the TOP providing real time data, equipment limits, and model updates to their RA as specified by their RA, then the levels of non-compliance could be:* *1) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for up to 24 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant).* *2) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system*

	operating limits for a period of 24-36 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant). *3) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period of 36-48 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant).* *4) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period greater than 48 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant), or* *the TOP did not station personnel at the Station or Plant as directed by the RA to provide this data while telemetry was being restored, or* *the TOP did not provide equipment limits as requested, or* *The TOP did not provide modeling update information until after the energization of new facilities.* *Note: the idea is that depending on system conditions, the RA may be able to rely on their previous operational planning analysis (next day analysis) for a day or so. However, if system conditions warrrant, the RA should have the authority to direct the TOP to man the station and if the TOP refuses that should be considered a significant infraction.* *Need to define "surrogate value" and "surrogate data". }*
Guy Zito (See List) NPCC #2 – 2, NPCC #1 – 5 David Kiguel Hydro One #1	No It is not clear what type of data is being referred to in this requirement and clarification is needed if it is data derived from testing or some realtime operation or if it is engineering data, manufacturer's data, etc.
Joseph Buch Madison #4	No See comments on question 26. *{ The standard does not spell out the "data" required. There are certain key items which at a minimum are necessary to perform reliability analysis. These should be enumerated and a part of this standard. See further comments in questions 14 and 47.}*
Gregory Campoli NY ISO #2	No This requirement is unclear. There is confusion as to the type of data. We agree if we assume that this requirement is for operational/scheduling information for performing a reliability assessment for operation planning. This does not work for data being provided for the first time from new facilities such as engineering data.
Thomas Pruitt Duke #1 Susan Morris SERC #2 Robert Reed TS (See List)	No The language is not clear enough. See number 18 comments, it is not apparent the types of data being referred to in this requirement. Clarification is needed to specify the required data - from testing, real-time operation, engineering specifications, manufacturer's specifications, etc. *{ For example some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.}*

No –Mixed comments	
Lloyd Linke MAPP #2	This is too vague - provide what data? Who is receiving and providing required data should also be clarified. Is this just tied to telemetry, or is it more broad than that? Depending on what data this is, 7 days may be too short. The industry will need to change its current business practices in order to comply with requirement
Ray Morella Joanne Borrell Ed Stein FirstEnergy #1, 3, 6	No (1) Change the Requirement from 'providing specified data no less than 7 days prior to the energization of new facilities' to 'providing specified data prior to the energization of new facilities'. (2) not sure if 'shall provide data as specified by an (associated) Reliability Coordinator' means that any Reliability Coordinator can request the data or that only the Reliability Coordinator that has jurisdiction over the area operated by the BA can request the data. The standard needs to be clear on which meaning is correct. (3) Change 'industry accepted format, timeframe, and technically accurate and complete' to 'industry accepted format, accurate and complete'. Timeframe is already specified in the standard. It doesn't need to be repeated. Delete the description of 'technically'.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No Change the Requirement from (providing specified data no less than 7 days prior to the energization of new facilities) to (providing specified data prior to the energization of new facilities). I can just see someone delaying the installation of a needed facility for 7 days because they didn't want to get a non-compliance. There was not complete agreement on this comment. Seven companies voted in favor of this comment. One company voted against this comment. I'm not sure if 'shall provide data as specified by an (associated) Reliability Coordinator' means that any Reliability Coordinator can request the data or that only the Reliability Coordinator that has jurisdiction over the area operated by the BA can request the data. The standard needs to be clear on which meaning is correct. Change 'industry accepted format, timeframe, and technically accurate and complete' to 'industry accepted format, accurate and complete'. Timeframe is already specified in the standard. It doesn't need to be repeated. Delete the description of 'technically'. What is the difference between accurate data and technically accurate date? Is technically accurate data better that accurate data? Is technically accurate data different than accurate data?
Fred Frederick Vectren #3	No
Yes – Comments about 7 days	
Lee Xanthakos SCE&G #1	See comments for Requirement 5 *{ I agree with the requirement, but I question the value of making a hard 7-day rule. Why not 14 days or 21 days????}*
Gerald Rheault Manitoba #1,3,5,6	Yes See comment for #18. *{ Manitoba Hydro questions the 7 day period specified. Some processes would require significantly more lead time than that while some require less; how was the 7 day time chosen. The issue is one of supplying data on a timely basis. Isn't that covered by another requirement.}*
Sam Jones	Yes

ERCOT #2OLDTF (9?) 6 - #2 1 - #1,5	The timing of this requirement conflicts with Requirement 5. That is, the seven days does not leave the RA any time to complete its obligations under requirement 5.
Toni Timberman BPA #1	Yes The language “no less than 7 days prior to the energization of new facilities or changes to existing facilities” is not relevant to BA data, since the BA is not normally involved with new facilities and the data requested from a BA is very different than from the other functions.
Richard Schwarz PNSC #2	Yes Should pertain to any facilities at any time with the timeframe defined by the RA according to its needs.

Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Ed Riley CA ISO #2 James Stanton Calpine #5 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Lee Westbrook Oncor #1 Mike Miller Southern Co #1 Stuart Goza TVA #1 William Smith Allegheny Pwr #1	Yes

10. Requirement 6 - Do you agree with these levels of non-compliance for this requirement?

No – Comments about appropriateness of levels of non-compliance	
Raj Rana AEP #1,3,5,6	No What if they provide the data, but it is 3 days prior to energization? Or they provide it 3 days after energization? Or 3 weeks after energization? What if they provide only partial data? Or only incorrect data? Are all these non-compliance events truly equal?
George Bartlett Entergy Svcs 1	No There probably should be more than one level of non-compliance and not supplying requested data should not be the highest level of violation. The first level should be "Data for new/revised facilities not provided to TOPs and associated RAs when the data was . The second level should be "Data for new/revised facilities was not provided as requested". The fourth level of non-compliance should be "Data not supplied to TOPs or associated RAs resulted in SOL violations".
Francis Halpin BPA Bus Line #5,6	No There should be levels of compliance based upon notification and calaboration with affected parties
Alan Johnson Mirant #6	No Not sure that non-compliance should jump right to level 4.
Alan Boesch NPPD #1	No The level of non-compliance does not seem appropriate. Starting at level one and then esculate up through the the different levels depending on how late it is seems to be more appropriate.
Peter Burke ATC #1	No Why do we go straight to level 4? Is it assumed that things are already working properly and that the penalty is being applied due to a lapse? If there are fines for non-compliance, are people incented to avoid paying fines by not energizing new equipment that's needed for reliability? Levels of non-compliance would be better if defined something like: 1. Data for new/revised facilities was provided less than seven days prior to energization. 2. Data for new/revised facilities was provided before one month after but not before energization. 3. Data for new/revised facilities was provided before three months but not before one month after energization. 4. Data for new/revised facilities was not provided within three months after energization.
Joseph Buch Madison #4	No See comments on question 27. *{ There is only 1 level of non-compliance, level 4 and no definition of the data required. If certain key items of "data" were defined as part of the standard and they were not provided, a level 4 non-compliance would be appropriate. If these items were provided, however they were only provided 2 days before energization a level 3 non-compliance might be appropriate. Similarily, if the data on the key items were provided 3 to 7 days before energization a level 2 non-compliance might be appropriate. See further comments in question 47.}*

Lee Xanthakos SCE&G #1	See comments for requirement 5 *{ Seems like there should be more than one level of non-compliance. What if the data was incomplete for example? Shouldn't merit some non-compliance penalty?}*
FRCC 6-#1, 4-#2, 1-#2	Perhaps there should be several levels that are time dependent. See earlier comments regarding self certification and re-certification. *{ Section 201 (e) states that the RA will demonstrate compliance thru the self certification process with re-certification on a schedule established by the compliance monitor. We do not agree with the re-certification part of this statement. The compliance monitoring of this standard is not for certification on an entity performing a function.* *There is no need for any re-certification in connection with this standard. The self certification process is just a way for an entity to provide information to the compliance monitor that will be validated thru spot reviews etc. The re-certification statement appears in every compliance section in this document. It needs to be removed throughout.}*
No – Comments indicating addressing non-compliance now is premature	
Thomas Pruitt Duke #1Todd Lucas (6?) Southern Co #1Susan Morris SERC #2 Robert Reed TS (See List)	No Until numbers 18 and 20 are resolved (clarification of language) the levels of non-compliance cannot be determined. In general there should be at least two levels of non-compliance identified..
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
No – Comments indicating an expansion of the requirements is needed	
Karl Kohlrus CWL&P #5	No There should be a reminder sent out if the data is not sent initially before going directly to Level 4.
John Blazekovich Exelon #1,3,5,6 Albert M. DiCaprio MAAC #2 Tony Jankowski We-Energies #4 Fred Frederick Vectren #3	No
Toni Timberman BPA #1	Yes delete new/revised facilities

Richard Schwarz PNSC #2	Yes Should pertain to all facilities

Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2 Ed Stein Firstenergy Sol #6 Gerald Rheault Manitoba #1,3,5,6 James Stanton Calpine #5 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 Kathleen Goodman ISO NE #2 Kim Warren IMO #2 Mike Miller Southern Co #1 Ray Morella FirstEnergy #1 Richard Kafka Pepco #1 Roman Carter So Co Gen 3,5,6 (6 members) Sam Jones ERCOT #2 Stuart Goza TVA #1 Tom Petrich (5) PG&E #1	Yes

11. Requirement 7 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating not appropriate for the IA	
Francis Halpin BPA Bus Line #5,6	No Responsibilities relegated to the IA in the Functional Model are related to the implementation of Interchange Schedules; they do not include responsibilities related to this requirement.
Albert M. DiCaprio MAAC #2	No IA is not involved with facility data – (only Interchange Schedules)
Peter Burke ATC #1	No Same responses as provided to Questions 18 & 20. *{{A seven day lead time may not, in many cases, be sufficient lead time to incorporate new facilities or changes to existing facilities in models or perform revised analysis. There should also be a requirement to provide data in real time with measures related to timeliness and accuracy.}* (What new facilities would an IA be placing into service?)
Sam Jones ERCOT #2OLDTF (9?) 6 - #2 1 - #1,5	No This Requirement makes no sense. The IA authorizes next-hour bilateral Transactions and Market dispatch that are ready for physical implementation.
Vern Colbert Dominion #1	No It is not clear what data the IA would be required to provide.
Richard Kafka Pepco #1	No IA is responsible for interchange information, not facility data
Tony Jankowski We-Energies #4	No The RA/TOP should already have all required data as stated in Requirement #3 and Requirement #4.
Tom Petrich (5) PG&E #1	We are not sure what kind of data the IA function can provide before energization. An example would be helpful.
FRCC 6-#1, 4-#2, 1-#2	No First of all, the information the IA will be providing the RA will deal with interchange schedules. We are not sure what other information the IA will be giving the RA or TOP for that matter that will involve new facilities. Would it be more appropriate to have the requirement center around the IA providing the interchange information to the RA in a timely manner so that the impact of the interchange schedules can be considered in the reliability analyses?
John Blazekovich Exelon #1,3,5,6	No Do not understand the need for this requirement
No – Comments indicating 7 days is not realistic	
Roman Carter So Co Gen 3,5,6 (6 members)	No More time such as 1 month should be considered.
Alan Boesch	No

NPPD #1	Seven days prior to energization may be an unrealistic expectation. What type of data will the IA be providing to an associated RA or TOP on new or modified facilities? Will the data originate with the IA? If not the standard should be that the IA pass the data on within a specified period of time, but the requirement to provide the data belongs to the entity that owns the facility. Depending on the type of data you are talking about 7 days might be realistic.
George Bartlett Entergy Svcs 1	No The IA should provide data when requested, not 7 days prior to energization. Please delete the phrase "no less than 7 days prior to the energization of new facilities or changes to existing facilities" from both the Requirements and the Measures.
Doug Hils Cinergy #1	No In general I agree with the requirement. Model updates are extremely necessary, howerer there may be times that temporary changes are made to get some equipment back in service by reconfiguring the system. Would there be a violation if that equipment was placed back in service before the 7 day notification took place?
Kim Warren IMO #2	No Requirement "5" states that the RA has to notify other associated RA's and TOP's no less than 7 days prior to energization of new/changed facilities. If the Interchange Authority has the same time line requirement and gives the minimum notice (7 days) this does not allow time for the RA to complete their requirements of passing on the information to the associated RA's and TOP's. Therefore I suggest increasing the Interchange Authority time line to 10 days.
Lee Xanthakos SCE&G #1	See comments for requirement 5 *{ I agree with the requirement, but I question the value of making a hard 7-day rule. Why not 14 days or 21 days????}*
No - Comments indicating requirement needs more details	
Thomas Pruitt Duke #1 Susan Morris SERC #2 Robert Reed TS (See List)	No Clarification language is necessary. Same as 18, 20, 21 above. *{The language is not clear enough. For example some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.}* *{The language is not clear enough. See number 18 comments, it is not apparent the types of data being referred to in this requirement. Clarification is needed to specify the required data - from testing, real-time operation, engineering specifications, manufacturer's specifications, etc.}* *{Until numbers 18 and 20 are resolved (clarification of language) the levels of non-compliance cannot be determined. In general there should be at least two levels of non-compliance identified.}*
Raj Rana AEP #1,3,5,6	No It is not clear whether the IA must supply this data to any requesting RA or just ot the RA that has jurisdication over the IA's area. We propose that the IA should only have to supply this information to his RA. Other RA's should contact the IA's RA for the information. We suggest this requirement be changed similar to our comments provided on

	Requirement #2 under our response to question #13.
Lloyd Linke MAPP #2	This is too vague - provide what data? Who is receiving and providing required data should also be clarified. Is this just tied to telemetry, or is it more broad than that? Depending on what data this is, 7 days may be too short. The industry will need to change its current business practices in order to comply with requirement
Kim Warren IMO #2	No Requirement "5" states that the RA has to notify other associated RA's and TOP's no less than 7 days prior to energization of new/changed facilities. If the Interchange Authority has the same time line requirement and gives the minimum notice (7 days) this does not allow time for the RA to complete their requirements of passing on the information to the associated RA's and TOP's. Therefore I suggest increasing the Interchange Authority time line to 10 days.
Ray Morella Joanne Borrell Ed Stein FirstEnergy #1,3,6 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No Change the Requirement from 'providing specified data no less than 7 days prior to the energization of new facilities' to 'providing specified data prior to the energization of new facilities'. not sure if 'shall provide data as specified by an (associated) Reliability Coordinator' means that any Reliability Coordinator can request the data or that only the Reliability Coordinator that has jurisdiction over the area operated by the IA can request the data. The standard needs to be clear on which meaning is correct. Change 'industry accepted format, timeframe, and technically accurate and complete' to 'industry accepted format, accurate and complete'. Timeframe is already specified in the standard. It doesn't need to be repeated. Delete the description of 'technically'.
No – Comments indicating additional details needed in requirements	
Joseph Buch Madison #4	No See comments on question 26. *{ The standard does not spell out the "data" required. There are certain key items which at a minimum are necessary to perform reliability analysis. These should be enumerated and a part of this standard. See further comments in questions 14 and 47.}*
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No What is the difference between accurate data and technically accurate date? Is technically accurate data better that accurate data? Is technically accurate data different than accurate data?
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	No It is not clear what type of data is being referred to in this requirement and clarification is needed if it is data derived from testing or some realtime operation or if it is engineering data, manufacturer's data, etc.
Gregory Campoli NY ISO #2 David Kiguel Hydro One #1	No This requirement is unclear. There is confusion as to the type of data. We agree if we assume that this requirement is for operational/scheduling information for performing a reliability assessment for operations planning. This does not work for data being provided for the first time from new facilities such as engineering data.
Alan Johnson Mirant #6	No Agree conceptually, but need some clarification as to what is meant by "…changes to existing facilities". What types of changes are intended here?

No – Comments suggestion changing the scope of the requirement	
Bob Burkard NCMPA1 # 3,4,5	No Emergency changes to existing facilities should be exempted with a requirement to coordinate with the above entities.
Fred Frederick Vectren #3	No
Yes – Comments about 7 days	
Kathleen Goodman ISO NE #2	Yes/No Seven days advanced notice may not be feasible for updates to real-time (EMS) systems due to the impact to operations during 'cut-over' activities. The time-frame requirement may vary widely depending on database requirements, support staffing, impact to real-time operations, etc. We believe the timing should be left to the RAs.
Gerald Rheault Manitoba #1,3,5,6	Yes See comment in #18. *{ Manitoba Hydro questions the 7 day period specified. Some processes would require significantly more lead time than that while some require less; how was the 7 day time chosen. The issue is one of supplying data on a timely basis. Isn't that covered by another requirement.}*
Yes – comments about appropriateness of this requirement	
Todd Lucas (6?) Southern Co #1	Yes See # 18 comments. {*A seven day lead time may not, in many cases, be sufficient lead time to incorporate new facilities or changes to existing facilities in models or perform revised analysis. There should also be a requirement to provide data in real time with measures related to timeliness and accuracy.}* Also, is this requirement #7 necessary? What facilities, (lines, generators, etc.), will an Interchange Authority have that requires energization?
Toni Timberman BPA #1	Yes The language "no less than 7 days prior to the energization of new facilities or changes to existing facilities" is not relevant to IA data, since the IA is not normally involved with new facilities and the data requested from a IA is very different than from the other functions.
Yes – comments suggesting expansion of requirement	
Richard Schwarz PNSC #2	Yes This requirement should be for any data request, not just for new or revised facilities. Should pertain to all facilities. The timeframe should be specified by the RA in accordance with its own needs.

Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Ed Riley CA ISO #2 James Stanton Calpine #5 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Lee Westbrook Oncor #1 Mike Miller Southern Co #1 Stuart Goza TVA #1 William Smith Allegheny Pwr #1	Yes

12. Requirement 7 - Do you agree with these levels of non-compliance for this requirement?

No – Comments restating that requirement is inappropriate	
Francis Halpin BPA Bus Line #5,6	No IA's do not normally have the information referred to in the requirements.
FRCC 6-#1, 4-#2, 1-#2	No Can not comment on this as we believe the requirement for the IA is not accurate.
Sam Jones ERCOT #2	See comments to #22 above. *{ This Requirement makes no sense. The IA authorizes next-hour bilateral Transactions and Market dispatch that are ready for physical implementation.}*
No – Comments indicating addressing non-compliance is premature	
Todd Lucas (6?) Southern Co #1	No Until numbers 18, 20, & 22 are resolved the levels of non-compliance cannot be determined.
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
Susan Morris SERC #2	In general there should be at least two levels of non-compliance identified.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
No – Comments indicating more details needed	
Thomas Pruitt Duke #1 Susan Morris SERC #2 Robert Reed TS (See List)	See 22. *{The language is not clear enough. For example some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.}* *{The language is not clear enough. See number 18 comments, it is not apparent the types of data being referred to in this requirement. Clarification is needed to specify the required data - from testing, real-time operation, engineering specifications, manufacturer's specifications, etc.}* *{Until numbers 18 and 20 are resolved (clarification of language) the levels of non-compliance cannot be determined. In general there should be at least two levels of non-compliance identified.}*
Raj Rana AEP #1,3,5,6	No What if they provide the data, but it is 3 days prior to energization? Or they provide it 3 days after energization? Or 3 weeks after energization? What if they provide only partial data? Or only incorrect data? Are all these non-compliance events truly equal?
No – Comments with specific wording recommendations	
Peter Burke	No

ATC #1	Levels of non-compliance would be better if defined something like: 1. Data for new/revised facilities was provided less than seven days prior to energization. 2. Data for new/revised facilities was provided before one month after but not before energization. 3. Data for new/revised facilities was provided before three months but not before one month after energization. 4. Data for new/revised facilities was not provided within three months after energization.
Lee Xanthakos SCE&G #1	See comments for requirement 5 *{ I agree with the requirement, but I question the value of making a hard 7-day rule. Why not 14 days or 21 days????}*
Karl Kohlrus CWL&P #5	No There should be a reminder sent out if the data is not sent initially before going directly to Level 4.
No – Comments indicating # of levels of non-compliance need adjustments	
Alan Johnson Mirant #6	No Not sure that non-compliance should jump right to level 4
Alan Boesch NPPD #1	The level of non-compliance does not seem appropriate. Starting at level one and then esculate up through the the different levels depending on how late it is seems to be more appropriate.
Joseph Buch Madison #4	No See comments on question 27. *{ There is only 1 level of non-compliance, level 4 and no definition of the data required. If certain key items of "data" were defined as part of the standard and they were not provided, a level 4 non-compliance would be appropriate. If these items were provided, however they were only provided 2 days before energization a level 3 non-compliance might be appropriate. Similarily, if the data on the key items were provided 3 to 7 days before energization a level 2 non-compliance might be appropriate. See further comments in question 47.}*
George Bartlett Entergy Svcs 1	No There probably should be more than one level of non-compliance and not supplying requested data should not be the highest level of violation. The first level should be "Data for new/revised facilities not provided to TOPs and associated RAs when the data was . The second level should be "Data for new/revised facilities was not provided as requested". The fourth level of non-compliance should be "Data not supplied to TOPs or associated RAs resulted in SOL violations".
No – Other Comments	
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.

John Blazekovich Exelon #1,3,5,6 Fred Frederick Vectren #3 Albert M. DiCaprio MAAC #2 Tony Jankowski We-Energies #4 Richard Kafka Pepco #1	No
Richard Schwarz PNSC #2	Yes Should pertain to all facilities
Toni Timberman BPA #1	Yes delete new/revised facilities
Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 ECAR Ops Pane #1 – 8 #5 – 1 #2 - 2 Ed Stein Firstenergy Sol #6 Gerald Rheault Manitoba #1,3, 5,6 James Stanton Calpine #5 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 Kathleen Goodman ISO NE #2 Kim Warren IMO #2 Mike Miller Southern Co #1 Ray Morella FirstEnergy #1 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

13. Requirement 8 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirement is inappropriate	
Tony Jankowski We-Energies #4	No The RA/TOP should already have all required data as stated in Requirement #3 and Requirement #4.
No – Comments about 7 days	
George Bartlett Entergy Svcs 1	No The TOW should provide data when requested, not 7 days prior to energization. Please delete the phrase "no less than 7 days prior to the energization of new facilities or changes to existing facilities" from both the Requirements and the Measures.
Doug Hils Cinergy #1	No In general I agree with the requirement. Model updates are extremely necessary, howerer there may be times that temporary changes are made to get some equipment back in service by reconfiguring the system. Would there be a violation if that equipment was placed back in service before the 7 day notification took place?
Lee Xanthakos SCE&G #1	See comments for requirement 5 *{ I agree with the requirement, but I question the value of making a hard 7-day rule. Why not 14 days or 21 days????}*
Bob Burkard NCMPA1 # 3,4,5	No Emergency changes to existing facilities should be exempted with a requirement to coordinate with the above entities.
Alan Boesch NPPD #1	No Depending on the type of data seven days prior to energization may be a unrealistic expectation.
Vern Colbert Dominion #1	No Seven days is not enough time.
Roman Carter So Co Gen 3,5,6 (6 members)	No Again, more time such as 1 month is more appropriate.
Francis Halpin BPA Bus Line #5,6	No 7 days is too short a period for evaluation of system impacts.
Todd Lucas (6?) Southern Co #1	No See #18 comments. *{ A seven day lead time may not, in many cases, be sufficient lead time to incorporate new facilities or changes to existing facilities in models or perform revised analysis. There should also be a requirement to provide data in real time with measures related to timeliness and accuracy.}*
No – Comments asking for an expansion of the requirements	
FRCC 6-#1, 4-#2, 1-#2	No This requirement should not just focus on new facilities or changes to exisiting facilities. As we have stated for the TOP, the TOW should have requirements for

	providing the data to the RA as specified by the RA and in the timeframe the RA needs.
No – Comments asking for greater clarity in the requirements	
Raj Rana AEP #1,3,5,6	No It is not clear whether the TOW must supply this data to any requesting RA or just ot the RA that has jurisdication over the TOW's area. We propose that the TOW should only have to supply this information to his RA. Other RA's should contact the TOW's RA for the information. Why 7 days? If the intent is to ensure the requestor knows about the new facilities and can update their model before energization of the new facilities, then more then 7 days notice should be required. If the intent is to ensure the requestor is recieiving the real-rime data associated with the new facilities, then 7 days may be adequate. We suggest this requirement be changed similar to our comments provided on Requirement #2 under our response to question #13. *{ If the requirement was changed to the TOP providing real time data, equipment limits, and model updates to their RA as specified by their RA, then the levels of non-compliance could be:* *6 Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for up to 24 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant).* *6 Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period of 24-36 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant).* *6 Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period of 36-48 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant).* *6 Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period greater than 48 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant), or* *the TOP did not station personnel at the Station or Plant as directed by the RA to provide this data while telemetry was being restored, or the TOP did not provide equipment limits as requested, or The TOP did not provide modeling update information until after the energization of new facilities.* *Note: the idea is that depending on system conditions, the RA may be able to rely on their previous operational planning analysis (next day analysis) for a day or so. However, if system conditions warrrant, the RA should have the authority to direct the TOP to man the station and if the TOP refuses that should be considered a significant infraction.* *Need to define "surrogate value" and "surrogate data".}*
Lloyd Linke MAPP #2	This is too vague - provide what data? Who is receiving and providing required data should also be clarified. Is this just tied to telemetry, or is it more broad than that? Depending on what data this is, 7 days may be too short.

	The industry will need to change its current business practices in order to comply with requirement.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It is not clear what type of data is being referred to in this requirement and clarification is needed if it is data derived from testing or some realtime operation or if it is engineering data, manufacturer's data, etc.
Gregory Campoli NY ISO #2	No This requirement is unclear. There is confusion as to the type of data. We agree if we assume that this requirement is for operational/scheduling information for performing a reliability assessment for operations planning. This does not work for data being provided for the first time from new facilities such as engineering data.
Alan Johnson Mirant #6	No Agree conceptually, but need some clarification as to what is meant by "…changes to existing facilities". What types of changes are intended here?
Thomas Pruitt Duke #1 Susan Morris SERC #2 Robert Reed TS (See List)	No See 22. {*The language is not clear enough. For example some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.}* *{The language is not clear enough. See number 18 comments, it is not apparent the types of data being referred to in this requirement. Clarification is needed to specify the required data - from testing, real-time operation, engineering specifications, manufacturer's specifications, etc.}* *{Until numbers 18 and 20 are resolved (clarification of language) the levels of non-compliance cannot be determined. In general there should be at least two levels of non-compliance identified.}*
Joseph Buch Madison #4	No See comments on question 26. *{ The standard does not spell out the "data" required. There are certain key items which at a minimum are necessary to perform reliability analysis. These should be enumerated and a part of this standard. See further comments in questions 14 and 47.}*
No – Other Comments	
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	No The timing of this Requirement conflicts with Requirement 5. This is, the seven days does not leave the RA any time to complete their obligations under Requirement 5.
Kim Warren IMO #2	No Requirement "5" states that the RA has to notify other associated RA's and TOP's no less than 7 days prior to energization of new/changed facilities. If the Transmission Owner has the same time line requirement and gives the minimum notice (7 days) this does not allow time for the RA to complete their requirements of passing on the information to the associated RA's and TOP's. Therefore I

	suggest increasing the Transmission Owners time line to 10 days.
No – Mix of comments	
Peter Burke ATC #1	No Same responses as provided to Questions 18 & 20. *{ Three concerns with this requirement:* *1. TOP should not make requests, per response to question #16. Rather, the RA should make the requests and then hand that data down to the TOP.* *2. This requirement and the others like it for the BA, IA, Generator and Transmission Owner (TOW) all state that the data should be supplied "as requested". That is needed but there should also be a requirement that RAs, IAs, BAs, Generators and TOWs should supply this information to one another, without a request, if the data has to do with major/critical facilities (i.e. an entity may not realize they should make a request.)* *3. The requirement directs that data must be provided no less than 7 days in advance. Some new facilities can be significant so that 7 days in advance is not enough time for receiving data. In some cases, data for significant new facilities would be needed a season or a year in advance.* *4. Estimated or approximate data should be acceptable prior to energization. "As built" data would be provided when available or when required telemetry is complete.}* *{ Same concerns as expressed in reply to Question 18. One entity may not know it should request information from another entity. There should also be a requirement on the entity where the change is occurring to provide that data, unrequested, to the other entities if it involves major/critical facilities.}* Some measure needs to be in place to make sure that the RA andTOP are notified in a timely manner that system changes are planned. This would be a challenge to meet initially as the processes are not in place to make this work well now.
Ray Morella Joanne Borrell Ed Stein FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No (1) Change the Requirement from 'providing specified data no less than 7 days prior to the energization of new facilities' to 'providing specified data prior to the energization of new facilities'. (2) not sure if 'shall provide data as specified by an (associated) Reliability Coordinator' means that any Reliability Coordinator can request the data or that only the Reliability Coordinator that has jurisdiction over the area operated by the TOP can request the data. The standard needs to be clear on which meaning is correct. (3) Change 'industry accepted format, timeframe, and technically accurate and complete' to 'industry accepted format, accurate and complete'. Timeframe is already specified in the standard. It doesn't need to be repeated. Delete the description of 'technically'.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No I can just see someone delaying the installation of a needed facility for 7 days because they didn't want to get a non-compliance. There was not complete agreement on this comment. Seven companies voted in favor of this comment. One company voted against this comment. What is the difference between accurate data and technically accurate date? Is technically accurate data better that accurate data? Is technically accurate data different than accurate data?
Fred Frederick	No

Vectren #3	
Yes – Comments on 7 days	
Kathleen Goodman ISO NE #2	Yes/No Seven days advanced notice may not be feasible for updates to real-time (EMS) systems due to the impact to operations during 'cut-over' activities. The time-frame requirement may vary widely depending on database requirements, support staffing, impact to real-time operations, etc. We believe the timing should be left to the RAs.
Gerald Rheault Manitoba #1,3,5,6	Yes See comment in #18 *{ Manitoba Hydro questions the 7 day period specified. Some processes would require significantly more lead time than that while some require less; how was the 7 day time chosen. The issue is one of supplying data on a timely basis. Isn't that covered by another requirement.}*
John Blazekovich Exelon #1,3,5,6	Yes Estimated data that describes equipment should be provided several months in advance of energization so that operational planning studies (12 months in advance) can be performed. Estimated data is probably adequate for the equipment energization provided as-built data is provided within a reasonable amount of time. We suggest one month after energization as a reasonable time frame for providing as-built data. "Estimated" versus "as-built" data should be defined.
Yes – Comments on need to expand requirement	
Toni Timberman BPA #1	Yes Data provision should not be limited to "the energization of new facilities or changes to existing facilities" and the timeline should be set by the data requestor.
Richard Schwarz PNSC #2	Yes This requirement should be for any data request, not just for new or revised facilities. Time frame to be specified by the RA according to its own needs.
James Stanton Calpine #5 Ed Riley CA ISO #2 Dilip Mahendra SMUD #1 Darrel Richardson Illinois Power #1, 3 Charles Yeung Reliant Energy #6 Albert M. DiCaprio MAAC #2 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Mike Miller Southern Co #1 Lee Westbrook Oncor #1 Richard Kafka Pepco #1 William Smith Allegheny Pwr #1 Tom Petrich (5) PG&E #1 Stuart Goza TVA #1	Yes

14. Requirement 8 - Do you agree with these levels of non-compliance for this requirement?

No – Other Comments	
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
No – Levels of non-compliance need adjustments	
Doug Hils Cinergy #1	No Model updates are extremely necessary, howerer there may be times that temporary changes are made to get some equipment back in service by reconfiguring the system. Would there be a violation if that equipment was placed back in service before the 7 day notification took place?
David Kiguel Hydro One #1	No It is not clear what type of data is being referred to in this requirement and clarification is needed if it is data derived from testing or some realtime operation or if it is engineering data, manufacturer's data, etc.
George Bartlett Entergy Svcs 1	No There probably should be more than one level of non-compliance and not supplying requested data should not be the highest level of violation. The first level should be "Data for new/revised facilities not provided to TOPs and associated RAs when the data was . The second level should be "Data for new/revised facilities was not provided as requested". The fourth level of non-compliance should be "Data not supplied to TOPs or associated RAs resulted in SOL violations".
Francis Halpin BPA Bus Line #5,6	No There should be levels of compliance based upon notification and calaboration with affected parties
FRCC 6-#1, 4-#2, 1-#2	No Perhaps there should be several levels that are time dependent. See earlier comments regarding self certification and re-certification. *{ Section 201 (e) states that the RA will demonstrate compliance thru the self certification process with re-certification on a schedule established by the compliance monitor. We do not agree with the re-certification part of this statement. The compliance monitoring of this standard is not for certification on an entity performing a function.* *There is no need for any re-certification in connection with this standard. The self certification process is just a way for an entity to provide information to the compliance monitor that will be validated thru spot reviews etc. The re-certification statement appears in every compliance section in this document. It needs to be removed throughout.}*
Todd Lucas (6?) Southern Co #1	No Until numbers 18, 20, 22 & 24 are resolved the levels of non-compliance cannot be determined.
Thomas Pruitt Duke #1	No See 22. *{The language is not clear enough. For example some might interpret the*

Robert Reed TS (See List) Susan Morris SERC #2	*requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.}* *{ it is not apparent the types of data being referred to in this requirement. Clarification is needed to specify the required data - from testing, real-time operation, engineering specifications, manufacturer's specifications, etc.}* *{Until numbers 18 and 20 are resolved (clarification of language) the levels of non-compliance cannot be determined. In general there should be at least two levels of non-compliance identified.}*
Sam Jones ERCOT #2	See comments to #24 above. *{The timing of this Requirement conflicts with Requirement 5. This is, the seven days does not leave the RA any time to complete their obligations under Requirement 5.}*
Raj Rana AEP #1,3,5,6	No What if they provide the data, but it is 3 days prior to energization? Or they provide it 3 days after energization? Or 3 weeks after energization? What if they provide only partial data? Or only incorrect data? Are all these non-compliance events truly equal?
Peter Burke ATC #1	No Levels of non-compliance would be better if defined something like: 1. Data for new/revised facilities was provided less than seven days prior to energization. 2. Data for new/revised facilities was provided before one month after but not before energization. 3. Data for new/revised facilities was provided before three months but not before one month after energization. 4. Data for new/revised facilities was not provided within three months after energization. There's no desire for penalties that dis-incent people from energizing new equipment but there's need for penalties that encourage early reporting. Not sure that 7 days will be needed once systems are in palce and incremental updates are being performed. There may also be a need for determining the impact of the facility addition to the system before determining penalties. (Should a new 200 MW generator going into service be penalized the same as a distribution tap serving 5 MWs of load? Probably not but this standard as written does not differentiate between the two.)
Lee Xanthakos SCE&G #1	See comments for requirement 5 *{ Seems like there should be more than one level of non-compliance. What if the data was incomplete for example? Shouldn't merit some non-compliance penalty?}*
Karl Kohlrus CWL&P #5	No There should be a reminder sent out if the data is not sent initially before going directly to Level 4.
Joseph Buch Madison #4	No See comments on question 27. *{ There is only 1 level of non-compliance, level 4 and no definition of the data required. If certain key items of "data" were defined as part of the standard and*

	they were not provided, a level 4 non-compliance would be appropriate. If these items were provided, however they were only provided 2 days before energization a level 3 non-compliance might be appropriate. Similarily, if the data on the key items were provided 3 to 7 days before energization a level 2 non-compliance might be appropriate. See further comments in question 47.}
John Blazekovich Exelon #1,3,5,6	No Level of non-compliance should be tied to the impact of changes to the system. As stated the level of non-compliance is equal for major and minor changes in transmission system configuration, levels of non-compliance should recognize the difference. Non compliance should be tied to the standard time frame for supplying data. Data maintenance is an on-going activity, the drafting team should recognize and address data maintenance and compliance implementation.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
Alan Boesch NPPD #1	No The level of non-compliance does not seem appropriate. Starting at level one and then esculate up through the the different levels depending on how late it is seems to be more appropriate.
Tony Jankowski We-Energies #4 Fred Frederick Vectren #3	No
Richard Schwarz PNSC #2	Yes Should pertain to all facilities
Toni Timberman BPA #1	Yes delete “for new/revised facilities”

Alan Johnson Mirant #6 Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2 Ed Stein Firstenergy Sol #6 Gerald Rheault Manitoba #1,3,5,6 James Stanton Calpine #5 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 Kathleen Goodman ISO NE #2 Kim Warren IMO #2 Mike Miller Southern Co #1 Ray Morella FirstEnergy #1 Richard Kafka Pepco #1 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

15. Requirement 9 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments about 7 days	
Bob Burkard NCMPA1 # 3,4,5	No Emergency changes to existing facilities should be exempted with a requirement to coordinate with the above entities.
Alan Boesch NPPD #1	No Depending on the type of data seven days prior to energization may be a unrealistic expectation.
Roman Carter So Co Gen 3,5,6 (6 members)	No More time such as 1 month is more appropriate.
Vern Colbert Dominion #1	No Seven days is not enough time.
George Bartlett Entergy Svcs 1	No The Generator Owner should provide data when requested, not 7 days prior to energization. Please delete the phrase "no less than 7 days prior to the energization of new facilities or changes to existing facilities" from both the Requirements and the Measures.
Francis Halpin BPA Bus Line #5,6	No Is 7 days the appropriate time frame for data submittal?? Does it allow sufficient time for proper analysis of the impact on the system? Seems like the data needs to be submitted in the time frame of weeks before energization in order to do system studies. Six months may be required, in some cases at least.
No – Comments indicating additional clarity is needed	
Joseph Buch Madison #4	No The standard does not spell out the "data" required. There are certain key items which at a minimum are necessary to perform reliability analysis. These should be enumerated and a part of this standard. See further comments in questions 14 and 47. *{ The "data" that is to be rquested is not defined. As part of this standard one should be able to initially define a handful of key data elements that are required. These key elements would include the minimum information required to support reliability analyses. See question 47 for additional comments.}* *{ This standard requires generator owners to supply data as requested to the requesting RA or TOP no less than 7 days prior to energization of new facilities or changes to existing facilities with a level 4 non-compliance if this data is not provided. This is not acceptable. The standard does not spell out the data required, it is left up to the RA or TOP to determine. Some data such as winter ratings is not crucial to system operation and associated level 4 non-compliance along with the sanctions for this level of non-compliance is simply not appropriate. What may be acceptable is to classify non-compliance with this standard as written as level 1. A future revision to this standard including an itemized listing of the specified data could then be developed along with appropriate levels of non-compliance. For example, generator data for dynamic stability provided between 5 and 7 days before energization could be given a level 1 non-compliance.}*
Lloyd Linke	This is too vague - provide what data? Who is receiving and providing required data should also be clarified. Is this just tied to telemetry, or is it more broad than

MAPP #2	that? Depending on what data this is, 7 days may be too short. The industry will need to change its current business practices in order to comply with requirement.
James Stanton Calpine #5	No What kinds of "changes" to facilities are we talking about? If this is defined somewhere else it should be included here. If it is not defined, it should be.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	No It is not clear what type of data is being referred to in this requirement and clarification is needed if it is data derived from testing or some realtime operation or if it is engineering data, manufacturer's data, etc.
David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Gregory Campoli NY ISO #2	No This requirement is unclear. There is confusion as to the type of data. We agree if we assume that this requirement is for operational/scheduling information for performing a reliability assessment for operations planning. This does not work for data being provided for the first time from new facilities such as engineering data.
Alan Johnson Mirant #6	No Agree conceptually, but need some clarification as to what is meant by "…changes to existing facilities". What types of changes are intended here?
Susan Morris SERC #2 Thomas Pruitt Duke #1 Todd Lucas (6?) Southern Co #1 Robert Reed TS (See List)	No Clarification language is necessary. Same as 18, 20, 21, 22 above. *{The language is not clear enough. For example some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.}* *{The language is not clear enough. See number 18 comments, it is not apparent the types of data being referred to in this requirement. Clarification is needed to specify the required data - from testing, real-time operation, engineering specifications, manufacturer's specifications, etc.}* *{Until numbers 18 and 20 are resolved (clarification of language) the levels of non-compliance cannot be determined. In general there should be at least two levels of non-compliance identified.}*
Roger Green Southern Co #5	Cannot properly evaluate until data requirements are specified. Is it practical for all parties to meet the 7 day data turn around requirements (see Requirements 5-9)? The common time frame indicates the data may have to be submitted by the facility owner to all parties.
No – Comments indicating expansion of requirement is needed	
FRCC 6-#1, 4-#2, 1-#2	No This requirement should not just focus on new facilities or changes to exisiting facilities. As we have stated for the TOP, the generation owner should have requirements for providing the data to the RA as specified by the RA and in the timeframe the RA needs.
No – Other comments	

Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	No The timing of this requirement conflicts with Requirement 5. That is the seven days does not leave the RA any time to complete their obligations under requirement 5.
Tony Jankowski We-Energies #4	No The RA/TOP should already have all required data as stated in Requirement #3 and Requirement #4.
Kim Warren IMO #2	No Requirement "5" states that the RA has to notify other associated RA's and TOP's no less than 7 days prior to energization of new/changed facilities. If the Generator Owner has the same time line requirement and gives the minimum notice (7 days) this does not allow time for the RA to complete their requirements of passing on the information to the associated RA's and TOP's. Therefore I suggest increasing the Generator Owners time line to 10 days.
No – Mix of comments	
Ray Morella Ed Stein Joanne Borrell FirstEnergy #1,3,6 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No (1) Change the Requirement from 'providing specified data no less than 7 days prior to the energization of new facilities' to 'providing specified data prior to the energization of new facilities'. (2) I'm not sure if 'shall provide data as specified by an (associated) Reliability Coordinator' means that any Reliability Coordinator can request the data or that only the Reliability Coordinator that has jurisdiction over the area operated by the Generation Owner can request the data. The standard needs to be clear on which meaning is correct. (3) Change 'industry accepted format, timeframe, and technically accurate and complete' to 'industry accepted format, accurate and complete'. Timeframe is already specified in the standard. It doesn't need to be repeated. Delete the description of 'technically'.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No I can just see someone delaying the installation of a needed facility for 7 days because they didn't want to get a non-compliance. There was not complete agreement on this comment. Seven companies voted in favor of this comment. One company voted against this comment. What is the difference between accurate data and technically accurate date? Is technically accurate data better that accurate data? Is technically accurate data different than accurate data?
Raj Rana AEP #1,3,5,6	No It is not clear whether the Generator Owner must supply this data to any requesting RA/TOP or just to the RA/TOP that has jurisdication over the Generator. We propose that the Generator should only have to supply this information to his RA and TOP that he is connected to. Other RA's should contact the Generator Owner's RA for the information. Why 7 days? If the intent is to ensure the requestor knows about the new facilities and can update their model before energization of the new facilities, then more then 7 days notice should be required. If the intent is to ensure the requestor is recieiving the real-rime data associated with the new facilities, then 7 days may be adequate. We suggest this requirement be changed similar to our comments provided on Requirement #2 under our response to question #13. *{ If the requirement was changed to the TOP providing real time data, equipment*

	limits, and model updates to their RA as specified by their RA, then the levels of non-compliance could be: *(1) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for up to 24 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant).* *(2) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period of 24-36 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant).* *(3) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period of 36-48 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant).* *(4) Actual TOP telemetered data specified is not be provided by the TOP to the RA and the RA determines that the loss of the data prevents the RA from performing a reliability analysis or ensuring the system is operating within system operating limits for a period greater than 48 hrs and no provision was made by the TOP to manually supply the data (i.e. by staffing the station or plant), or the TOP did not station personnel at the Station or Plant as directed by the RA to provide this data while telemetry was being restored, or the TOP did not provide equipment limits as requested, or The TOP did not provide modeling update information until after the energization of new facilities.* *Note: the idea is that depending on system conditions, the RA may be able to rely on their previous operational planning analysis (next day analysis) for a day or so. However, if system conditions warrrant, the RA should have the authority to direct the TOP to man the station and if the TOP refuses that should be considered a significant infraction.* *Need to define "surrogate value" and "surrogate data".}*
Peter Burke ATC #1	No Same responses as provided to Questions 18 & 20. *{ Levels of non-compliance would be better if defined something like:* *1. Data for new/revised facilities was provided less than seven days prior to energization.* *2. Data for new/revised facilities was provided before one month after but not before energization.* *3. Data for new/revised facilities was provided before three months but not before one month after energization.* *12. Data for new/revised facilities was not provided within three months after energization.}* *{ Why do we go straight to level 4? Is it assumed that things are already working properly and that the penalty is being applied due to a lapse? If there are fines for non-compliance, are people incented to avoid paying fines by not energizing new equipment that's needed for reliability?* *Levels of non-compliance would be better if defined something like:* *1. Data for new/revised facilities was provided less than seven days prior to energization.* *2. Data for new/revised facilities was provided before one month after but not*

	before energization. *3. Data for new/revised facilities was provided before three months but not before one month after energization.* *4.Data for new/revised facilities was not provided within three months after energization.}* Some measure needs to be in place to make sure that the RA and TOP are notified in a timely manner that system changes are planned. This would be a challenge to meet initially as the processes are not in place to make this work well now.
Kathleen Goodman ISO NE #2	Yes/No The term Generator Owner has not been defined anywhere. There may be cases where, depending upon the Agreenents in-place, that the actual owner of a generator is not responsible for providing anything but, rather, a third party performs this function on their behalf. Seven days advanced notice may not be feasible for updates to real-time (EMS) systems due to the impact to operations during 'cut-over' activities. The time-frame requirement may vary widely depending on database requirements, support staffing, impact to real-time operations, etc. We believe the timing should be left to the RAs.
Fred Frederick Vectren #3	No
Yes – Comment s about 7 days	
Lee Xanthakos SCE&G #1	See comments for requirement 5 { *I agree with the requirement, but I question the value of making a hard 7-day rule. Why not 14 days or 21 days????}*
John Blazekovich Exelon #1,3,5,6	Yes Estimated data that describes equipment should be provided several months in advance of energization so that operational planning studies (12 months in advance) can be performed. Estimated data is probably adequate for the equipment energization provided as-built data is provided within a reasonable amount of time. We suggest one month after energization as a reasonable time frame for providing as-built data. "Estimated" versus "as-built" data should be defined.
Gerald Rheault Manitoba #1,3,5,6	Yes See comment in #18. *{ Manitoba Hydro questions the 7 day period specified. Some processes would require significantly more lead time than that while some require less; how was the 7 day time chosen. The issue is one of supplying data on a timely basis. Isn't that covered by another requirement.}*
Yes – Comment s indicating additional clarification needed	
Mike Miller Southern Co #1	Yes Define energization
Yes – Comments to modify requirements	
Toni Timberman BPA #1	Yes requirement should be on Generator Owner or Operator, and the timeline specified by the requesting entity. Delete "the energization of new facilities or changes to existing facilities". BA should receive data from Generator also…timeline as specified by requesting party, but no less than 7 days…

Richard Schwarz PNSC #2	Yes The time to provide data should be specified by the RA since everyone has different time requirement to make EMS & model changes. Should pertain to all facilities, not just new facilities.
Albert M. DiCaprio MAAC #2 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 Ed Riley CA ISO #2 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Richard Kafka Pepco #1 Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 William Smith Allegheny Pwr #1	Yes

16. Requirement 9 - Do you agree with these levels of non-compliance for this requirement?

No – Comments indicating that addressing non-compliance is premature	
Todd Lucas (6?) Southern Co #1	No Until numbers 18, 20, 22, 24, & 26 are resolved the levels of non-compliance cannot be determined
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
No – Comments indicating alternatives to suggested levels of non-compliance	
FRCC 6-#1, 4-#2, 1-#2	No Perhaps there should be several levels that are time dependent. See earlier comments regarding self certification and re-certification.
Peter Burke ATC #1	No Levels of non-compliance would be better if defined something like: 1. Data for new/revised facilities was provided less than seven days prior to energization. 2. Data for new/revised facilities was provided before one month after but not before energization. 3. Data for new/revised facilities was provided before three months but not before one month after energization. 4. Data for new/revised facilities was not provided within three months after energization. There's no desire for penalties that dis-incent people from energizing new equipment but there's need for penalties that encourage early reporting. Not sure that 7 days will be needed once systems are in palce and incremental updates are being performed. There may also be a need for determining the impact of the facility addition to the system before determining penalties. (Should a new 200 MW generator going into service be penalized the same as a distribution tap serving 5 MWs of load? Probably not but this standard as written does not differentiate between the two.)
No – Comments indicating additional clarity is needed	
Thomas Pruitt Duke #1	No See 26. *{Define "associated". The language is not clear enough. For example, some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.}*
Guy Zito (See List) NPCC #2 – 2	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be

NPCC #1 - 5	made whether these levels are appropriate.
No – Comments indicating non-compliance levels are inappropriate	
Raj Rana AEP #1,3,5,6	No What if they provide the data, but it is 3 days prior to energization? Or they provide it 3 days after energization? Or 3 weeks after energization? What if they provide only partial data? Or only incorrect data? Are all these non-compliance events truly equal?
Lee Xanthakos SCE&G #1	See comments for requirement 5 *{ Seems like there should be more than one level of non-compliance. What if the data was incomplete for example? Shouldn't merit some non-compliance penalty?}*
Karl Kohlrus CWL&P #5	No There should be a reminder sent out if the data is not sent initially before going directly to Level 4.
George Bartlett Entergy Svcs 1	No There probably should be more than one level of non-compliance and not supplying requested data should not be the highest level of violation. The first level should be "Data for new/revised facilities not provided to TOPs and associated RAs when the data was . The second level should be "Data for new/revised facilities was not provided as requested". The fourth level of non-compliance should be "Data not supplied to TOPs or associated RAs resulted in SOL violations".
Joseph Buch Madison #4	No There is only 1 level of non-compliance, level 4 and no definition of the data required. If certain key items of "data" were defined as part of the standard and they were not provided, a level 4 non-compliance would be appropriate. If these items were provided, however they were only provided 2 days before energization a level 3 non-compliance might be appropriate. Similarily, if the data on the key items were provided 3 to 7 days before energization a level 2 non-compliance might be appropriate. See further comments in question 47.
Francis Halpin BPA Bus Line #5,6	No There should be levels of compliance based upon notification and calaboration with affected parties
No – Comments indicating requirements are inappropriate	
Sam Jones ERCOT #2	See comments to #26 above. *{The timing of this Requirement conflicts with Requirement 5. That is, the seven days does not leave the RA any time to complete their obligations under Requirement 5.}*
Roger Green Southern Co #5	No These are non traditional requirements on generation owners (maybe not on the type of data but on the group or groups in which the generator must coordinate).
Doug Hils Cinergy #1	No Requirement are being duplicated between RA's and TOP's The standard should require that the realibility analysis is being done by one or the other. It should not be necessary for both to duplicate the efforts
No – Mix of comments	

Susan Morris SERC #2 Robert Reed TS (See List)	No 1) See 26. In general there should be at least two levels of non-compliance identified. *{Define "associated". The language is not clear enough. For example, some might interpret the requirement to read differently than others (as follows) - A seven (7) day lead time is not sufficient for integration of data for a new facilitiy. A more appropriate time-frame might be several months (given the time it takes to line up the telecommunications, etc., for transmission of a new quantity). If the data is going to be used for operational planning analysis, then this may require at least a one-year lead time.}* 2) As an example of the need for clarification language, the ". . . no less than 7 days prior. ": In a market-based system, there are aspects of adding a new market entity that need considerably more than days-to-months lead time; for compliance a generator might be prohibited from operating commercially until all data and interconnection issues are resolved.
Fred Frederick Vectren #3 Tony Jankowski We-Energies #4	No
David Kiguel Hydro One #1	Yes/No We are unsure what type of analysis would be required here and it is unclear how often it would need to be performed. From a reliability standpoint, operational planning studies would be done that considers adequacy and system outages. We agree with the requirement but there is insufficient detail to measure compliance
Toni Timberman BPA #1	Yes delete new/revised facilities
Richard Schwarz PNSC #2	Yes Should pertain to all facilities

Alan Johnson Mirant #6 Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2 Ed Stein Firstenergy Sol #6 Gerald Rheault Manitoba #1,3,5,6 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Kathleen Goodman ISO NE #2 Kim Warren IMO #2 Mike Miller Southern Co #1 Ray Morella FirstEnergy #1 Richard Kafka Pepco #1 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

17. Requirement 10 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating additional clarity is needed	
Raj Rana AEP #1,3,5,6	No This requirement is too vague. How often should the RA perform a reliability analysis? How often should the RA request the program to run? Once a hour? Once a day? Once a week? Should the reliability analysis program bei running every 5 minutes or every 10 minuets. Per this requirement, if the RA so chooses, he could perform the analysis every other day and argue that is enough. Is it? The requirement should be clear that there is an expectation that the RA is performing an operational planning analysis on a daily basis looking at next day to next week projected conditions. Further, the RA must have the capability to perform a reliability analysis on demand in order to identify problems either real-time or on a next contingency basis. Finally, the RA should have a reliability analysis program (state estimator) that runs (which means it solves) a minimum of every 10 minutes. The Measure(s) section states the "program(s) run(s) when requested and identifies any problems that could cause instability", . . . etc. "Any problems" is pretty broad. Often, a reliability analysis program (state estimator and operator load flow) does not perform an analysis on all possible contingnecies but rather only credible contingencis identified by the operator from other system performance apprasials performed by a Planning Authorithy, a Tranmission Owner's Planning Section, RTO, or inter-regional study team. Do you really mean that the RA's analysis program must be able to perform an analysis for all possible single contingency events within their network model? Many real-time analysis programs fo not do this, but most RA's also have access to off-line analysis programs that can meet this requirement. What is the intent here? We would suggest the requirement be that the reliability analysis program have the ability to identify first contingency problems (problems that could cause instability, uncontrolled separation, etc.) based upon credible first contingency scenarios indentified by performance apprasials conducted by the PA or TOW's Transmission Planning section. Also, define the time horizon.
David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Gregory Campoli NY ISO #2	No There is insufficient detail in measuring compliance with this requirement. This requirement identifies both operational analysis and real time analysis which implies various time frames for assessment.
Susan Morris SERC #2 Robert Reed TS (See List)	No Clarification language is needed to identify the type of analysis required. Also, define the periodicity of the analysis - how often it needs to be performed. From a reliability standpoint, operational planning studies are recommended to be performed to determine the adequacy during system outages. (TS only - We agree with the requirement but there is insufficient detail to measure compliance)
Thomas Pruitt	No 1) Language needs clarification to identify the type of analysis required. Also,

Duke #1	define the periodicity of the analysis - how often it needs to be performed. 2) The RA should ensure that this function is performed (but it would not necessarily do it itself). There should be some provision for the analysis to be performed by a third party.
Kathleen Goodman ISO NE #2	No This needs clarification. Who is requesting that these programs be run? What type of programs? If there is no request, and nothing is done to study a potential reliability problem, is there non-compliance?
No – Comments indicating requirements inappropriate	
Ed Riley CA ISO #2	No The types of reports that would be needed to identify "problems that could cause instability, uncontrolled separation or cascading outages . . " are not done quickly, making it difficult to perform them in real-time. The wording of the Requirement sounds like these would be required in real-time, and it is not possible for a RA to complete them in this time-frame.
Alan Johnson Mirant #6	No Believe the requirement should specify which entities can make a request of the RA. Would also think that there should be a distinction made between requests of a real-time and planning nature.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	Yes/No We are unsure what type of analysis would be required here and it is unclear how often it would need to be performed. From a reliability standpoint, operational planning studies would be done that considers adequacy and system outages. We agree with the requirement but there is insufficient detail to measure compliance
Richard Schwarz PNSC #2	The RA should perform reliability analyses on the current operating system only to determine if the system is operating in a secure mode. This means running N-1, N-2 or credible contingency studies. The requirement should also include running an analysis program to mesh with the Measures and Outcome(s) requirement to run a reliability analysis program
Ed Stein Ray Morella Joanne Borrell Firstenergy #1, 3, 6 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No Requirements 210 and 211 are very similar. Requirement 210 applies to Reliability Coordinators. Requirement 211 applies to Transmission Operators. The requirements are duplicative. The standard should require a reliability analysis to be performed by either the Reliability Coordinator or the Transmission Operator, but not both of them. There is nothing wrong with both of them doing a reliability analysis if they so wish, but both of them should not be forced to do so. There is nothing wrong with a Transmission Operator delegating this responsibility to a Reliability Coordinator or a Reliability Coordinator delegating this responsibility to a Transmission Operator.
Joseph Buch Madison #4	No There are two portions of the bulk transmission system that must be analized for reliable operation. One is the portion that involves inter-regional or major regional areas and the other involves sub-regional or more localized areas. Having one entity trying to address both could result in items being overlooked. The RA should be responsible for the overall regional and interregional system. The TOP should be responsible for the sub-regional and local system which generally consists of the system operating at less than 200 kV.
Alan Boesch NPPD #1	No The measures and outcomes should be related to violating System Operating

	Limits and not be limited to instability, uncontrolled separation ore cascading outages. See comments to question no. 10 above. *{I am very confused by this Standard. Who is going perform these functions the TOP or the RA. The Standard appears to have both performing the same function. The Standard needs to define the relationship between the RA and TOP. Maybe that could be accomplished in a opening paragraph. The requirements on the limits may be too broad. For example, an operating limit should also protect the safety of the public. If a facility was loaded to the point where it no longer met clearance requirements, the RA should respect these limits. The standards also seem to ignore voltage limits. There are limits to how high or low the voltage should be allowed to go before action is required. In addition to steady-state voltages, there should be a limit on transient voltages as well. It is not clear from this standard that these limits apply.}*
Fred Frederick Vectren #3	No
Mixed comments	
Toni Timberman BPA #1	Yes/No Lots of comments here….what is the definition of "problems"? Is the requirement saying that studies must be done until they come up with a scenario that would cause instability, etc? Taken literally, that is what this requirement is asking for. Must the studies run until they identify the 6-line, 3-substation outage combination that would tip the system over the edge? Realistically, the requirement should specify "n-1, n-2" types of studies, or "credible contingencies", etc. Required analyses should be in line with the NERC Reliability Criteria. The requirement seems to be backwards. The RA should evaluate its current operating condition to assess that the system is secure from instability, etc. If the Operational Planning studies were done correctly, no "problem" should be identified that could cause instability, etc. Also, there is nothing in the requirement that indicates a "program should run", but that is what the measure and the compliance levels are related to. This seems to have been made (inadvertently?) very specific to real-time analysis programs, and I don't believe that is the intent. The outcome mentions "shall run programs" but nothing is said about this in the requirement. Having a dispatcher (operator) assess the condition of the power system is valid "reliability analyses" according to the explanation of terms at the front of this comment form, but I don't believe this could be considered running an analysis program.
Yes – Other comments	
FRCC 6-#1, 4-#2, 1-#2	Yes The FRCC Security Process specifies the periodicity for performing real time contingency analysis and for operations planning studies. We agree with this requirement but would not support NERC telling how often the analysis should be performed. That should be left up to the Regions or the RAs.
Yes – suggestions for additional clarifications	
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	Yes We agree with the Requirement; however, as written, it assumes that all RAs have online reliability analysis programs to identify the applicable limits. In fact, many use off-line studies to perform base case analyses, which are translated into cyclic computer calculations.
Gerald Rheault	Yes

Manitoba #1,3,5,6	Manitoba Hydro agrees with the use of online reliability analysis programs to identify possible instability, uncontrolled separation or cascading outages that could adversely impact the reliability of the bulk transmission system. The analysis performed will identify the possibility of problems occurring but will not determine the secure operating limit for the system. Steps should then be taken by the RA to put the system in an operating mode to ensure that Operating Security Limits will not be violated.
George Bartlett Entergy Svcs 1	Yes We agree with this requirement in general. However, we suggest removing the term "when requested" from the Measures and add "as needed" in its place. The RA should be able to run analysis programs "when requested". It is more important he run the programs when needed to analyze the system limitations.
Francis Halpin BPA Bus Line #5,6	Yes In principle we agree, this 'analyses' needs to be done immediately prior to the operating day - Some description needs to be added to provide clarity on when the analyses are supposed to be completed
Tom Petrich (5) PG&E #1	Yes Please modify the sentence to read: "The RA shall run reliability analysis program(s) and the program(s) shall identify potential problems, if any, that could cause generation and transmission facility overloads, instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system." We should not lose sight of the responsibility of the RA to take proper actions to correct the problems that it has identified.
Vern Colbert Dominion #1	Yes Define how often the studies should be performed.
Roman Carter So Co Gen 3,5,6 (6 members)	Yes Agree with the requirement, but there is insufficient information on the analysis and how often it would be performed.
Peter Burke ATC #1	Yes Somehow the requirement should recognize that large scale system instability threats may not be easily or quickly identified.
Lee Westbrook Oncor #1	Yes Do the analyses include the calculation of operating limits?
Lloyd Linke MAPP #2	Yes is it practical to require on-line dynamic, voltage, and small signal stability analysis, or can an RA use a proxy?
John Blazekovich Exelon #1,3,5,6	Yes Although we agree with the need for the requirement we find the wording of this requirement to be somewhat ambiguous. The wording suggests that the RA or TOP is required to run studies until a cascading outage is found. We believe that the intent should be to analyze "Planned for Contingencies" and identify problems if any are found, but the wording does not state this. The RA should develop and document their "Planned for Contingencies" and should only be required to run reliability analysis to analyze these "Planned for Contingencies".

Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Lee Xanthakos SCE&G #1 Mike Miller Southern Co #1 Richard Kafka Pepco #1 Roger Green Southern Co #5 Stuart Goza TVA #1 Todd Lucas (6?) Southern Co #1 Tony Jankowski We-Energies #4 William Smith Allegheny Pwr #1	Yes

18. Requirement 10 - Do you agree with these levels of non-compliance for this requirement?

No – Comments indicating non-compliance levels don't match requirement	
Richard Schwarz PNSC #2	No Compliance levels should measure the recognition that there was a need to perform analysis, and whether the analysis was or wasn't done.
FRCC 6-#1, 4-#2, 1-#2	No We are not sure that these levels fit completely. Wouldn't it depend on the type of reliability analyses being performed. For instance, if a real time contingency analysis was to be run by the RA every 5 minutes, these levels might not apply. But, if it was for a 7 day study twice a week, these might be more appropriate. Also, who is requesting the reliability analysis? In FRCC, our Security Process (Reliability Plan) document lists the requirements for the reliability analysis in our region.
Alan Johnson Mirant #6	No Should be a distinction between non-compliance for real-time and planning requests.
Alan Boesch NPPD #1	No Is there a difference between "run" and converge? A program can run but not produce useful results. It also seems there should be some period of time to permit the solution to converge prior to being out of compliance. It is not realistic to get convergance 100% of the time on real-time programs.
Toni Timberman BPA #1	No Compliance levels are not related to the requirement. A better measure would be whether the RA recognized (or didn't) that there was a need to perform analysis, and whether the analysis was done (or wasn't). The measures and compliance should assess whether the RA did analysis rather than program performance.
Tom Petrich (5) PG&E #1	These levels of non-compliance are not clear to us. Who is "requesting" the reliability analysis and what is the basis? How does this relate to the actual operation of the system? In WECC, we require the system be adjusted within 20 minutes to reduce flows on stability limited paths to be within their operational limits for the system conditions. We would expect the reliability analysis be requested and performed well in advance so the RA is prepared to monitor and take corrective actions.
Susan Morris SERC #2 Thomas Pruitt Duke #1 Robert Reed TS (See List)	No 1) Number 28 needs to be addressed before non-compliance can be determined. 2) Based on the time-frames specified, the levels of non-compliance imply different compliance than the requirement does. Clarification should consider: Is the requirement based on real-time operating concerns, or is it based on a short-term reliability/scheduling concern?
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	No Please see comments to #28 above. Also, the Requirement is seemingly more important than it is depicted here. Instead of skipping Level 4, should use Levels 2, 3, and 4 with the caveat of having appropriate predetermined analyses to take the place of real-time analyses.
Raj Rana AEP #1,3,5,6	No Non-compliance measures are too vague. What if the reliability analysis did not

	run when requested but ran within 5or 10 minutes? What if the reliability analysis ran but the solution did not converge due to missing data, etc? There should be a different requirement and measure for real-time reliability analysis and operational planning analysis. Also, by the definition you provided, reliability analysis also includes system operator assessments. So by strict interpretation, as long as the RA's system operator assesses the situation, he would never be in violation of this requirement. As we said, this requirement and it's measures are too vague.
Peter Burke ATC #1	No The MISO Day 2 market relies on analysis tools running every 5 minutes. Not sure that 8 hours is an acceptable cutoff for level 1 non-compliance. It is unreasonable that an analysis not running once but recovering to run in a few minutes would still be considered non-compliance. Level 1 non-compliance should allow a buffer of time for the start of the analysis, maybe 1 or 2 hours, to be compliant. The reason is that some analyses (e.g., dynamic stability) can take 1 or 2 hours to set up the appropriate cases for the analysis and have the runs completed. Level 1 non-compliance would be more reasonable if written as follows: "Reliability analysis did not run within 1 (or 2) hour(s) of request, but ran within 8 hours." There is some concern as to how MISO can maintain an accurate model of the system based on the size of the system MISO's required to model and the number of changes being made to this system. Another concern is how reliable the network analysis tools can be when relying on ICCP as their only data source. Some of this data may be second hand which will tend to complicate analysis.
Lloyd Linke MAPP #2	No Level #3 should read “Reliability analysis did not run when requested, but ran in 24-48 hours” and level #4 should be added to read “Reliability analysis did not run when requested, and did not run in 48 hours”
Kim Warren IMO #2	No A minimum time standard should be built into this compliance issue similar to "Exceeding an Operating Limit but Not a Reportable Violation" (question 5 & 6). There should be a time allowance for short term failures (i.e. < 30 minutes) of the run of reliability analysis programs, under normal system conditions, before reporting is required.
Kathleen Goodman ISO NE #2	No From the information the writer has provided we would suggest that the level of non compliance be based on findings that the system was found to be in an operating state that could have resulted in "instability, uncontrolled separation etc" due to the fact that an effective reliability analysis was not done, that would have identified the condition.
Joseph Buch Madison #4	No Of major concern is the case where a critical element has been forced out of service. Having the reliability analysis not run within 24 hours is not acceptable under these conditions. The real time system should not have to run "blind" for more than 24 hours. This should be classified as level 4 non-compliance. Also levels 1 & 2 should be classified as levels 2 & 3.
Ed Stein Joanne Borrell FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8	No The Reliability Coordinator should be allowed to use a previous reliability analysis that covered simiar system conditions if the reliability analysis could not be run because of computer problems or was duplicative of a previous reliability analysis. Such action should not result in a non-compliance.

#5 – 1 #2 - 2	
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Gregory Campoli NY ISO #2	No This does not capture the wide range of possible risks associtated with not meeting the intent of this requirement.
Gerald Rheault Manitoba #1,3,5,6	No Manitoba Hydro believes that the times referenced are artificial and don't relate to system need and risk. Time frames should be determined based on system need and the relative risk posed to the system of not having these tools operational.
George Bartlett Entergy Svcs 1	No Levels of non-compliance should be based on the RAs not analyzing the system as needed to determine system limitations. The levels of non-compliance, as specified, will direct the RAs efforts to running an analysis "when requested", rather than analyzing the system. Therefore, we suggest changing the levels of non-compliance in a direction that will incent the RA to properly analyze the system.
Francis Halpin BPA Bus Line #5,6	No Not stringent enough.
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Doug Hils Cinergy #1	No Requirement are being duplicated between RA's and TOP's The standard should require that the realibility analysis is being done by one or the other. It should not be necessary for both to duplicate the efforts. The RA in our case has a much better view of the setup and transactions taking place across the grid. TOP view of the world would be very limited in comparison.
Fred Frederick Vectren #3	No
David Kiguel Hydro One #1	Yes/No We are unsure what type of analysis would be required here and it is unclear how often it would need to be performed. From a reliability standpoint, operational planning studies would be done that considers adequacy and system outages. We agree with the requirement but there is insufficient detail to measure compliance. Please see our comments under item # 44 (Regional and Interconection Differences).
Roman Carter So Co Gen 3,5,6 (6 members)	Yes We agree with the form of non-compliance but without complete knowledge of how often the studies will be performed, we're not sure that the timeframes are adequate or not.

Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Charles Yeung Reliant Energy #6 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Karl Kohlrus CWL&P #5 Lee Xanthakos SCE&G #1 Mike Miller Southern Co #1 Richard Kafka Pepco #1 Stuart Goza TVA #1 Todd Lucas (6?) Southern Co #1 Tony Jankowski We-Energies #4 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

19. Requirement 11 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirements inappropriate for the TOP – belongs to the RA	
Doug Hils Cinergy #1	No Duplicated effort of the RA in standard 210
FRCC 6-#1, 4-#2, 1-#2	No It would seem that this requirement is really unnecessary. Requirement 10 has the RAs performing the analysis and that should be all that is needed. However, if it were to stay, TOPs should not be required to run on-line/real-time automated studies to identify and/or forecast bulk reliability concerns. NERC should not expect every TOP to acquire and maintain on-line reliability analysis tools without adequate reliability benefit to justify such a costly universal requirement - particularly since the RAs will be required to use such tools anyway.
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	No In the ERCOT Region, the primary responsibility for such analysis is ERCOT as the RA. This is in conjunction with any analysis the TOP performs, but the TOP does not have the primary responsibility. In other words, the RA is responsible for these analysis. Also, please refer to our comments to Q28. *{We agree with the Requirement; however, as written, it assumes that all RAs have online reliability analysis programs to identify the applicable limits. In fact, many use off-line studies to perform base case analyses, which are translated into cyclic computer calculations.}*
Vern Colbert Dominion #1	No The RA should perform this analysis
Richard Kafka Pepco #1	No This is an RA responsibility
Toni Timberman BPA #1	No Again, according to the Functional Model the TOP has no responsibilities related to the bulk transmission system. Also see comments to Requirement 10. *{ Lots of comments here….what is the definition of "problems"? Is the requirement saying that studies must be done until they come up with a scenario that would cause instability, etc? Taken literally, that is what this requirement is asking for. Must the studies run until they identify the 6-line, 3-substation outage combination that would tip the system over the edge? Realistically, the requirement should specify "n-1, n-2" types of studies, or "credible contingencies", etc. Required analyses should be in line with the NERC Reliability Criteria. The requirement seems to be backwards. The RA should evaluate its current operating condition to assess that the system is secure from instability, etc. If the Operational Planning studies were done correctly, no "problem" should be identified that could cause instability, etc. Also, there is nothing in the requirement that indicates a "program should run", but that is what the measure and the compliance levels are related to. This seems to have been made (inadvertently?) very specific to real-time analysis programs, and I don't believe that is the intent. The outcome mentions "shall run programs" but nothing is said about this in the requirement. Having a dispatcher (operator) assess the condition of the power system is valid "reliability analyses" according to the explanation of terms at the front of this comment form, but I don't believe this could be considered running an analysis program.}*

Susan Morris SERC #2 Robert Reed TS (See List)	No This requirement should be eliminated - Requirement 10 (at the RA level) is adequate. See response to Question number 2. *{1) RAs should be required to run (on-line/real-time) automated studies and off-line operational planning studies to identify and/or forecast bulk reliability concerns, but TOPs should not be subject to such requirements. The standard does not read as though manual analysis is sufficient, as it references "analysis tool" availability and then makes mention of "reliability analysis did not run" in multiple locations. This verbiage indicates that manual reliability analysis is not sufficient. Therefore, modifications should be made to alter this requirement for the TOPs. Expecting every TOP to acquire and maintain on-line reliability analysis tools is too expensive and too obtrusive without adequate reliability benefit to justify such a universal requirement - particularly since the RAs will be required to use such tools anyway.* *2) What is the scope of the term "real time"? The footnote appearing on pg.1 of Version A defines "real time" but it is still not clear if this is restricted to data extracted from the Energy Management Systems, and does a reference to "real-time" conceptually imply data, or processes, or both?* *3) What is the definition and scope of "operational planning analysis"?* *4) It seems the Reliability Analysis definition above is an attempt to conceal the fact that many existing entities performing Reliability Authority Functions do not have a working state estimator. The RA should explain what type of of analysis tool(s), the frequency, the type of input data (off-line or real-time), etc. that is used to perform "reliability analysis".* *5) Why are the analysis requirements of the RA and the TOP identical? If this is true, why do we need an RA and a TOP?* *6) Why isn't there a standard for the TOP to provide telemetered data? There should be some type of performance standard established to assess the accuracy of telemetered data.}*
Ray Morella Joanne Borrell Ed Stein FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No Requirements 210 and 211 are very similar. Requirement 210 applies to Reliability Coordinators. Requirement 211 applies to Transmission Operators. The requirements are duplicative. The standard should require a reliability analysis to be performed by either the Reliability Coordinator or the Transmission Operator, but not both of them. There is nothing wrong with both of them doing a reliability analysis if they so wish, but both of them should not be forced to do so. There is nothing wrong with a Transmission Operator delegating this responsibility to a Reliability Coordinator or a Reliability Coordinator delegating this responsibility to a Transmission Operator
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No The Transmission Operator may not have the wide area data that is available to a Reliability Coordinator and may not have as extensive a model as the Reliability Coordinator. There may be differences between the reliability analysis done be the Transmission Operator and the Reliability Coordinator. There needs to be coordination between the Transmission Operator and Reliability Coordinator on these analysis.
Raj Rana AEP #1,3,5,6	No This is duplicative to Requirement #10. Why should the RA and TOP be required to perform the same analysis? We do not dispute that redundancy is good nor that many TOP's will perform this fucntion. However, a NERC Reliability standard should not require the TOP to do this as this is clearly within the scope and function identified for the RA. The TOP should be clearly required to implement

	and follow the directives that an RA may issue due to their performance of a reliability analysis for their footprint. Further, we do not believe this is a function that the RA should be allowed to delegate to another party. Define the time horizon.
Peter Burke ATC #1	No RA should take the lead & TOP should assist but not be held to RA standard. Same comments as in 12. *{I am not aware of many TOPs that have the tools needed to study voltage stability and/or transient stability for their systems in real time. MISO has these tools and is working to implement them. If the standard is implemented as written it will require a significant investment and development effort at many sites to put the necessary reliability monitoring tools in place. When done, we have duplication of effort and significant costs incurred with a limited benefit to the system.* *I do believe that the TOP should be capable of monitoring its system and analyzing to make sure it can survive first contingency events and maintain operations within acceptable guidelines. This requires a functioning State Estimator, Security Screening/Contingency Analysis, and Online Power Flow.}* A basic analysis tool set (SE, SA, and PF) should be running at the TOP shop. The more advanced tools like voltage stability, transient stabilty, etc. may be better suited to the RAs.
Charles Yeung Reliant Energy #6	No It is unclear what the relationship and responsibilites of the TOP are as compared to the RA. The Standard proposes the same langauge for both functions. What is the reporting relationship and operational heirarchy between the RA and the TOP? Is the TOP analysis more "local" in nature than the RA analysis? What if each one's analysis does not agree? Which analysis will prevail to ensure grid reliability?
Francis Halpin BPA Bus Line #5,6	No The drafting team should consider the requirement for TOP's to run reliability analysis "programs" in the context of the small, non-RTO, Transmission Operator who may not have access to these tools. Again, clarity as to when the analysis must be completed.
Joseph Buch Madison #4	No See comments on question 28. *{ There are two portions of the bulk transmission system that must be analized for reliable operation. One is the portion that involves inter-regional or major regional areas and the other involves sub-regional or more localized areas. Having one entity trying to address both could result in items being overlooked. The RA should be responsible for the overall regional and interregional system. The TOP should be responsible for the sub-regional and local system which generally consists of the system operating at less than 200 kV.}*
Albert M. DiCaprio MAAC #2	No As noted above the TOP is not responsible for system analysi (which is the only way it could identify an OSL). Therefore in the Relaibility Standards process that responsibility still lies with the RA. The RA can provide the data to the TOP as needed or as agreed to (e.g. they can agree that the TOP gets the data directly)
Lloyd Linke MAPP #2	No RAs should be required to run (on-line/real-time) automated studies to identify bulk reliability concerns, but TOPs should not be subject to such requirements. I

	don't believe the Standard reads as though manual analysis is sufficient, as it references "analysis tool" availability and the makes mention of "reliability analysis did not run" in a multiple locations. This verbiage indicates that manual reliability analysis is not sufficient. Therefore, modifications should be made to alter this requirement for the TOPs. Expecting every TOP to acquire and maintain on-line reliability analysis tools is too expensive and too obtrusive without adequate reliability benefit to justify such a universal requirement - particularly since the RAs will be required to use such tools anyway. See comment under question #7 regarding the definition of operating limits. *{ System operator limits as defined herein is appropriate for RAs, but should not be defined as provided herein for TOPs. For TOPs, system operating limits should not include only those limits which have been identified as leading to cascading outages, instability, or uncontrolled separation. This is a major issue in terms of the scope. As conceived herein, this standard does not result in any entity assuring that the bulk power system is operating within limits, it only results in operating within those limits for which violations result in instability/cascading outage risk. That is inappropriate. Any defined operating limit, which has been identified as potentially threatening bulk reliability and thereby requiring consistent monitoring and adherence, should be covered by this standard.}*
No – Comments indicating additional clarification needed	
Kathleen Goodman ISO NE #2	No This needs clarification. Who is requesting that these programs be run? What type of programs? If there is no request, and nothing is done to study a potential reliability problem, is there non-compliance?
Ed Riley CA ISO #2	No. See response to question #28 *{The types of reports that would be needed to identify "problems that could cause instability, uncontrolled seperation or cascading outages.." are not done quickly, making it difficult to perform them in real-time. The wording of the Requirement sounds like these would be required in real-time, and it is not possible for a RA to complete them in this time-frame.}*
Gregory Campoli NY ISO #2	No There is insufficient detail in measuring compliance with this requirement. This requirement identifies both operational analysis and real time analysis which implies various time frames for assessment.
No – Comments suggesting specific modifications to the requirements	
Alan Johnson Mirant #6	No The measure should specify which functions can make a request of the TOP. There may also be a need to make a distinction between real-time and planning requests.
Thomas Pruitt Duke #1	No There should be some provision for the analysis to be performed by a third party.
Alan Boesch NPPD #1	No The measures and outcomes should be related to violating System Operating Limits and not be limited to instability, uncontrolled separation ore cascading outages. See comments to question no. 10 above. *{The measures and outcomes should be related to violating System Operating Limits and not be limited to instability, uncontrolled separation ore cascading outages. See comments to question no. 10 above.}*
George Bartlett	No

Entergy Svcs 1	Our comments to Requirement 10 apply here also. *{ We agree with this requirement in general. However, we suggest removing the term "when requested" from the Measures and add "as needed" in its place. The RA should be able to run analysis programs "when requested". It is more important he run the programs when needed to analyze the system limitations.}*
Fred Frederick Vectren #3	No
Yes – Comments suggesting additional clarifications	
Kim Warren IMO #2	Yes/No Yes ,only if it is recognized that in some jurisdictions, the TOP may be the same entity as the RA but does not necessarily perform all of the roles(eg. switching,maintenance,outage & construction notification) that the Functional Model defines for the TOP. Where the RA and the TOP are different, there needs to be a clear distinction of which system limits each are accountable for. This document should be reworked to be consistent with the recently issued OLD TF report.
David Kiguel Hydro One #1	Yes/No We are unsure what type of analysis would be required here and it is unclear how often it would need to be performed. From a reliability standpoint, operational planning studies would be done that considers adequacy and system outages. We agree with the requirement but there is insufficient detail to measure compliance. Please see our comments under item # 44 (Regional and Interconection Differences).
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	Yes/No We are unsure what type of analysis would be required here and it is unclear how often it would need to be performed. From a reliability standpoint, operational planning studies would be done that considers adequacy and system outages. We agree with the requirement but there is insufficient detail to measure compliance
Lee Xanthakos SCE&G #1	Yes/No See comment for question 12. *{ I agree with requirements, but I do not agree that it written exactly the same as the RAs. As a matter of fact, my opinion of the entire draft is that a distinction is made between the requiremsnt of an RA and a TOP. Why have two entities required doing the same thing?}*
Lee Westbrook Oncor #1	Yes See Requirement 10. *{ Do the analyses include the calculation of operating limits?}*
Gerald Rheault Manitoba #1,3,5,6	Yes See comment for #28. *{ Manitoba Hydro agrees with the use of online reliability analysis programs to identify possible instability, uncontrolled separation or cascading outages that could adversely impact the reliability of the bulk transmission system. The analysis performed will identify the possibility of problems occurring but will not determine the secure operating limit for the system. Steps should then be taken by the RA to put the system in an operating mode to ensure that Operating Security Limits will not be violated.}*
John Blazekovich Exelon #1,3,5,6	Yes Although we agree with the need for the requirement we find the wording of this

	requirement to be somewhat ambiguous. The wording suggests that the RA or TOP is required to run studies until a cascading outage is found. We believe that the intent should be to analyze "Planned for Contingencies" and identify problems if any are found, but the wording does not state this. The RA or TOP should develop and document their "Planned for Contingencies" and should only be required to run reliability analysis to analyze these "Planned for Contingencies".
Tom Petrich (5) PG&E #1	Yes Please modify the sentence to read: "The TOP shall run reliability analysis program(s) and the program(s) shall identify potential problems, if any, that could cause generation and transmission facility overloads, instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system." We should not lose sight of the responsibility of the TOP to take proper actions to correct the problems that it has identified.
Roman Carter So Co Gen 3,5,6 (6 members)	Yes However we have the same comments as in question #28. *{ Agree with the requirement, but there is insufficient information on the analysis and how often it would be performed.}*

Bob Burkard NCMPA1 # 3,4,5 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Mike Miller Southern Co #1 Roger Green Southern Co #5 Stuart Goza TVA #1 Todd Lucas (6?) Southern Co #1 Tony Jankowski We-Energies #4 William Smith Allegheny Pwr #1	Yes

20. Requirement 11 - Do you agree with these levels of non-compliance for this requirement?

No – Comments indicating additional clarification needed	
Alan Johnson Mirant #6	No Should be a distinction between non-compliance for real-time and planning requests.
Alan Boesch NPPD #1	No Is there a difference between "run" and converge? A program can run but not produce useful results. It also seems there should be some period of time to permit the solution to converge prior to being out of compliance. It is not realistic to get convergance 100% of the time on real-time programs
Kim Warren IMO #2	No A minimum time standard should be built into this complience issue similar to "Exceeding an Operating Limit but Not a Reportable Violation" (question 5 & 6). There should be a time allowance for short term failures (i.e. < 30 minutes) of the run of reliability analysis programs, under normal system conditions, before reporting is required.
Raj Rana AEP #1,3,5,6	No Non-compliance measures are too vague. What if the reliability analysis did not run when requested but ran within 5or 10 minutes? What if the reliability analysis ran but the solution did not converge due to missing data, etc? There should be a different requirement and measure for real-time reliability analysis and operational planning analysis. Also, by the definition you provided, reliability analysis also includes system operator assessments. So by strict interpretation, as long as the RA's system operator assesses the situation, he would never be in violation of this requirement. As we said, this requirement and it's measures are too vague. Define the time horizon. Should the concern be limited to those thermal overloads and voltage conditions that lead only to catastrophic events?
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Tom Petrich (5) PG&E #1	These levels of non-compliance are not clear to us. Who is “requesting” the reliability analysis and what is the basis? How does this relate to the actual operation of the system? In WECC, we require the system be adjusted within 20 minutes to reduce flows on stability limited paths to be within their operational limits for the system conditions. We would expect the reliability analysis be requested and performed well in advance so the RA is prepared to monitor and take corrective actions.
Roman Carter So Co Gen 3,5,6 (6 members)	We have the same comments as in question #29 *{ We agree with the form of non-compliance but without complete knowledge of how often the studies will be performed, we’re not sure that the timeframes are adequate or not.}*
Gerald Rheault Manitoba #1,3,5,6	See comment for #29. *{ Manitoba Hydro believes that the times referenced are artificial and don’t relate to system need and risk. Time frames should be determined based on system need and the relative risk posed to the system of not having these tools*

	operational.}
No – Comments indicating compliance levels inappropriate	
Ray Morella Joanne Borrell Ed Stein FirstEnergy #1, 3, 6	No The Transmission Operator should be allowed to use a previous reliability analysis that covered simiar system conditions if the reliability analysis could not be run because of computer problems or was duplicative of a previous reliability analysis. Such action should not result in a non-compliance.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No The Transmission Operator should be allowed to use a previous reliability analysis that covered simiar system conditions if the reliability analysis could not be run because of computer problems or was duplicative of a previous reliability analysis. Such action should not result in a non-compliance.
George Bartlett Entergy Svcs 1	No Our comments to Requirement 10 apply here also. *{ Levels of non-compliance should be based on the RAs not analyzing the system as needed to determine system limitations. The levels of non-compliance, as specified, will direct the RAs efforts to running an analysis "when requested", rather than analyzing the system. Therefore, we suggest changing the levels of non-compliance in a direction that will incent the RA to properly analyze the system.}*
Kathleen Goodman ISO NE #2	No From the information the writer has provided we would suggest that the level of non compliance should be based on findings that the system was found to be in an operating state that could have resulted in "instability, uncontrolled separation etc" due to the fact that an effective reliability analysis was not done, that would have identified the condition.
Gregory Campoli NY ISO #2	No This does not capture the wide range of possible risks associtated with not meeting the intent of this requirement.
Joseph Buch Madison #4	No See comments on question 29. *{ Of major concern is the case where a critical element has been forced out of service. Having the reliability analysis not run within 24 hours is not acceptable under these conditions. The real time system should not have to run "blind" for more than 24 hours. This should be classified as level 4 non-compliance. Also levels 1 & 2 should be classified as levels 2 & 3.}*
Toni Timberman BPA #1	No See comments to Requirement 10 *{ Compliance levels are not related to the requirement. A better measure would be whether the RA recognized (or didn't) that there was a need to perform analysis, and whether the analysis was done (or wasn't). The measures and compliance should assess whether the RA did analysis rather than program performance.}*
Francis Halpin BPA Bus Line #5,6	No Too lax.
No – Comments indicating requirement is inappropriate	
FRCC 6-#1, 4-#2, 1-#2	No We really do not think this requirement is necessary.

Doug Hils Cinergy #1	No Requirement 12 and 13 duplicate activites between the RA and the TOP's. In general I agree with the requiremement but only one enity should be required to fulfill requirement.
Susan Morris SERC #2 Thomas Pruitt Duke #1 Robert Reed TS (See List)	No See 30. *{This requirement should be eliminated - Requirement 10 (at the RA level) is adequate. See response to Question number 2.}*
Lloyd Linke MAPP #2	No See #30 *{ RAs should be required to run (on-line/real-time) automated studies to identify bulk reliability concerns, but TOPs should not be subject to such requirements. I don't believe the Standard reads as though manual analysis is sufficient, as it references "analysis tool" availability and the makes mention of "reliability analysis did not run" in a multiple locations. This verbiage indicates that manual reliability analysis is not sufficient. Therefore, modifications should be made to alter this requirement for the TOPs. Expecting every TOP to acquire and maintain on-line reliability analysis tools is too expensive and too obtrusive without adequate reliability benefit to justify such a universal requirement - particularly since the RAs will be required to use such tools anyway.* *See comment under question #7 regarding the definition of operating limits.* *{ System operator limits as defined herein is appropriate for RAs, but should not be defined as provided herein for TOPs. For TOPs, system operating limits should not include only those limits which have been identified as leading to cascading outages, instability, or uncontrolled separation. This is a major issue in terms of the scope. As conceived herein, this standard does not result in any entity assuring that the bulk power system is operating within limits, it only results in operating within those limits for which violations result in instability/cascading outage risk. That is inappropriate. Any defined operating limit, which has been identified as potentially threatening bulk reliability and thereby requiring consistent monitoring and adherence, should be covered by this standard.}*
Peter Burke ATC #1	No Same as response to Question #29, subject to advice provided to Question #30. *{The MISO Day 2 market relies on analysis tools running every 5 minutes. Not sure that 8 hours is an acceptable cutoff for level 1 non-compliance.* *It is unreasonable that an analysis not running once but recovering to run in a few minutes would still be considered non-compliance. Level 1 non-compliance should allow a buffer of time for the start of the analysis, maybe 1 or 2 hours, to be compliant. The reason is that some analyses (e.g., dynamic stability) can take 1 or 2 hours to set up the appropriate cases for the analysis and have the runs completed. Level 1 non-compliance would be more reasonable if written as follows:* *"Reliability analysis did not run within 1 (or 2) hour(s) of request, but ran within 8 hours."* *There is some concern as to how MISO can maintain an accurate model of the system based on the size of the system MISO's required to model and the number of changes being made to this system. Another concern is how reliable the network analysis tools can be when relying on ICCP as their only data source.*

	Some of this data may be second hand which will tend to complicate analysis.} Additionally, if system conditions are "normal," it may be acceptable to lose applications for an extended period of time (possibly 1 hour) without this being a problem. Alternatively, at some times, the loss of study tools for 10 minutes can be a disaster. A flat 8 hour cutoff may force TOPs to have applications support personnel on site around the clock which may not be necessary. Non-compliance should be defined in a way that conforms to Operator sense of urgency for the analysis tools.
No – Other comments	
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Fred Frederick Vectren #3 Albert M. DiCaprio MAAC #2 Vern Colbert Dominion #1 Richard Kafka Pepco #1	No
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	Yes/No Please see comments to #29 above. {*Please see comments to #28 above. Also, the Requirement is seemingly more important than it is depicted here. Instead of skipping Level 4, should use Levels 2, 3, and 4 with the caveat of having appropriate predetermined analyses to take the place of real-time analyses.}* *{We agree with the Requirement; however, as written, it assumes that all RAs have online reliability analysis programs to identify the applicable limits. In fact, many use off-line studies to perform base case analyses, which are translated into cyclic computer calculations.}*
Bob Burkard NCMPA1 # 3,4,5 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Karl Kohlrus CWL&P #5 Mike Miller Southern Co #1 Stuart Goza TVA #1 Todd Lucas (6?) Southern Co #1 Tony Jankowski We-Energies #4 William Smith Allegheny Pwr #1	Yes

21. Requirement 12 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirement is inappropriate	
Lee Xanthakos SCE&G #1	No We do not agree with this requirement. Furthermore we do not agree that NERC has the authority to force such a requirement onto the RAs. As written, the requirement essentially bestows functional control to the RA. This is something the South Carolina PSC has expressly ruled is the responsibility of the TSP and no one else. Actual and functional control of the transmission system is the responsibility of SCE&G's transmission department. This responsibility can not and will not be transferred to any other entity without expressed approval of the Public Service Commission. This approval has not been given nor is it expected to be given, regardless of SCE&G's desires We recommend that drafting team should instead write a standard that requires the RA to notify the TSP of a imminent situation and provide assistance, if requested, so the TSP can implement their own mitigation plans.
Vern Colbert Dominion #1	No RA should prevent an identified problem beforehand. He can only mitigate when there is an actual emergency.
Todd Lucas (6?) Southern Co #1	No The RA itself cannot take direct action to prevent/mitigate potential problems. The requirement should be that the RA notify the responsible parties that can take direct action.
Charles Yeung Reliant Energy #6	No The RA must not act when there are market mechanisms available to mitigate/prevent the identified problem. This Standard must recognize that such congestion management processes will be accomodated by the RAs before RAs take actions. The Standard must coordinate with the business practice or standard that will be employed to relieve congestion or anticipated system problems.
No – Other comments	
William Smith Allegheny Pwr #1	No Requirement 212 and 213 are very similar. Requirement 212 applies to Reliability Authorities and requirement 213 applies to Transmission Operators. There should be some coordination so that the two entities don't take different actions.
Ed Stein Joanne Borrell Ray Morella FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2	No Requirements 212 and 213 are very similar. Requirement 212 applies to Reliability Coordinators. Requirement 213 applies to Transmission Operators. The requirements are duplicative. The standard should require actions be taken to prevent/mitigate identified problems by either the Reliability Coordinator or the Transmission Operator, but not both of them. It should be clear in the agreement between the Transmission Operator and their Reliability Coordinator who has authority to take the action to correct or mitigate a problem. Having two different entities responsible to take action to correct a problem is troublesome. The possiblity exists that the two entities may decide on different courses of action to solve the problem. Valuable minutes may be squandered by the two different entities attempting to coordinate actions. Only one entity should have the responsibility to take action and that responsibility needs to be clearly delineated.

No – Comments suggesting specific changes	
Thomas Pruitt Duke #1	No Change the wording from "take actions necessary" to "direct actions necessary". This requirement is actually 2 requirements - the action and documentation of the action. The requirement/measure should be separated into two separate requirements.
Doug Hils Cinergy #1	No Level four as needs to be rewritten to only include action not taken on the part of the RA and exclude items outside control.
No – Comments suggesting additional clarification needed	
Susan Morris SERC #2 Robert Reed TS (See List)	No Should not combine the terms "prevention" and "mitigation" in the same requirement/measure unless the language is clear to eliminate potential ambiguity. Prevention and mitigation are actions that may be undertaken in two different timeframes. Without clear language, the requirement/measure should be separated into two separate requirements to address the prevention and mitigation as separate issues. (SERC Only: This requirement and requirement 14 should be combined and rewritten to require that the RA have procedures in place that specifies actions needed to preserve reliable operation of the system.)
George Bartlett Entergy Svcs 1	No This requirement should be revised to clearly separate "prevent" and "mitigate" identified problems. This is also difficult to quantify. Suppose a next-hour contingency analysis is run based on expected load and generation and it shows a slight post-contingent overload. Then, the weather changes in the area of the overload, causing no overload (projected post-contingent) in real-time. Was this a Level 3 violation? The RA should forecast problems and observe the trajectory of the trends and then determine the appropriate course of action or inaction as the case may be.
Gregory Campoli NY ISO #2	No The reference "to prevent" is related to real time monitoring and "mitigate" is related to operational planning analysis ? These requirements should be made clear.
Raj Rana AEP #1,3,5,6	No We agree with the overall intent of this requirement. However, additional language is required. It seams the only desired outcome of this requirement is that the RA have documentation. Shouldn't another desired outcome be that the system is operated reliably? Hence a key component missing is that of the RA directing the TOP or BA to take action, as the RA typically cannot take any actions other then to give directives. Should the concern be limited to monitoring only those levels of thermal overloads and/or voltage conditions that lead to catastrophic events? How does this requirement fit with the current NERC TLR process? Suggested revisions noted below: **Requirement 12:** The Reliability Authority (RA) shall use the results of real time monitoring and/or reliability analyses to take and direct actions necessary to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission

	system. The RA shall document actions taken or directed. **Measure(s):** Documentation showing that actions were taken or directed to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. **Outcome(s) (100% Compliance):** The RA shall document actions taken or directed to mitigate/prevent identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.
Ed Riley CA ISO #2	No See response to #28. *{ The types of reports that would be needed to identify "problems that could cause instability, uncontrolled seperation or cascading outages.." are not done quickly, making it difficult to perform them in real-time. The wording of the Requirement sounds like these would be required in real-time, and it is not possible for a RA to complete them in this time-frame.}*
Alan Boesch NPPD #1	No The measures and outcomes should be related to violating System Operating Limits and not be limited to instability, uncontrolled separation ore cascading outages. See comments to question no. 10 above. *{I am very confused by this Standard. Who is going perform these functions the TOP or the RA. The Standard appears to have both performing the same function. The Standard needs to define the relationship between the RA and TOP. Maybe that could be accomplished in a opening paragraph. The requirements on the limits may be too broad. For example, an operating limit should also protect the safety of the public. If a facility was loaded to the point where it no longer met clearance requirements, the RA should respect these limits. The standards also seem to ignore voltage limits. There are limits to how high or low the voltage should be allowed to go before action is required. In addition to steady-state voltages, there should be a limit on transient voltages as well. It is not clear from this standard that these limits apply.}*
Yes – Comments suggesting additional clarifications	
Richard Schwarz PNSC #2	Yes The RA should direct rather than take action.
Toni Timberman BPA #1	Yes Functional Model requires RA to “direct” actions rather than “take” actions. TOP or BA would be the entities actually “taking” action. Again, need to know definition of “problems”. Is there a requirement for 3-year retention of information associated with this requirement?
Kathleen Goodman ISO NE #2	Yes Please also make provisions for mitigating actions which were not previously identified by a study, but cleared the limit violation.
James Stanton Calpine #5	Yes Would like to see language in the Measure to the effect this documentation of actions taken will be readily available to all participants. This would help insure that potential discriminatory actions do not occur, and if they do, will be discoverable. If it is not readily available then the RA is non-compliant. The Measure and Non-compliance levels should also contain a time period when the

	documentation will be available.
Peter Burke ATC #1	Yes The need is clear and the TLR process is a first step in tracking these kinds of activities. This could be worded more carefully to describe "documentation" that is reasonable and applicable in the normal course of business without being open to an interpretation requiring extraordinary and unreasonable documentation.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	Yes It should be noted that prevention and mitigation are actions that may be undertaken in two different timeframes.
Yes – Other comments	
Albert M. DiCaprio MAAC #2	Yes As written this requirement mandates the RA to take action (while at the same time leaving the procedures, services and processes up to the individual RAs). The requirement also allows preventive and well as corrective actions to be taken
FRCC 6-#1, 4-#2, 1-#2	Yes We do support this requirement, but have concern about the type of documentation that is contemplated. This may need to connect back to the work of the OLDTF and what is reportable or not. We would not support keeping a lot of documentation for things that are not reportable. Documentation can be costly and we do not favor doing it unneccessarily. Regions may already have documentation requirements so we would like to see more details on what is envisioned here.
OLDTF (9?) 6 - #2 1 - #1,5	Yes Agrees with OLDTF report.

Alan Johnson Mirant #6 Bob Burkard NCMPA1 # 3,4,5 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Francis Halpin BPA Bus Line #5,6 Fred Frederick Vectren #3 Gerald Rheault Manitoba #1,3,5,6 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Lee Westbrook Oncor #1 Lloyd Linke MAPP #2 Mike Miller Southern Co #1 Richard Kafka Pepco #1 Roger Green Southern Co #5 Roman Carter So Co Gen 3,5,6 (6 members) Sam Jones ERCOT #2 Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 Tony Jankowski We-Energies #4	Yes

22. Requirement 12 - Do you agree with these levels of non-compliance for this requirement?

No – Comments indicating Levels 2 and 3 are the same	
FRCC 6-#1, 4-#2, 1-#2	No We are not sure what the difference is between level 2 and level 3. Also, if the RA gave direction to a TOP or BA to implement a mitigation plan, and the TOP or BA did not do it in time, who would the non-compliant party be? The RA's responsibility it to monitor and take action, which could be giving direction to some other entity, so it would seem like the noncompliance levels need to focus on did the RA do what they should do, or not.
Alan Boesch NPPD #1	No What is the difference between two and three? If it is the difference between documenting and reporting a violation (the amount of time over the limit), this needs to be clarified in the standard. The items in No. 4 need to be expanded based on comments to question No. 10.
Sam Jones ERCOT #2OLDTF (9?) 6 - #2 1 - #1,5	No Level 2 and 3 appear to be the same.
John Blazekovich Exelon #1,3,5,6	No Do not understand the difference between items 2 & 3 - clarification is needed.
Thomas Pruitt Duke #1	No What is the difference between levels 2 and 3?
Kathleen Goodman ISO NE #2	No Levels two and three appear to be identical.
Tom Petrich (5) PG&E #1	No Non-compliance Levels 2 and 3 do not seem reasonable. For example, during emergencies, the correct action may be “no action”. In any case, If no limit violation has occurred, what is the basis of the “non-compliance”. They should be changed to “not applicable”.
No – Comments indicating levels of non-compliance inappropriate	
Todd Lucas (6?) Southern Co #1	No The levels of compliance should be tailored to the requirement for notification by the RA to prevent/mitigate OSLVs and/or instability, uncontrolled cascading, etc. Consideration should be given to combining requirements 12 & 14.
Gerald Rheault Manitoba #1,3,5,6	No The issue should not be one of violation not occurring because the contingencies considered didn’t happen. The issue should be one of risk and recognition of the impacts of the contingencies such that operation must be to limits based on these contingencies.
Charles Yeung Reliant Energy #6	No These compliance measures do not recognize the accomodation and coordination with market mechanisms to achieve the reliability objective.
Joseph Buch Madison #4	No Level 4 as presently defined indicates that instability, uncontrolled seperation or

	cascading outages have already occurred. This might be akin to locking the barn after the horse is out. We should be a level 4 if the potential exists, not after it happened.
Ray Morella Joanne Borrell Ed Stein FirstEnergy #1, 3, 6	No We agree with Non-compliance levels 1, 2, and 3. Non-compliance level 4 is where I have a problem. We don't think that the Reliability Coordinator should be charged with a level 4 non-compliance when he took the action necessary to prevent the problem but some other entity did not take the necessary required action.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No I agree with Non-compliance levels 1, 2, and 3. Non-compliance level 4 is where I have a problem. I don't think that the Reliability Coordinator should be charged with a level 4 non-compliance when he took the action necessary to prevent the problem but some other entity did not take the necessary required action. For instance, if the Reliability Coordinator ordered a Balancing Authority to drop load because of low or declining frequency and the Balancing Authority did not drop the load, then the level 4 non-compliance should be charged to the Balancing Authority not the Reliability Coordinator.
No – Comments indicating requirement is inappropriate	
Lee Xanthakos SCE&G #1	No NERC does not have the authority to require RAs to take action on TSP equipment for which they are not allowed to have functional control
Doug Hils Cinergy #1	No Duplicate of requirement 12
No – Comments indicating addressing non-compliance is premature	
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
Susan Morris SERC #2 Robert Reed TS (See List)	No Question 32 needs to be addressed and resolved before the levels of non-compliance can be determined.
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
No – Mix of comments	
Peter Burke ATC #1	No Should entities be penalized for things that might have happened but didn't? How much faith do we place in analysis results? If an overload would have been 1% over rating and nothing happened, is that a problem. 5%? 10%? If something happens, some type of penalty/written reprimand should be issued with a lesson learned follow-up to make sure it does not happen again. Hopefully a system isn't created that discourages people from reporting problems to avoid fines and thereby miss the opportunity to analyze a problem to prevent it in the future. Level 3 non-compliance doesn't appear to be different from level #2. Level 4 non-compliance should forgive extraordinary and severe causes as follows: System operating limit violated and resulted in instability, uncontrolled separation or cacading outages that adversely impacted the reliability of the bulk

	transmission system without the influence of severe storms, sabotage, or other extraordinary conditions.
Raj Rana AEP #1,3,5,6	No Level 2 states "no actions or incorrect actions were taken . . ." The determination that the RA's actions were incorrect would be by after the fact analysis performed by whom? Additionally, would it be necessary to determine whether the actions taken were due to gross negligence or due to an "honest" error or misinterpretation of the data? Would non-compliance sanctions differ based upon gross negligence vs. honest error? We are not sure what the difference between Level 2 and Level 3 is. Please clarify. Some "what ifs": What if the system operating limit (SOL) was violated and thus the bulk transmission system was at risk but actual instability, uncontrolled separation, or cascading outages did not occur? What level of non-compliance should this be? What if the SOL was violated, and the RA had directed the TOP and/or BA to take action but the TOP and/or BA did not take the action? As stated above, the RA is non-compliant. But, inreality the TOP and/or BA should be found non-compliant. What if the SOL is violated, and the RA has directed the TOP and/or BA to take action, and they are in the midst of taking that action, but prior to the action being fully implemented, instability, uncontrolled separation or cascading outages occur? Is anyone non-compliant and if so at what level?
George Bartlett Entergy Svcs 1	No In general, this requirement is somewhat subjective and difficult to quantify. Operators will become unnecessarily conservatve in order to meet this requirement. Also, levels 2 and 3 of non-compliance must be revised, they are exactly the same. Level 2 should read something like - "Monitoring and/or reliablity analyses idetntide a potential problem - no actions, or incorrect actions, were taken but no limit violation ". Level 3 should read something like - "Monitoring and/or reliability analyses identified a problem, actions were taken but were not sufficient to mitigate the problem, but no instability, uncontrolled separation or cascading outages ocurred. Level 4 seems OK.
No – Comments indicating additional clarification needed	
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate. Further clarification is requested regarding the difference between violation and limit violation.
Vern Colbert Dominion #1	No
Fred Frederick Vectren #3	No
Yes – Mix of comments	
Toni Timberman	Yes/No

BPA #1	Suggest revising as follows: 1. Monitoring and/or reliability analyses identified a problem – no actions or incorrect actions were taken but no reportable violations occurred 2. Monitoring and/or reliability analyses identified a problem – correct action was taken but not to the extent necessary. Reportable violation occurred. 3. Monitoring and/or reliability analyses identified a problem – no actions (or incorrect actions) were taken. Reportable violation occurred 4. System operating limit violated and resulted in instability, uncontrolled separation or cascading outages that adversely impacted the reliability of the bulk transmission system
Yes – Comments suggesting additional clarification	
Richard Schwarz PNSC #2	Yes Levels of non-compliance should measure whether or not the RA identified a reliability problem, were actions (correct or incorrect) taken, and did a reportable violation occur
Tony Jankowski We-Energies #4	Yes #2 should state that a system operating limit was exceeded, but no violation. #3 should state that a system operating limit violation occurred.
Albert M. DiCaprio MAAC #2	Yes There is a definite need here to recognize that NO ACTION “can be” a definitive activity (ergo not to be held as a non-compliance indicator)
Lloyd Linke MAPP #2	Yes "Problem" is too vague. Also, this should not be tied soley to instability, uncontrolled seperation, or cascading… other operating limits also need to be consistently adhered to. System Operating Limit should be in caps to be consistent with the definition on page 2.
Yes – Comments suggesting Levels 2 and 3 are identical	
Darrel Richardson Illinois Power #1, 3	Yes We agree with the levels, however we are curious as to the difference between Level 2 and Level 3. If these mean the same, then one should be eliminated. Perhaps there should be a definition of both a "limit violation" and "violation".
Francis Halpin BPA Bus Line #5,6	Yes But..is there really a substantive difference between level 2 and level 3? Should three read "..no reportable violation occurred"????
Kim Warren IMO #2	Yes A more descriptive or clearer definition is required to differentiate between level 2 and level 3.

Alan Johnson Mirant #6 Bob Burkard NCMPA1 # 3,4,5 Dilip Mahendra SMUD #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Mike Miller Southern Co #1 Richard Kafka Pepco #1 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 William Smith Allegheny Pwr #1	Yes

23. Requirement 13 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirement is inappropriate	
Toni Timberman BPA #1	No TOP has no responsibility for the bulk transmission system. Functional Model says that "Transmission Operator under the Reliability Authority's direction can take action, such as implementing voltage reductions, to help mitigate an Energy Emergency." This does not indicate that the TOP can react unilaterally based on real-time monitoring or reliability analyses.
Albert M. DiCaprio MAAC #2	No This is an RA responsibility. Of course the RA may assign that function to the TOP (but in the end the RA is still the responsible party)
Alan Johnson Mirant #6	Question whether this is fully compliant with the Functional Model. Shouldn't the TOP take direction from the RA regarding the implementation of reliability matters? Or does it take direction from the RA and have the responsibility to act independently and report its actions to the RA?
No – Comments suggesting requirement needs modification	
Susan Morris SERC #2 Thomas Pruitt Duke #1 Robert Reed TS (See List)	No See 32. How are conflicting results from an RAs analysis vs. the TOPs analysis to be resolved? *{ Should not combine the terms "prevention" and "mitigation" in the same requirement/measure unless the language is clear to eliminate potential ambiguity. Prevention and mitigation are actions that may be undertaken in two different timeframes. Without clear language, the requirement/measure should be separated into two separate requirements to address the prevention and mitigation as separate issues.* *(SERC Only: This requirement and requirement 14 should be combined and rewritten to require that the RA have procedures in place that specifies actions needed to preserve reliable operation of the system.)}*
Vern Colbert Dominion #1	No See #32. The TOP should resolve an identified problem with the cooperation of the RA. *{ RA should prevent an identified problem beforehand. He can only mitigate when there is an actual emergency.}*
Charles Yeung Reliant Energy #6	No It is unclear what the relationship and responsibilites of the TOP are as compared to the RA. The Standard proposes the same langauge for both functions. What is the reporting relationship and operational heirarchy between the RA and the TOP? Is the TOP analysis more "local" in nature than the RA analysis? What if each one's analysis does not agree? Which analysis will prevail to ensure grid reliability?
FRCC 6-#1, 4-#2, 1-#2	No See our comment on requirement 4. *{ In requirement 3, the RA has already determined what data it needs for reliability analyses and system monitoring. It appears to be redundant to have the TOP do the same thing.* *Would it be more appropriate for the TOP to have a requirement to provide the*

	requested data to the RA and then be measured in how they perform that?} Again, this seems redundant to what the RA is doing via requirement 12. It would seem more appropriate to have the TOP have a requirement to work with the RA in providing mitigating plans and taking actions as directed by the RA.
William Smith Allegheny Pwr #1	No Requirement 212 and 213 are very similar. Requirement 212 applies to Reliability Authorities and requirement 213 applies to Transmission Operators. There should be some coordination so that the two entities don't take different actions.
Ray Morella Ed Stein Joanne Borrell FirstEnergy #1, 3, 6 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No Requirements 212 and 213 are very similar. Requirement 212 applies to Reliability Coordinators. Requirement 213 applies to Transmission Operators. The requirements are duplicative. The standard should require actions be taken to prevent/mitigate identified problems by either the Reliability Coordinator or the Transmission Operator, but not both of them. It should be clear in the agreement between the Transmission Operator and their Reliability Coordinator who has authority to take the action to correct or mitigate a problem. Having two different entities responsible to take action to correct a problem is troublesome. The possiblity exists that the two entities may decide on different courses of action to solve the problem. Valuable minutes may be squandered by the two different entities attempting to coordinate actions. Only one entity should have the responsibility to take action and that responsibility needs to be clearly delineated.
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	Yes/No This Requirement does not adequately address the coordination that must take place between the TOP and the RA. Furthermore, the TOP may not include a wide enough scope to determine these limits.
George Bartlett Entergy Svcs 1	No Comments to Requirement 12 apply here also. *{This requirement should be revised to clearly separate "prevent" and "mitigate" identified problems. This is also difficult to quantify. Suppose a next-hour contingency analysis is run based on expected load and generation and it shows a slight post-contingent overload. Then, the weather changes in the area of the overload, causing no overload (projected post-contingent) in real-time. Was this a Level 3 violation? The RA should forecast problems and observe the trajectory of the trends and then determine the appropriate course of action or inaction as the case may be.}*
Ed Riley CA ISO #2	No See response to question #28. *{ The types of reports that would be needed to identify "problems that could cause instability, uncontrolled separation or cascading outages . . " are not done quickly, making it difficult to perform them in real-time. The wording of the Requirement sounds like these would be required in real-time, and it is not possible for a RA to complete them in this time-frame.}*
Doug Hils Cinergy #1	No Needs to be rewritten to include only lack of action on the part of the TOP.
David Kiguel Hydro One #1	No It should be noted that prevention and mitigation are actions that may be undertaken in two different timeframes. Please see our comments under item # 44 (Regional and Interconection Differences).

	{There are differences in some Areas. For example, in Ontario the IMO is solely responsible to determine operating limits and to direct the operation of the IMO-Controlled Grid within these limits. The Transmission owners/operators operate thir respective systems under the IMO's direction. They only provide the IMO with equipment ratings which the IMO must respect. The transmission operators do not determine operating limits or monitor/report their compliance. *The standard should reflect jurisdictional differences in the responsibilities assigned to the RA and TOP in some areas. }*
Raj Rana AEP #1,3,5,6	No We believe having the duplicity of Requirement #12 and #13 is dangerous and could impede system reliability. The NERC reliability standards need to be clear where the authority resides. Having duplicate requirements for the RA and the TOP implies neither has the final say. The RA should and must have the final say. This requirement for the TOP needs to be reworded to show their subordinate role to the RA. The TOP shall follow the directives of the RA in order to prevent/mitigate identified problems. How does this requirement fit with the current NERC TLR process? Should the concern be limited to monitoring only those levels of thermal overloads and/or voltage conditions that lead to catastrophic events? Suggested revisions: **Requirement 13:** The Transmission Operator (TOP) shall use the results of real time monitoring and/or reliability analyses performed by either the RA or TOP, to take actions or follow directives of the RA as necessary to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. The TOP shall document actions taken. **Measure(s):** Documentation showing that actions were taken or RA directives followed to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. **Outcome(s) (100% Compliance):** The TOP shall document actions taken or RA directives followed to mitigate/prevent identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.
Richard Kafka Pepco #1	No
Fred Frederick Vectren #3	No
Yes – Comments indicating need for additional clarifications	
Alan Boesch NPPD #1	Yes/No The measures and outcomes should be related to violating System Operating Limits and not be limited to instability, uncontrolled separation ore cascading outages. See comments to question no. 10 above.

Kim Warren IMO #2	Yes/No Yes ,only if it is recognized that in some jurisdictions, the TOP may be the same entity as the RA but does not necessarily perform all of the roles(eg. switching,maintenance,outage & construction notification) that the Functional Model defines for the TOP. Where the RA and the TOP are different, there needs to be a clear distinction of which system limits each are accountable for. This document should be reworked to be consistent with the recently issued OLD TF report.
Gregory Campoli NY ISO #2	Yes/No The reference to prevent is related to real time monitoring and mitigate is related to operational planning analysis ? These requirements should be made clear.
Peter Burke ATC #1	Yes This could be worded more carefully to describe "documentation" that is reasonable and applicable in the normal course of business without being open to an interpretation requiring extraordinary and unreasonable documentation. There is a need for the TOP to take actions, however, the TOP should coordinate with the RA, where possible. The level of documentation should not be as rigid as that applied to the RA. Referring to similar comments in reply to question 12, a basic analysis tool set (SE, SA, and PF) should be running at the TOP shop. The more advanced tools like voltage stability, transient stabilty, etc. may be better suited to the RAs. The TOP may be the primary party responsible for maintaining reliable operation of the transmission system and, as such, should document steps taken to prevent problems using the available diagnostic tools. This does not include instability, or uncontrolled separation as these would be identified by more advanced tools first.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	Yes It should be noted that prevention and mitigation are actions that may be undertaken in two different timeframes.
John Blazekovich Exelon #1,3,5,6	Yes Although we agree with the need for the requirement we find the wording of this requirement to be somewhat ambiguous. The wording suggests that the RA or TOP will not take action unless instability or cascading outages are at risk. We believe that the intent should be to analyze "Planned for Contingencies" and identify problems, including equipment overloads above emergency limits, if any are found, but the wording does not state this.
Kathleen Goodman ISO NE #2	Yes Please also make provisions for mitigagating actions which were not previously identified by a study, but cleared the limit violation.
Gerald Rheault Manitoba #1,3,5,6	Yes Manitoba Hydro believes that TOP actions should be subject to RA oversight and approval for any actions that are identified as possibly adversely impacting the reliability of the bulk transmission system.
Francis Halpin BPA Bus Line #5,6	Yes The and/or language implies that monitoring is sufficient and other more sophisticated analysis tools are optional. This is appropriate language which will allow smaller TOP's to be compliant.
Tom Petrich (5) PG&E #1	Yes The TOP needs to take necessary actions to prevent equipment overloads as well.

Stuart Goza TVA #1	Yes Action taken must be coordinated with RA.
Todd Lucas (6?) Southern Co #1	Yes Need to clarify how conflicting results from an RAs analysis vs. the TOPs analysis will be resolved

Bob Burkard NCMPA1 # 3,4,5 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Lee Westbrook Oncor #1 Lee Xanthakos SCE&G #1 Lloyd Linke MAPP #2 Mike Miller Southern Co #1 Roger Green Southern Co #5 Roman Carter So Co Gen 3,5,6 (6 members) Tony Jankowski We-Energies #4	Yes

24. Requirement 13 - Do you agree with these levels of non-compliance for this requirement?

No – Comments indicating requirement is inappropriate	
Toni Timberman BPA #1	No TOP does not have this responsibility
No – Comments indicating levels 2 and 3 are the same	
FRCC 6-#1, 4-#2, 1-#2	No Similar to our comments on question 33, not sure what the difference in level 2 and 3 are. Anyway, since we think the requirement itself needs to be changed, the noncompliance levels would need to be based on the revised requirement.
OLDTF (9?) 6 - #2 1 - #1,5 Sam Jones ERCOT #2	See response to Q 33. 2 and 3 appear to be the same. *{ Level 2 and 3 appear to be the same.}*
Thomas Pruitt Duke #1	No What is the difference between levels 2 and 3?
Kathleen Goodman ISO NE #2	No Levels two and three appear to be identical.
John Blazekovich Exelon #1,3,5,6	No Do not understand the difference between items 2 & 3 - clarification is needed.
Alan Boesch NPPD #1	No What is the difference between two and three? If it is the difference between documenting and reporting a violation (the amount of time over the limit), this needs to be clarified in the standard. The items in No. 4 need to be expanded based on comments to question No. 10.
George Bartlett Entergy Svcs 1	No Comments to Requirement 12 apply here also. *{ In general, this requirement is somewhat subjective and difficult to quantify. Operators will become unnecessarily conservatve in order to meet this requirement.* *Also, levels 2 and 3 of non-compliance must be revised, they are exactly the same.* *Level 2 should read something like - "Monitoring and/or reliablity analyses idetntide a potential problem - no actions, or incorrect actions, were taken but no limit violation ".* *Level 3 should read something like - "Monitoring and/or reliability analyses identified a problem, actions were taken but were not sufficient to mitigate the problem, but no instability, uncontrolled separation or cascading outages ocurred.* *Level 4 seems OK.}*
No – Comments indicating levels of non-compliance are inappropriate	
Tom Petrich (5) PG&E #1	No Non-compliance Levels 2 and 3 do not seem reasonable. For example, during emergencies, the correct action may be “no action”. In any case, If no limit violation occurred, what is the basis of the “non-compliance”. They should be

	changed to “not applicable”.
Todd Lucas (6?) Southern Co #1	No Need to clarify the difference between “limit violations” and “violations”. Non compliance should be structured around OSLVs. Clarification is needed for “no action”. There may be cases where taking no action is the appropriate response How will compliance be monitored for cases where no violations occur? Consideration should be given to combining requirements 13 & 15.
Peter Burke ATC #1	No Same response as provided for Question 33. *{Should entities be penalized for things that might have happened but didn't? How much faith do we place in analysis results? If an overload would have been 1% over rating and nothing happened, is that a problem. 5%? 10%? If something happens, some type of penalty/written reprimand should be issued with a lesson learned follow-up to make sure it does not happen again. Hopefully a system isn't created that discourages people from reporting problems to avoid fines and thereby miss the opportunity to analyze a problem to prevent it in the future.* *Level 3 non-compliance doesn't appear to be different from level #2.* *Level 4 non-compliance should forgive extraordinary and severe causes as follows: System operating limit violated and resulted in instability, uncontrolled separation or cacading outages that adversely impacted the reliability of the bulk transmission system without the influence of severe storms, sabotage, or other extraordinary conditions.}*
Raj Rana AEP #1,3,5,6	No Level 2 states "no actions or incorrect actions were taken . . ." The determination that the actions were incorrect would be by after the fact analysis performed by whom? Additionally, would it be necessary to determine whether the actions taken were due to gross negligence or due to an "honest" error or misinterpretation of the data or misinterpretation of the directive given by the RA? Would non-compliance sanctions differ based upon gross negligence vs. honest error? We are not sure what the difference between Level 2 and Level 3 is. Please clarify. Some "what ifs": What if the system operating limit (SOL) was violated and thus the bulk transmission system was at risk but actual instability, uncontrolled separation, or cascading outages did not occur? What level of non-compliance should this be? What if the SOL was violated, and the RA had directed the TOP to take action but the TOP did not take the action? As stated above, this is either a level 2 or level 3 non-compliance. But, what if the RA directed the TOP and the BA to take action and the TOP took the action but the BA did not? The TOP is compliant and the BA should be found non-compliant. But, per the above, the TOP is non-compliant too because the SOL was violated. What if the SOL is violated, and the RA has directed the TOP and/or BA to take action, and they are in the midst of taking that action, but prior to the action being fully implemented, instability, uncontrolled separation or cascading outages occur? Is anyone non-compliant and if so at what level? What if monitoring and/or reliability analysis identifeid a problem, and the RA directs the TOP to take specific action, but the TOP does not take the action? Does it matter whether the SOL was violated or not?

Joseph Buch Madison #4	No See comments on question 33. *{ Level 4 as presently defined indicates that instability, uncontrolled seperation or cascading outages have already occurred. This might be akin to locking the barn after the horse is out. We should be a level 4 if the potential exists, not after it happened.}*
Ray Morella Joanne Borrell Ed Stein FirstEnergy #1, 3, 6	No I agree with Non-compliance levels 1, 2, and 3. Non-compliance level 4 is where I have a problem. I don't think that the Transmission Operator should be charged with a level 4 non-compliance when he took the action necessary to prevent the problem but some other entity did not take the necessary required action.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No I agree with Non-compliance levels 1, 2, and 3. Non-compliance level 4 is where I have a problem. I don't think that the Transmission Operator should be charged with a level 4 non-compliance when he took the action necessary to prevent the problem but some other entity did not take the necessary required action. For instance, if the Transmission Operator ordered a Balancing Authority to drop load because of low or declining frequency and the Balancing Authority did not drop the load, then the level 4 non-compliance should be charged to the Balancing Authority not the Transmission Operator.
Gerald Rheault Manitoba #1,3,5,6	No See comment for #33. *{ The issue should not be one of violation not occurring because the contingencies considered didn't happen. The issue should be one of risk and recognition of the impacts of the contingencies such that operation must be to limits based on these contingencies.}*
No – Comments indicating addressing non-compliance is premature	
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
Susan Morris SERC #2 Robert Reed TS (See List)	No Question 34 needs to be addressed and resolved before the levels of non-compliance can be determined.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate. Further clarification is requested regarding the difference between violation and limit violation.
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.

Albert M. DiCaprio MAAC #2 Fred Frederick Vectren #3 Vern Colbert Dominion #1 Richard Kafka Pepco #1	No
Yes – Comments indicating additional clarification is needed	
Lloyd Linke MAPP #2	Yes "Problem" is too vague. Also, this should not be tied soley to instability, uncontrolled seperation, or cascading… other operating limits also need to be consistently adhered to. System Operating Limit should be in caps to be consistent with the definition on page 2.
Yes – Comments indicating Levels 2 and 3 are the same	
Francis Halpin BPA Bus Line #5,6	Yes But..is there really a substantive difference between level 2 and level 3? Should three read "..no reportable violation occurred"????
Darrel Richardson Illinois Power #1, 3	Yes We agree with the levels, however we are curious as to the difference between Level 2 and Level 3. If these mean the same, then one should be eliminated. Perhaps there should be a definition of both a "limit violation" and "violation".
Kim Warren IMO #2	Yes A more descriptive or clearer definition is required to differentiate between level 2 and level 3.
Tony Jankowski We-Energies #4	Yes #2 should state that a system operating limit was exceeded, but no violation. #3 should state that a system operating limit violation occurred.
Bob Burkard NCMPA1 # 3,4,5 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 James Stanton Calpine #5 Joe Minkstein PG&E #5 Karl Kohlrus CWL&P #5 Lee Xanthakos SCE&G #1 Mike Miller Southern Co #1 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 William Smith Allegheny Pwr #1	Yes

25. Requirement 14 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirement needs clarification	
FRCC 6-#1, 4-#2, 1-#2	No Mitigation plans of the TOP, BA etc. need to be understood and reviewed by the RA so that when limits are exceeded, the RA can direct actions that will return the system to a normal or safe operating state. The outcome statement says that the RA will have a documented, approved mitigation plan. Who is this mitigation plan to be approved by? This requirement is not very clear.
Todd Lucas (6?) Southern Co #1	No Need clarification of the responsibilities. Mitigation plans are the joint responsibility of the RA, TOP, & TO and should be jointly developed
Sam Jones ERCOT #2OLDTF (9?) 6 - #2 1 - #1,5	No Re Outcomes: We believe that this should read "procedure or policy" to ensure "Operating within limits and associated mitigating actions are taken." We don't know how you can have a "documented, approved mitigation plan" for unknown contingencies. Furthermore, Requirement 14 is awkward -- such a plan should be part of the Certification requirements, not this standard.
Susan Morris SERC #2 Robert Reed TS (See List)	No The requirement can be enhanced. See the following comments as examples: - It should be clarified that these plans need to include system intact and applicable prior-outage conditions. - It is only necessary to have a procedure in place that relieves the SOL violation. If a mitigation plan requires external approvals, then by whom? Will security constrainted generation redispatch be an acceptable prevention or mitigation action?
Alan Johnson Mirant #6	No Agree in concept, but unclear as to who approves the mitigation plan and on what basis. Does it fall upon NERC to make these determinations?
Raj Rana AEP #1,3,5,6	No We agree with the intent of this requirement. However, the language of the requirement needs to be modified. First, the wording in Version A and Version B are different. Which is correct? Version B explicity states the plan must be approved in the requirement section, whereas version A only mentions the plan needing to be approved in the levels of non-compliance section. If the mitigation plan is to be approved, then by whom? We would hope by the Regions. Second, is it intended that this Plan replace the Region and/or RA Reliability Plans? Is this Plan just a section of those Plans? If so, isn't this part of the organizational requirement of the RA ans thus covered elswhere? Third, how detailed do you want these plans? Are they just to state the congestion management procedures available to the RA, such as redispatch (LMP) and NERC TLR procedures? The requirement seems too vague as worded. Based upon what is expected to be included in reliability analysis under previous requirements in this document, it seems unreasonalbe to expect that all problems can have a one size fits all scenarios solution (mitigation plan). It does seem reasonable that the RA have a plan that states their congenstion management practices and tools available. But that should be a requirement ot be certified as a RA. Define "mitigation plan".

Peter Burke ATC #1	No It is unreasonable to expect there will be a documented mitigation plan for everything. A storm or other cause of combined events can result in unanticipated or extremely rare outage scenarios. Lack of documentation for such scenarios need not be a hindrance since an experienced operator can promptly devise an effective mitigation plan. However, producing and maintaining documentation for all such scenarios would be burdensome and inefficient. Will it be possible to keep a mitigation plan matrix up to date and get necessary approvals in a timely fashion? Who will approve the mitigation plan?
Gregory Campoli NY ISO #2	No We are unclear has to who should be approving a mitigation plan. Procedures should be identified that include mitigation plans. The requirement should be changed to reference procedures not mitigation plans.
James Stanton Calpine #5	No The Requirement sentence seems to be poorly constructed. Suggest this alternative: "The Reliability Authority (RA) shall have a mitigation plan that includes procedures designed to prevent operating limits from being exceeded, and to mitigate the effects of periods when the limits are exceeded."
George Bartlett Entergy Svcs 1	No We agree with this Requirement, in general. However, the plan should not have to be "approved" by anyone other than through internal RA processes.
Charles Yeung Reliant Energy #6	No Same comment as for Requirement #12, question #32. *{ The RA must not act when there are market mechanisms available to mitigate/prevent the identified problem. This Standard must recognize that such congestion management processes will be accomodated by the RAs before RAs take actions. The Standard must coordinate with the business practice or standard that will be employed to relieve congestion or anticipated system problems.}*
No – Comments indicating requirement is inappropriate	
Lee Xanthakos SCE&G #1	No See comments for questions 32. State laws may prohibit RAs from taking action on a TOPs system *{ We do not agree with this requirement. Furthermore we do not agree that NERC has the authority to force such a requirement onto the RAs. As written, the requirement essentially bestows functional control to the RA. This is something the South Carolina PSC has expressly ruled is the responsibility of the TSP and no one else. Actual and functional control of the transmission system is the responsibility of SCE&G's transmission department. This responsibility can not and will not be transferred to any other entity without expressed approval of the Public Service Commission. This approval has not been given nor is it expected to be given, regardless of SCE&G's desires* *We recommend that drafting team should instead write a standard that requires the RA to notify the TSP of a imminent situation and provide assistance, if requested, so the TSP can implement their own mitigation plans.}*
Joseph Buch Madison #4	No
Fred Frederick	No

Vectren #3	
Yes – Comments indicating additional clarification needed	
Toni Timberman BPA #1	Yes/No Requirement does not specify “documented, approved” mitigation plan but the Outcome and Levels of Non-Compliance use this language. Who is responsible for approving the plan?
William Smith Allegheny Pwr #1	Yes Requirement 214 and 215 are very similar. Requirement 214 applies to Reliability Authorities and requirement 215 applies to Transmission Operators. Coordination among the two entities should be required.
Vern Colbert Dominion #1	Yes Contingency plan is a better choice of wording for this requirement than mitigation plan.
Tony Jankowski We-Energies #4	Yes Should read: To prevent or mitigate system operating limit violations.
Tom Petrich (5) PG&E #1	Yes In the sentence, “The RA shall have a documented, approved mitigation plan that identifies actions to remain/return to within system operating limits.” We may want to replace the word “approved” with “finalized”. If not, we suggest identifying the approving party. Otherwise, it could introduce confusion in implementation.
Thomas Pruitt Duke #1	Yes 1) The use of the word "approved" needs to be clarified. Who approves the plan? 2) Since System Operating Limits are still being developed, it is premature to use this term in the requirement. The requirement should be worded in such a way that does not use the term.
Lee Westbrook Oncor #1	Yes Emergency operations plans may not be documented to the same degree as plans prepared pre-contingency.
Kathleen Goodman ISO NE #2	Yes Please also make provisions for mitigating actions which were not previously identified by a study, but cleared the limit violation.
Richard Schwarz PNSC #2	Yes The requirement does not require an approved mitigation plan. Who is responsible for approving the mitigation plan?
Mike Miller Southern Co #1	Yes Documentation included for Non-reportable as well as Reportable OSLV required
Lloyd Linke MAPP #2	Yes It should be clarified that these plans need to include system intact and applicable prior-outage conditions. System Operating Limit should be in caps to be consistent with the definition on page 2. The requirement section language should be the same as that for requirement #15.
John Blazekovich Exelon #1,3,5,6	Yes What entity is required to "approve" the mitigation plan? Need to clearly state the scope of the plan required along with the level of detail required in the plan.

	The outcome appears to require entities to prepare plans to address instability and uncontrolled separation only, this requirement should address "Planned for Contingencies".
Ed Stein Firstenergy Sol #6 Ray Morella FirstEnergy #1 Joanne Borrell FirstEnergy Sol #3 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	Yes Requirements 214 and 215 are very similar. Requirement 214 applies to Reliability Coordinators. Requirement 215 applies to Transmission Operators. The Reliability Coordinator Plan and the Transmission Operator Plan must be coordinated. These plans must clearly state the responsibilities of the Reliability Coordinator and the responsibilities of the Transmission Operator. There must not be any confusion as to who has the responsibility to take specific actions.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	Yes It is only necessary to have a procedure in place that relieves the SOL violation. It is unclear if a mitigation plan requires external approvals and by whom.
Alan Boesch NPPD #1	Yes/No Who has to approve the plan? The RA, compliance monitor, TOP or someone else? Who approves needs to be identified in the standard.
Francis Halpin BPA Bus Line #5,6	Yes The plan should be the result of a collaborative effort of all involved parties.
Ed Riley CA ISO #2	Yes If the Requirement and Outcome are modified so that where reference is made to a “mitigation plan”, it says “mitigation plan/procedure”.
Darrel Richardson Illinois Power #1, 3	Yes However, because of varying system usages and configurations the entitiy should not be in non-comp[liance if the mitigation plan is not entirely perscriptive. The mitigation plan may point to a range of actions that could be taken to resolve given problems.
Stuart Goza TVA #1 Roman Carter So Co Gen 3,5,6 (6 members) Roger Green Southern Co #5 Richard Kafka Pepco #1 Joe Minkstein PG&E #5 Gerald Rheault Manitoba #1,3,5,6 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Doug Hils Cinergy #1 Dilip Mahendra SMUD #1 Bob Burkard NCMPA1 # 3,4,5 Albert M. DiCaprio MAAC #2	Yes

26. Requirement 14 - Do you agree with these levels of non-compliance for this requirement?

No – Comments indicating addressing non-compliance is premature	
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
FRCC 6-#1, 4-#2, 1-#2	No Until the requirement itself is better understood, we can not comment on these levels. In the draft standard, in the compliance monitoring process section 214(e), there is a sentence that states "The compliance monitor shall evaluate the mitigation plan and/or procedures." Why is this here? The compliance monitor will evaluate compliance to the requirement measures. It does not seem correct that the compliance monitor will evaluate mitigation plans, as that is not their area of expertise.
Susan Morris SERC #2 Thomas Pruitt Duke #1 Todd Lucas (6?) Southern Co #1	No Question 36 needs to be addressed and resolved before the levels of non-compliance can be determined.
Robert Reed TS (See List)	No Question 36 needs to be addressed and resolved before the levels of non-compliance can be determined.
Alan Boesch NPPD #1	No Who has to approve the plan? The RA, compliance monitor, TOP or someone else? Who approves needs to be identified in the standard.
Peter Burke ATC #1	No Cannot agree with this approval process since it remains somewhat undefined. For instance, who gives the approval?
Kathleen Goodman ISO NE #2	No Please also make provisions for mitigating actions which were not previously identified by a study, but cleared the limit violation.
No – Comments indicating levels of non-compliance need adjustment	
Toni Timberman BPA #1	#1 is not consistent with the requirement. #4 is ok.
Tom Petrich (5)	We need to specify the party that would do the approving.

PG&E #1	
No – Other comments	
Francis Halpin BPA Bus Line #5,6	No Compliance needs to affirm that a collaborative process took place in the development of the 'mitigation plan'.
Sam Jones ERCOT #2	Please see comments to #36 above. *{re: Outcomes. Shouldn't this read "procedure or policy" to ensure "Operating within limits and associated mitigating actions are taken." How can you have a "documented, approved mitigation plan" for unknown contingencies? Furthermore, such a plan as required by Requirement 1`4 should be part of the Certification requirements, not this standard.}*
ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2 Ray Morella FirstEnergy #1	No Version A and Version B of this questionnaire have different descriptions of non-compliance for this requirement. The standard needs to define which description is correct.
Yes – Comments indicating additional clarification needed	
Lloyd Linke MAPP #2	Yes It should be clarified who needs to approve these plans - corporate manangement, NERC….
Raj Rana AEP #1,3,5,6	Yes However, you need to define in the requirements section who is to approve the plan and be more specific as to what the approval requirements are. That is just how detailed does this plan need to be. However, if the intent is that each identified credible contingency scenario has its own action plan, that seems unrealistic unless this is at a superfical highlevel and then what is the point of the plan?

Albert M. DiCaprio MAAC #2	Yes
Bob Burkard NCMPA1 # 3,4,5	
Darrel Richardson Illinois Power #1, 3	
Dilip Mahendra SMUD #1	
Doug Hils Cinergy #1	
Ed Stein Firstenergy Sol #6	
Fred Frederick Vectren #3	
George Bartlett Entergy Svcs 1	
Gerald Rheault Manitoba #1,3,5,6	
James Stanton Calpine #5	
Joanne Borrell FirstEnergy Sol #3	
Joe Minkstein PG&E #5	
John Blazekovich Exelon #1,3,5,6	
Joseph Buch Madison #4	
Karl Kohlrus CWL&P #5	
Kim Warren IMO #2	
Mike Miller Southern Co #1	
Richard Kafka Pepco #1	
Richard Schwarz PNSC #2	
Roman Carter So Co Gen 3,5,6 (6 members)	
Stuart Goza TVA #1	
Tony Jankowski We-Energies #4	
Vern Colbert Dominion #1	
William Smith Allegheny Pwr #1	

27. Requirement 15 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirement is inappropriate	
Toni Timberman BPA #1	Requirement does not state that the documented plan must be approved. Requirement states that actions "prevent exceeding" but the outcome says "remain/return to within". These are not consistent. Again, TOP has no responsibility for the bulk transmission system.
Richard Kafka Pepco #1	No This is an RA responsibility
Albert M. DiCaprio MAAC #2	No Again, this is an RA responsibility.
No – Comments indicating additional clarification is needed	
Thomas Pruitt Duke #1	No See comments for question 36. *{1) The use of the word "approved" needs to be clarified. Who approves the plan?* *2) Since System Operating Limits are still being developed, it is premature to use this term in the requirement. The requirement should be worded in such a way that does not use the term.}*
Susan Morris SERC #2 Robert Reed TS (See List)	No 1) Clarification is necessary to specify that these plans need to include system intact and applicable prior-outage conditions. 2) System Operating Limit should be in capital letters to be consistent with the definition on page 2. 3) There may be potential conflict between the RA and TOP in prevention/mitigation actions. Is this requirement necessary?
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	Please see comments to #36 above. *{re: Outcomes. Shouldn't this read "procedure or policy" to ensure "Operating within limits and associated mitigating actions are taken." How can you have a "documented, approved mitigation plan" for unknown contingencies? Furthermore, such a plan as required by Requirement 1`4 should be part of the Certification requirements, not this standard.}*
Raj Rana AEP #1,3,5,6	No The development of mitigation plans and strategies should be a joint effort between the RA and TOP. But the responsibility should reside with the RA. If both are responsible for developing and having plans, what is to prevent them from having vastly different plans for the same problem? Who determines which plan is implemented? Should the concern be limited to thermal overloads and/or voltage conditions that only lead to catastrophic events?
Charles Yeung Reliant Energy #6	No Same comment as Requirement #13, question #34. *{ It is unclear what the relationship and responsibilites of the TOP are as compared to the RA. The Standard proposes the same langauge for both functions. What is the reporting relationship and operational heirarchy between the RA and the TOP? Is the TOP analysis more "local" in nature than the RA analysis? What if each one's analysis does not agree? Which analysis will prevail to ensure grid reliability?}*

Gregory Campoli NY ISO #2	No We are unclear has to who should be approving a mitigation plan. Procedures should be identified that includes mitigation plans. The requirement should be changed to refence procedures not mitigation plans.
Peter Burke ATC #1	No Subject to the response given to Question #36, the TOP should be held accountable for maintaining an accurate record of relevant mitigation plans for its area as supplied by the RA.
George Bartlett Entergy Svcs 1	No Our comment to Requirement 14 applies here also. It could also be argued that a TOP should share its mitigation plans with its RA. *{ We agree with this Requirement, in general. However, the plan should not have to be "approved" by anyone other than through internal RA processes.}*
Ken Skroback AL Elec Coop #4	No In outcomes you say that the mitigation plan must be approved. Approved by whom?
Kathleen Goodman ISO NE #2	No Please also make provisions for mitigating actions which were not previously identified by a study, but cleared the limit violation.
John Blazekovich Exelon #1,3,5,6	No Requires better definition of violating, returning, and reset point for S.O.L. What entity is required to "approve" the mitigation plan? Need to clearly state the scope of the plan required along with the level of detail required in the plan. The outcome appears to require entities to prepare plans to address instability and uncontrolled separation only, this requirement should address "Planned for Contingencies".
James Stanton Calpine #5	No See #37 language. *{ The Requirement sentence seems to be poorly constructed. Suggest this alternative: "The Reliability Authority (RA) shall have a mitigation plan that includes procedures designed to prevent operating limits from being exceeded, and to mitigate the effects of periods when the limits are exceeded."}*
Alan Johnson Mirant #6	No Again, agree in concept, but unclear as to what process will be used to approve the mitigation plan.
Fred Frederick Vectren #3	No
Yes – Comments indicating additional clarification needed	
Alan Boesch NPPD #1	Yes/No Who has to approve the plan? The RA, compliance monitor, TOP or someone else? Who approves needs to be identified in the standard.
David Kiguel Hydro One #1	Yes/No It is only necessary to have a procedure in place that relieves the SOL violation. It is unclear if a mitigation plan requires external approvals and by whom. Please see our comments under item # 44 (Regional and Interconection Differences).

	{There are differences in some Areas. For example, in Ontario the IMO is solely responsible to determine operating limits and to direct the operation of the IMO-Controlled Grid within these limits. The Transmission owners/operators operate thir respective systems under the IMO's direction. They only provide the IMO with equipment ratings which the IMO must respect. The transmission operators do not determine operating limits or monitor/report their compliance. *The standard should reflect jurisdictional differences in the responsibilities assigned to the RA and TOP in some areas. }*
Kim Warren IMO #2	Yes/No Yes ,only if it is recognized that in some jurisdictions, the TOP may be the same entity as the RA but does not necessarily perform all of the roles(eg. switching,maintenance,outage & construction notification) that the Functional Model defines for the TOP. Where the RA and the TOP are different, there needs to be a clear distinction of which system limits each are accountable for. This document should be reworked to be consistent with the recently issued OLD TF report.
Ed Stein Firstenergy Sol #6 Ray Morella FirstEnergy #1 Joanne Borrell FirstEnergy Sol #3 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	Yes Requirements 214 and 215 are very similar. Requirement 214 applies to Reliability Coordinators. Requirement 215 applies to Transmission Operators. The Reliability Coordinator Plan and the Transmission Operator Plan must be coordinated. These plans must clearly state the responsibilities of the Reliability Coordinator and the responsibilities of the Transmission Operator. There must not be any confusion as to who has the responsibility to take specific actions.
William Smith Allegheny Pwr #1	Yes Requirement 214 and 215 are very similar. Requirement 214 applies to Reliability Authorities and requirement 215 applies to Transmission Operators. Coordination among the two entities should be required.
Lloyd Linke MAPP #2	Yes It should be clarified that these plans need to include system intact and applicable prior-outage conditions. System Operating Limit should be in caps to be consistent with the definition on page 2.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	Yes It is only necessary to have a procedure in place that relieves the SOL violation. It is unclear if a mitigation plan requires external approvals and by whom.
FRCC 6-#1, 4-#2, 1-#2	Yes Again, we have the question about the TOP having an approved mitigation plan. Who does the approval? The RA should understand the mitigation plan, and agree that it will correct the problem, but approval may not be the appropriate word. Not only should the TOP have a mitigation plan ready, but they should have a requirement to implement it when directed to by the RA.
Vern Colbert Dominion #1	Yes Same as #36 *{ Contingency plan is a better choice of wording for this requirement than mitigation plan.}*
Tony Jankowski	Yes

We-Energies #4	Should read: To prevent or mitigate system operating limit violations.
Tom Petrich (5) PG&E #1	Yes In the sentence, "The TOP shall have a documented, approved mitigation plan that identifies actions to remain/return to within system operating limits." We may want to replace the word "approved" with "finalized". If not, we suggest identifying the approving party. Otherwise, it could introduce confusion in implementation.
Todd Lucas (6?) Southern Co #1	Yes Need clarification of the responsibilities. Mitigation plans are the joint responsibility of the RA, TOP, & TO and should be jointly developed
Lee Westbrook Oncor #1	Yes Words should match those in Requirement 14.
Francis Halpin BPA Bus Line #5,6	Yes The plan should be the result of a collaborative effort of all involved parties.
Ed Riley CA ISO #2	Yes See response to question #36. *{ If the Requirement and Outcome are modified so that where reference is made to a "mitigation plan", it says "mitigation plan/procedure".}*
Darrel Richardson Illinois Power #1, 3	Yes However, because of varying system usages and configurations the entitiy should not be in non-comp[liance if the mitigation plan is not entirely perscriptive. The mitigation plan may point to a range of actions that could be taken to resolve given problems.
Roman Carter So Co Gen 3,5,6 (6 members)	Yes However, is there a coordinated effort between the RA and TOP to mitigate an OSL? Or, do the RA and TOP perform the mitigation plan completely independent of one another.
Bob Burkard NCMPA1 # 3,4,5 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 Gerald Rheault Manitoba #1,3,5,6 Joe Minkstein PG&E #5 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Lee Xanthakos SCE&G #1 Mike Miller Southern Co #1 Roger Green Southern Co #5 Stuart Goza TVA #1	Yes

28. Requirement 15 - Do you agree with these levels of non-compliance for this requirement?

N0 – Comments indicating levels of non-compliance inappropriate	
FRCC 6-#1, 4-#2, 1-#2	No Should compliance levels be for having a plan and implementing it when directed. What good is a plan if it is not used?
Lee Xanthakos SCE&G #1	No There should be some level of compliance for how well an approved plan was followed.
Kathleen Goodman ISO NE #2	No Please also make provisions for mitigating actions which were not previously identified by a study, but cleared the limit violation.
Toni Timberman BPA #1	#1 is not consistent with the requirement. #4 is ok
No – Comments indicating addressing non-compliance is premature	
Susan Morris SERC #2 Thomas Pruitt Duke #1 Robert Reed TS (See List)	No Question 38 needs to be addressed and resolved before the levels of non-compliance can be determined.
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
No – Comments indicating additional clarification needed	
Raj Rana AEP #1,3,5,6	No However, you need to define in the requirements section who is to approve the plan and be more specific as to what the approval requirements are. That is just how detailed does this plan need to be. However, if the intent is that each identified credible contingency scenario has its own action plan, that seems unrealistic unless this is at a superfical highlevel and then what is the point of the plan?
Peter Burke ATC #1	No Agreement would depend upon addressing the concerns expressed in Questions #37 and #38 above.
Ken Skroback AL Elec Coop #4	No Level 1: Approved by whom?

No – Other comments	
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No Version A and Version B of this questionnaire have different descriptions of non-compliance for this requirement. The standard needs to define which description is correct.
Albert M. DiCaprio MAAC #2 Richard Kafka Pepco #1 Joanne Borrell FirstEnergy Sol #3 Ed Stein Firstenergy Sol #6	No
Yes – Comments indicating additional clarification needed	
Tom Petrich (5) PG&E #1	We need to specify the party that would do the approving.
Alan Boesch NPPD #1	Yes/No Who has to approve the plan? The RA, compliance monitor, TOP or someone else? Who approves needs to be identified in the standard.
Lloyd Linke MAPP #2	Yes It should be clarified who needs to approve these plans - corporate manangement, NERC….
Ray Morella FirstEnergy #1	Yes Version A and Version B of this questionnaire have different descriptions of non-compliance for this requirement. The standard needs to define which description is correct.
George Bartlett Entergy Svcs 1	Yes The 2nd level could be that the mitigation plan exists, has been approved by the TOP, but hasn't been shared with its RA.
Francis Halpin BPA Bus Line #5,6	Yes Compliance needs to affirm that a collaborative process took place in the development of the 'mitigation plan'.
Doug Hils Cinergy #1	Yes Use of mitigation plan from past similar system conditions need acceptable, new documentation need not be perpared for each new occurance of a similar condition.

Bob Burkard NCMPA1 # 3,4,5 Darrel Richardson Illinois Power #1, 3 Dilip Mahendra SMUD #1 Fred Frederick Vectren #3 Gerald Rheault Manitoba #1,3,5,6 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Kim Warren IMO #2 Mike Miller Southern Co #1 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 Todd Lucas (6?) Southern Co #1 Tony Jankowski We-Energies #4 Vern Colbert Dominion #1 William Smith Allegheny Pwr #1	Yes

29. Requirement 16 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments referencing the application of terms used in the OLDTF report	
OLDTF (9?) 6 - #2 1 - #1,5	No First, we believe this applies to IRL Compliance Violations only. Also, should split into a Preliminary Report and a "complete" Report. Preliminary Report should be submitted within 72 hours. A longer time is required for the "complete" report; probably a minimum of one month.
Sam Jones ERCOT #2	No Please refer to the OLDTF report. This should apply to IRL Compliance Violations only. Also, this should be split into a Preliminary Report and a "complete" Report. The Preliminary Report should be submitted within 72 hours. A longer time is required for the "complete" report; probably a minimum of one month.
Vern Colbert Dominion #1	No Wait until the OLDTF study is complete.
Gregory Campoli NY ISO #2	No This requirement needs to be developed following the work of the NERC OLD TF.
Susan Morris SERC #2 Thomas Pruitt Duke #1 Robert Reed TS (See List)	No Delay this requirement until the OLDTF collaborates with the SDT to define "operating limits". These new limit definitions must also go through the standards process before formal implementation.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No This aspect of the standard should be coordinated with the NERC OLD, Operating Limit Definition, Task Force . Presenting a standard that doen't represent the current intentions of the OLD TF may produce RS that may be in conflict with the current understanding of the NERC Operating Committee. Therefore we recommend delay of further development of this RS until the work of the OLD TF is complete and approved.
No – Comments indicating additional clarification is needed.	
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No (1) The existing NERC template on Operating Security Limits is confusing. This standard is much, much, much more confusing. There are many system operating limits. This standard does not say which system operating limit has to be reported and under what conditions it has to be reported. Do you have to report a system operating limit exceedance that has little impact on bulk power reliability. If so you'll get thousands of irrelevant reports every week for minor system operating limit exceedances. A report should be filed when a Operating Security Limit has been exceeded for 30 minutes per the existing NERC Policy. See the definition of an Operating Security Limit Violation under item 7 of this questionnaire. Requirement 216 has to be much more specific. If one cannot supply the specifics then this standard is not ready for balloting. (2) Requirements 216 and 217 are very similar. Requirement 216 applies to Reliability Coordinators. Requirement 217 applies to Transmission Operators. The requirements are duplicative. The standard should require the documenting of Operating Security Limit violations by either the Reliability

	Coordinator or the Transmission Operator, but not both of them. There is nothing wrong with both documenting the violations if they so wish, but both of them should not be forced to do so. There is nothing wrong with a Transmission Operator delegating this responsibility to a Reliability Coordinator or a Reliability Coordinator delegating this responsibility to a Transmission Operator. (3) The stardard needs to clarify the difference between a reportable incident and an incident that is not reportable but must be documented.
Raj Rana AEP #1,3,5,6	No We agree with the intent of this requirement but believe modification to the language is required. Version A and B of this requirement differ slightly. Which is correct? The requirement is not clear on whether the RA is to log and report just system operating limit (SOL) violations (i.e. the limit is violated for the time specified in the Facilities Rating SAR) of both violations and instances where the limit is exceed though a violation per the Facilities Rating SAR has not occurred. We believe the RA should complete a report for all SOL violations as defined in the Facilties Rating SAR, but momentary excursions should not have to be reported to the NERC CM. Suggested revision: **Requirement 16:** The Reliability Authority (RA) shall document instances of exceeding identified system operating limits (limits that if exceeded could lead to instability, etc.) and shall document, log and report on instances where a system operating limit has been exceeded for a specified period of time. **Measure(s):** 1. Data exists and is retrievable that documents instances of exceeding identified system operating limits 2. Record of violations is in existence for at least three years that identifies violations (instances where a system operating limit has been exceeded for a specified period of time) 3. Complete report filed with applicable Compliance Monitor within 72 hours of exceeding a system operating limit for a specified period of time (includes data and time of event, magnitude and duration of violation, actions taken and explanation of results of actions **Outcome(s) (100% Compliance):** The RA shall have retrievable information that documents exceeding identified system operating limits. The RA shall have daily operating logs and supporting documentation to show the magnitude and duration of violations (EMS or other source of data). Logs and supporting documentation shall be available for review for at least three years. The RA shall file a complete report (including date and time of event, magnitude and duration of violation, actions taken and explanation of results of actions) with its Compliance Monitor when a defined limit has been exceed for a specified time period. The report shall be filed within 72 hours of the event.
Peter Burke ATC #1	No What is meant by "specified period of time" in the statement "The Reliability Authority shall document . . . exceeded for a specified period of time?" Agreement to this requirement will have to wait until meaning of "specified period of time" is specified.

	In many cases, a complete and final report cannot be produced within 72 hours. This requirement would be feasible if its requirement were for a preliminary report within 72 hours. This requirement may be a heavy burden on the RA staff depending on the detail required in the documentation. Will the compliance monitor take immediate action on a report filed within 72 hours, what will the compliance monitor do with these reports, what is the compelling reason for providing these reports within 72 hours?
James Stanton Calpine #5	No Suggest changing "instances of exceeding identified system operating limits" to "instances of identified system operating limits being exceeded" Also, in the Measures #1, "Data exists and is retrievable" retrievable by whom? Should be all interested parties.
Ed Stein Firstenergy Sol #6	No This is very confusing because this standard does not identify which operating limits have to be reported and what conditions trigger a reporting event. As an example; a construction project requires a reconfiguration of a power plant substation. This reconfiguration creates a situation where the generating units operating at full load may go unstable with a three phase fault outside the substation and a breaker fail to trip condition. Operational planning studies will show that reducing the plant generation to 60% allows the units to remain stable during the fault conditions. Does this become an operating limit? What happens if the transmission operator elects to take the chance and keep the units operating at full load because the system is capacity short, the UN peace keeping negotiating team is in town, and the probability of having a bolted three phase fault with a stuck breaker is very,very low. Has the operator violated an operating limit? Does the operator have to complete a violation document? This standard has to define what is a violation and when does the violation have to be reported and documented.
Ed Riley CA ISO #2	No The Requirement should be amended to add the following on the end: "..and action taken to return the system to normal status". Also, although the CAISO is recommending removal of the compliance portions, it would like to take the opportunity to suggest a more practical and reasonable time frame for the requirment on filing a report in the event of a violation. The CIASO would like to suggest that in place of "72 hours" that the body that establishes the compliance requirements consider changing the requirement to "5 business days".
Doug Hils Cinergy #1	No Cannot agree without knowing the complete defination of "exceeding identified system operating limits" is.
Charles Yeung Reliant Energy #6	No It is unclear as to how the system operating limits are established and by who. It is also unclear what the speicified period of time that the system exceeds the limit is established and by who. These limits and time periods must be known and pre-approved in a process where all parties that may be affected by the violation can comment.
Alan Boesch NPPD #1	No What is the "specifed period of time"? Will this period be defined in this standard? What is the importance of getting this information to the Compliance Monitor in 72 hours? What will the compliance monitor do with the report? What is the basis for having the data available for three years?

No – Comments about the reporting requirement	
Tom Petrich (5) PG&E #1	No The 72 hours time requirement to file a complete report may not provide allowance for emergencies.
Kathleen Goodman ISO NE #2	No ISO New England does not believe that we should identify specific limits which must be reported on. Rather, we advocate internally reporting on every violation which does not clear within 30 minutes (as defined in NERC policy). Subsequently, each reported violation will be studied/examined to see if it would have caused instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk power transmission system (have an Inter-Area impact following next contingency). If so, ISO New England would report this "OSL violation" to NPCC and NERC with 72 hours. If there would not have been an Inter-Area impact (i.e. the impact would have been localized within the offending Control Area's boundary), no external reporting will occur. We suggest this approach be adopted. By restricting reporting to pre-identified limits, NERC may not be getting the information they seek through this Standard. Only through a post-operational assessment, can a true analysis (with the correct system configuration) be performed and an adequate judgement be made on the potenital impact to the bulk power system. We also believe that data should not be archived unless the limit is not cleared within 30 minutes. We do not advocate archiving data for every limit violation regardless of the time in which this was cleared.
Ray Morella Joanne Borrell FirstEnergy #1, 3 Fred Frederick Vectren #3	No
Yes – Comments about the data retention and reporting requirements	
George Bartlett Entergy Svcs 1	Yes/No How can an RA prove the negative, that is, how can they prove that a violation of system operating limits did not occur, unless they keep all operational data for some length of time? NERC needs to carefully consider this requirement, as the operational data generated on an hourly basis with a 4 second scan rate is unbelievably voluminous. We would prefer that a short rolling time limit be set for the retention of all EMS data, such as 3 months. There should be some kind of investigation procedure that triggers the analysis of this data on a post-event basis.
Gerald Rheault Manitoba #1,3,5,6	Yes Manitoba Hydro is concerned about the amount of data that may be required to be collected for this requirement. Perhaps there needs to be some sampling process or investigation only when multiple violations occur or when a system disturbance results
Darrel Richardson Illinois Power #1, 3	Yes The requirement of “within 72 hours” seems to be rather quick.
Roman Carter So Co Gen 3,5,6 (6 members)	Yes Are there current reports available to better identify what the cause was for exceeding the security limit and would this report be available within 72 hours to

	meet the documentation requirement above. If not, maybe the timeframe should be changed.
Todd Lucas (6?) Southern Co #1	Yes Agree assuming reporting requirements are commensurate with comments for question 6 & 7.
Tony Jankowski We-Energies #4	Yes Would be good to expand Measure #1 to include an annual summary report that identifies all limit exceedences, duration and number of events.
Yes – Comments indicating additional clarification needed	
Toni Timberman BPA #1	Yes Requirement should state that "report within 72 hours" on instances… Rather than use "where a system operating limit has been exceeded for a specified period of time" should use "where a reportable violation occurred" and define "reportable violation" elsewhere. In Measure 3, "magnitude" of violation is mentioned for the first time in this standard. I can find no place that includes magnitude as a characteristic of a reportable violation. Suggest moving (EMS or other source of data) to be directly after "supporting documentation" to make it clear that this is what is meant by "supporting documentation". Duration of violation must be defined…is it just the time of the red-hash mark area of the chart, or is it the yellow area plus the red-hashed area? In measure 3, should "event" be replaced with "reportable violation"?
Lloyd Linke MAPP #2	Yes System Operating Limit should be in caps to be consistent with the definition on page 2. What is the significance of a three year retention requirement? Suggest a one year retention requirement.
Lee Westbrook Oncor #1	Yes Who specifies the "specified period of time"?
Kim Warren IMO #2	Yes Clarify the distinction between "document" and "log". I weould think that logging is sufficient.
Yes –Comments indicating should wait for the OLDTF results	
FRCC 6-#1, 4-#2, 1-#2	Yes However, there are too many "irons in the fire" just now. The NERC OC has a task force working on this particular issue, and as indicated in the March OC meeting highlights, have directed the Reliability Coordinators to "field test" the OLDTF's definition and reporting form. The results of this "field test" need to be considered in this requirement.

Alan Johnson Mirant #6 Albert M. DiCaprio MAAC #2 Bob Burkard NCMPA1 # 3,4,5 Dilip Mahendra SMUD #1 Francis Halpin BPA Bus Line #5,6 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Lee Xanthakos SCE&G #1 Mike Miller Southern Co #1 Richard Kafka Pepco #1 Richard Schwarz PNSC #2 Stuart Goza TVA #1 William Smith Allegheny Pwr #1	Yes

30. Requirement 16 - Do you agree with these levels of non-compliance for this requirement?

No – Comments about appropriateness of levels of non-compliance	
Alan Boesch NPPD #1	No Why is the timing of the report so important?
Albert M. DiCaprio MAAC #2	No This requirement is a documentation requirement not a filing requirement (i.e. Level 1 is inappropriate)
Charles Yeung Reliant Energy #6	No These non-compliance levels do not specify what the conditions for an "incident" are. Does the standard rely on the definition of "reportable incident" porposed in Question #5 as the threshold for compliance measurement?
Tom Petrich (5) PG&E #1	No The requirement for producing supporting document and corresponding unlogged violation seems too prescriptive and do not make allowance for emergencies, when keeping the system together should be more important than filling out forms.
No – Comments suggesting specific changes	
George Bartlett Entergy Svcs 1	No Following up on our comments in 40, we believe that the levels would be 1. Some data was available but not enough to complete the analysis. Report was filed on time but was incomplete. 2. Not Applicable. 3. (We agree with level 3 as shown.) and 4) Data was wholly missing and / or documentation didn't exist.
Sam Jones ERCOT #2OLDTF (9?) 6 - #2 1 - #1,5	No Level 3 implies a log is kept, but the information could be kept in some other form. The important point is that the supporting documents be available. Also, please refer to our response to Q40 and suggestion that the report be split into preliminary and final versions. *{ First, we believe this applies to IRL Compliance Violations only. Also, should split into a Preliminary Report and a "complete" Report. Preliminary Report should be submitted within 72 hours. A longer time is required for the "complete" report; probably a minimum of one month.}*
No – Comments indicating addressing non-compliance is premature	
Susan Morris SERC #2 Thomas Pruitt Duke #1 Robert Reed TS (See List)	No Question 40 needs to be addressed and resolved before the levels of non-compliance can be determined.
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
Guy Zito (See List) NPCC #2 – 2	No It was felt that in order to properly address the compliance issues the RS must be

NPCC #1 – 5 David Kiguel Hydro One #1	well defined and more development is needed before a determination can be made whether these levels are appropriate.
No – Other comments	
FRCC 6-#1, 4-#2, 1-#2	No FRCC would like to wait until the "field test" of the OLDTF recommendation is completed to understand this requirement and its levels of non-compliance before commenting
Doug Hils Cinergy #1	No Under some complicated conditions the 72 hours time limitation is too restrictive to investigate, and supply anything more than a preliminary report of a violation. More time could be required to investigate, compile, and supply the complete documentation of a violation.
Vern Colbert Dominion #1 Fred Frederick Vectren #3	No
Todd Lucas (6?) Southern Co #1	Yes Agree assuming reporting requirements are commensurate with comments for question 6 & 7.
Toni Timberman BPA #1	Yes need to clearly define “supporting documentation” vs. “documentation”. What about if a complete report was filed but it came after 72 hours? Is it preferable to file an incomplete report on time and follow up with a complete report later? Also – should “incident” be replaced with “reportable violation”?

Alan Johnson Mirant #6	Yes
Bob Burkard NCMPA1 # 3,4,5	
Darrel Richardson Illinois Power #1, 3	
Dilip Mahendra SMUD #1	
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	
Ed Stein Firstenergy Sol #6	
Francis Halpin BPA Bus Line #5,6	
Gerald Rheault Manitoba #1,3,5,6	
James Stanton Calpine #5	
Joanne Borrell FirstEnergy Sol #3	
Joe Minkstein PG&E #5	
John Blazekovich Exelon #1,3,5,6	
Joseph Buch Madison #4	
Karl Kohlrus CWL&P #5	
Kathleen Goodman ISO NE #2	
Kim Warren IMO #2	
Lloyd Linke MAPP #2	
Mike Miller Southern Co #1	
Peter Burke ATC #1	
Raj Rana AEP #1,3,5,6	
Ray Morella FirstEnergy #1	
Richard Schwarz PNSC #2	
Roman Carter So Co Gen 3,5,6 (6 members)	
Stuart Goza TVA #1	
Tony Jankowski We-Energies #4	
William Smith Allegheny Pwr #1	

31. Requirement 17 - Do you agree with this requirement and its associated performance/outcome and measure/s?

No – Comments indicating requirement is inappropriate	
Albert M. DiCaprio MAAC #2	No The TOP may do this for the RA, but it need not be a TOP function.
Richard Kafka Pepco #1	No This is self monitoring by the TOP
Lee Xanthakos SCE&G #1	No Why would the TOP do this if the RA is already doing it in Requirement 16? There is not need for the duplication.
No – Comments referencing the OLDTF report	
Gregory Campoli NY ISO #2	No This requirement needs to be developed following the work of the NERC OLD TF.
David Kiguel Hydro One #1	No This aspect of the standard should be coordinated with the NERC OLD, Operating Limit Definition, Task Force . Presenting a standard that doen't represent the current intentions of the OLD TF may produce RS that may be in conflict with the current understanding of the NERC Operating Committee. Therefore we recommend delay of further development of this RS until the work of the OLD TF is complete and approved. Please see our comments under item # 44 (Regional and Interconection Differences).
OLDTF (9?) 6 - #2 1 - #1,5	No This Requirement needs to be reviewed with respect to the OLDTF report. If the Requirement refers to documenting SOL violations as defined by the OLDTF, then reporting may be required to the Regional Council. If the requirment refers to IRL Compliance Violations, then the RA needs to submit that report to the Regional Council and NERC.
Sam Jones ERCOT #2	No ERCOT agrees with the OLDTF report and feels that this Requirement needs to be reviewed with respect to that report. If the Requirement refers to documenting SOL violations as defined by the OLDTF, then reporting may be required to the Regional Council. If the Requirement refers to IRL Compliance Violations, then the RA needs to submit the report to the Regional Council and NERC.
Vern Colbert Dominion #1	No See #40. *{ Wait until the OLDTF study is complete.}*
FRCC 6-#1, 4-#2, 1-#2	No See comments to question 40. *{ However, there are too many "irons in the fire" just now. The NERC OC has a task force working on this particular issue, and as indicated in the March OC meeting highlights, have directed the Reliability Coordinators to "field test" the OLDTF's definition and reporting form. The results of this "field test" need to be considered in this requirement.}*
Robert Reed TS (See List)	No See 40. *{ Delay this requirement until the OLDTF collaborates with the SDT to define "operating limits". These new limit definitions must also go through the standards*

	process before formal implementation.}
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	No This aspect of the standard should be coordinated with the NERC OLD, Operating Limit Definition, Task Force . Presenting a standard that doen't represent the current intentions of the OLD TF may produce RS that may be in conflict with the current understanding of the NERC Operating Committee. Therefore we recommend delay of further development of this RS until the work of the OLD TF is complete and approved.
No – Comments indicating additional clarification needed	
Charles Yeung Reliant Energy #6	No Same comments as for questions #34 and #40. *{ It is unclear what the relationship and responsibilites of the TOP are as compared to the RA. The Standard proposes the same langauge for both functions. What is the reporting relationship and operational heirarchy between the RA and the TOP? Is the TOP analysis more "local" in nature than the RA analysis? What if each one's analysis does not agree? Which analysis will prevail to ensure grid reliability?}* *{ It is unclear as to how the system operating limits are established and by who. It is also unclear what the speicified period of time that the system exceeds the limit is established and by who. These limits and time periods must be known and pre-approved in a process where all parties that may be affected by the violation can comment.}*
Raj Rana AEP #1,3,5,6	No We agree with the intent, but for this requirement the language is too brief. How long must the TOP keep this data?
Peter Burke ATC #1	No The requirement's use of the word "identified" creates confusion by implying the existence of OSL's not identified or, worse, that the TOP requirement is somehow dependent on the TOP's act of identifying something which invites failure, intentional or otherwise, to identify and document violations. Must all OSL violations fall under the purview of this standard or only those OSL violations with regional impact? If this standard applies for every violation, including minor line overloads, etc., the documentation and reporting requirements would be overwhelming. The requirement should dictate how long documentation must be retained.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	No 1) The existing NERC template on Operating Security Limits is confusing. This standard is much, much, much more confusing. There are many system operating limits. This standard does not say which system operating limit has to be reported and under what conditions it has to be reported. Do you have to report a system operating limit exceedance that has little impact on bulk power reliability. If so you'll get thousands of irrelevant reports every week for minor system operating limit exceedances. A report should be filed when a Operating Security Limit has been exceeded for 30 minutes per the existing NERC Policy. See the definition of an Operating Security Limit Violation under item 7 of this questionnaire. Requirement 216 has to be much more specific. If one cannot supply the specifics then this standard is not ready for balloting. 2) Requirements 216 and 217 are very similar. Requirement 216 applies to Reliability Coordinators. Requirement 217 applies to Transmission Operators. The requirements are duplicative. The standard should require

	the documenting of Operating Security Limit violations by either the Reliability Coordinator or the Transmission Operator, but not both of them. There is nothing wrong with both documenting the violations if they so wish, but both of them should not be forced to do so. There is nothing wrong with a Transmission Operator delegating this responsibility to a Reliability Coordinator or a Reliability Coordinator delegating this responsibility to a Transmission Operator. (3) The stardard needs to clarify the difference between a reportable incident and an incident that is not reportable but must be documented.
Ed Stein Firstenergy Sol #6	No See the response to question 40 *{This is very confusing because this standard does not identify which operating limits have to be reported and what conditions trigger a reporting event. As an example; a construction project requires a reconfiguration of a power plant substation. This reconfiguration creates a situation where the generating units operating at full load may go unstable with a three phase fault outside the substation and a breaker fail to trip condition. Operational planning studies will show that reducing the plant generation to 60% allows the units to remain stable during the fault conditions. Does this become an operating limit? What happens if the transmission operator elects to take the chance and keep the units operating at full load because the system is capacity short, the UN peace keeping negotiating team is in town, and the probability of having a bolted three phase fault with a stuck breaker is very,very low. Has the operator violated an operating limit? Does the operator have to complete a violation document? This standard has to define what is a violation and when does the violation have to be reported and documented.}*
Darrel Richardson Illinois Power #1, 3	No Throughout this SAR, the requirements of the RA and TOP have been pretty much mirrored. However this one seems to be very vague. To some degree Requirement 17 should parallel Requirement 16.
Kathleen Goodman ISO NE #2	No ISO New England does not believe that we should identify specific limits which must be reported on. Rather, we advocate internally reporting on every violation which does not clear within 30 minutes (as defined in NERC policy). Subsequently, each reported violation will be studied/examined to see if it would have caused instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk power transmission system (have an Inter-Area impact following next contingency). If so, ISO New England would report this "OSL violation" to NPCC and NERC with 72 hours. If there would not have been an Inter-Area impact (i.e. the impact would have been localized within the offending Control Area's boundary), no external reporting will occur. We suggest this approach be adopted. By restricting reporting to pre-identified limits, NERC may not be getting the information they seek through this Standard. Only through a post-operational assessment, can a true analysis (with the correct system configuration) be performed and an adequate judgement be made on the potenital impact to the bulk power system.
No – Comments indicating requirement should be modified	
Kathleen Goodman ISO NE #2	No ISO New England does not believe that we should identify specific limits which must be reported on. Rather, we advocate internally reporting on every violation which does not clear within 30 minutes (as defined in NERC policy). Subsequently, each reported violation will be studied/examined to see if it would

	have caused instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk power transmission system (have an Inter-Area impact following next contingency). If so, ISO New England would report this "OSL violation" to NPCC and NERC with 72 hours. If there would not have been an Inter-Area impact (i.e. the impact would have been localized within the offending Control Area's boundary), no external reporting will occur. We suggest this approach be adopted. By restricting reporting to pre-identified limits, NERC may not be getting the information they seek through this Standard. Only through a post-operational assessment, can a true analysis (with the correct system configuration) be performed and an adequate judgement be made on the potenital impact to the bulk power system.
Doug Hils Cinergy #1	No This requirement is too restrictive and would require maintaining a living alarm program to take into account the actual ambient temperatures, actual loading level for rating of equipment that varies by temperature changes. Many alarm levels are set at a temperature extreme and the operators compare the actual temperature and loading to the acceptable level at the given ambient temperature. Alarm files could not be used as a legitimate violation file.
Ray Morella Joanne Borrell FirstEnergy #1, 3, Fred Frederick Vectren #3	No
Yes – Comments indicating requirement needs adjustment	
Gerald Rheault Manitoba #1,3,5,6	Yes See comment for #40. *{Manitoba Hydro is concerned about the amount of data that may be required to be collected for this requirement. Perhaps there needs to be some sampling process or investigation only when multiple violations occur or when a system disturbance results}*
George Bartlett Entergy Svcs 1	Yes We believe that our answers to questions 40 and 41 are also significant here. *{How can an RA prove the negative, that is, how can they prove that a violation of system operating limits did not occur, unless they keep all operational data for some length of time? NERC needs to carefully consider this requirement, as the operational data generated on an hourly basis with a 4 second scan rate is unbelievably voluminous. We would prefer that a short rolling time limit be set for the retention of all EMS data, such as 3 months. There should be some kind of investigation procedure that triggers the analysis of this data on a post-event basis.}* *{Following up on our comments in 40, we believe that the levels would be 1. Some data was available but not enough to complete the analysis. Report was filed on time but was incomplete. 2. Not Applicable. 3. (We agree with level 3 as shown.) and 4) Data was wholly missing and / or documentation didn't exist.}*
Roman Carter So Co Gen 3,5,6 (6 members)	Yes Are there current reports available to better identify what the cause was for exceeding the security limit and would this report be available within 72 hours to meet the documentation requirement above? If not, maybe the timeframe should be changed.

Toni Timberman BPA #1	Yes Requirement is for TOP to document exceeding system limits, regardless of duration? What is “data” in the measure referring to?
Lee Westbrook Oncor #1	Yes Words should more closely match Requirement 16.
Kim Warren IMO #2	Yes Is logging not sufficent? Whats the distinction between "document" & "log"?
Yes – Other Comments	
Thomas Pruitt Duke #1 Todd Lucas (6?) Southern Co #1 Susan Morris SERC #2	Yes See 40. *{Delay this requirement until the OLDTF collaborates with the SDT to define "operating limits". These new limit definitions must also go through the standards process before formal implementation.}*
Lloyd Linke MAPP #2	Yes System Operating Limit should be in caps to be consistent with the definition on page 2.

Alan Boesch NPPD #1 Alan Johnson Mirant #6 Bob Burkard NCMPA1 # 3,4,5 Dilip Mahendra SMUD #1 Ed Riley CA ISO #2 Francis Halpin BPA Bus Line #5,6 James Stanton Calpine #5 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Joseph Buch Madison #4 Karl Kohlrus CWL&P #5 Mike Miller Southern Co #1 Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 Tony Jankowski We-Energies #4 William Smith Allegheny Pwr #1	Yes

32. Requirement 17 - Do you agree with these levels of non-compliance for this requirement?

No – Comments suggesting addressing non-compliance is premature	
Gregory Campoli NY ISO #2	No It is premature to develop compliance levels at this time.
Thomas Pruitt Duke #1 Robert Reed TS (See List)	No Question 42 needs to be addressed and resolved before the levels of non-compliance can be determined.
Susan Morris SERC #2	No Question 42 needs to be addressed and resolved before the levels of non-compliance can be determined. In general there should be at least two levels of non-compliance identified.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	No It was felt that in order to properly address the compliance issues the RS must be well defined and more development is needed before a determination can be made whether these levels are appropriate.
Ed Riley CA ISO #2	No The CAISO feels that the compliance with Standards should be addressed separately from the Standards themselves. Therefore this section should be removed from the Standard.
No – Comments indicating levels of non-compliance need adjustment	
Ken Skroback AL Elec Coop #4	No If you had no instance of exceeding an operating limit, no documentation would exist and you would be Level 4 non-compliant.
Karl Kohlrus CWL&P #5	There should be a reminder sent out if the data is not sent initially before going directly to Level 4.
No – Comment indicating development should be linked to OLDT	
FRCC 6-#1, 4-#2, 1-#2	No See comments to question 41. *{ FRCC would like to wait until the "field test" of the OLDTF recommendation is completed to understand this requirement and its levels of non-compliance before commenting}*
Sam Jones ERCOT #2	Please see comments to #42 above. *{ERCOT agrees with the OLDTF report and feels that this Requirement needs to be reviewed with respect to that report. If the Requirement refers to documenting SOL violations as defined by the OLDTF, then reporting may be required to the Regional Council. If the Requirement refers to IRL Compliance Violations, then the RA needs to submit the report to the Regional Council and NERC.}*
Vern Colbert Dominion #1 Richard Kafka Pepco #1 Fred Frederick Vectren #3 Albert M. DiCaprio MAAC #2	No

Yes – Comments indicating levels of non-compliance need adjustment	
George Bartlett Entergy Svcs 1	Yes/No Levels of noncompliance should include Level 3, Data doesn't exist. We believe that our answers to questions 40 and 41 are also significant here. *{How can an RA prove the negative, that is, how can they prove that a violation of system operating limits did not occur, unless they keep all operational data for some length of time? NERC needs to carefully consider this requirement, as the operational data generated on an hourly basis with a 4 second scan rate is unbelievably voluminous. We would prefer that a short rolling time limit be set for the retention of all EMS data, such as 3 months. There should be some kind of investigation procedure that triggers the analysis of this data on a post-event basis.}* *{Following up on our comments in 40, we believe that the levels would be 1. Some data was available but not enough to complete the analysis. Report was filed on time but was incomplete. 2. Not Applicable. 3. (We agree with level 3 as shown.) and 4) Data was wholly missing and / or documentation didn't exist.}*
Lloyd Linke MAPP #2	Yes Level #4 should read “Data didn’t exist” instead of “Documentation didn’t exist”
Yes – Other comments	
Darrel Richardson Illinois Power #1, 3	Yes However, the term “documentation” needs to be better defined since this Requirement is so vague.
Todd Lucas (6?) Southern Co #1	Yes See comments for #40. *{ Agree assuming reporting requirements are commensurate with comments for question 6 & 7.}*

Alan Boesch NPPD #1 Alan Johnson Mirant #6 Bob Burkard NCMPA1 # 3,4,5 Dilip Mahendra SMUD #1 Doug Hils Cinergy #1 ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2 Ed Stein Firstenergy Sol #6 Francis Halpin BPA Bus Line #5,6 Gerald Rheault Manitoba #1,3,5,6 James Stanton Calpine #5 Joanne Borrell FirstEnergy Sol #3 Joe Minkstein PG&E #5 John Blazekovich Exelon #1,3,5,6 Joseph Buch Madison #4 Kathleen Goodman ISO NE #2 Kim Warren IMO #2 Mike Miller Southern Co #1 Peter Burke ATC #1 Raj Rana AEP #1,3,5,6 Ray Morella FirstEnergy #1 Roman Carter So Co Gen 3,5,6 (6 members) Stuart Goza TVA #1 Tom Petrich (5) PG&E #1 Toni Timberman BPA #1 Tony Jankowski We-Energies #4 William Smith Allegheny Pwr #1	Yes

33. Are you aware of any Regional or Interconnection Differences that should b Standard? If so, please identify what you feel should be added.

Note – Only responses with a "yes" are included here

Comments without reference to a particular region	
Ed Riley CA ISO #2	Yes The usage and definition of the term "violation" varies between the different entities. See definitions offered in comments on question #7.
David Kiguel Hydro One #1	Yes There are differences in some Areas. For example, in Ontario the IMO is solely responsible to determine operating limits and to direct the operation of the IMO-Controlled Grid within these limits. The Transmission owners/operators operate thir respective systems under the IMO's direction. They only provide the IMO with equipment ratings which the IMO must respect. The transmission operators do not determine operating limits or monitor/report their compliance. The standard should reflect jurisdictional differences in the responsibilities assigned to the RA and TOP in some areas.
Peter Burke ATC #1	No Actually, how would the MISO "Day 2" market, as proposed, conform to the definitions proposed in this new standard?
Kim Warren IMO #2	Yes Understanding that different companies have different operational setups and duties/requirements can sometimes cross boundry lines between different authorities (i.e. RA/TOP/TOW). In some case the RA and the TOP perform the same functions as defined in this SAR but that entity may not perform other duties such as switching, maintenance or notification of outages or construction plans which are also described as roles that the TOP is accountable for in the Functional Model. In other case, some duties as defined in the SAR process may be duplicated or shared or the accountabilites for which limits may need to be clarified.
Gerald Rheault Manitoba #1,3,5,6	Yes Manitoba Hydro believes that the requirements for monitoring system operating limits in real time in a thermally constrained network and for a stability constrained network are significantly different. The time limitations in a stability constrained network does not allow the RA or TOP to use online reliability analysis tools in the same way as they can be used in a thermally constrained tight network. The RA in a stability constrained network will be required to operate to predefined operating limits which have been determined from extensive operational planning analysis. The RA in a thermally constrained network can operate to real time defined limits because of the much slower system reaction time. **Requirement 1 and Requirement 2 must be worded in a manner to ensure that both the RA and TOP for thermally constrained and for stability constrained networks can meet the requirements of the Standard.**
Compliance Mgrs Compliance Subcom	The work of the OLDTF has shown that there are differences in the interpretation and response to limit determinations and violations among the interconnections and Regions. The Standard and its compliance measurements should not dictate whether a particular RA should operate in a predictive or a responsive mode (i.e., take action in advance to prevent an overload based on predictive analysis, or take steps to mitigate an actual overload only on occurrence) The above statement is not reflective of most comments, and represents a

	minority opinion for consideration.
Susan Morris SERC #2 Robert Reed TS (See List)	Yes The work of the OLDTF has shown that there are differences in the interpretation and response to limit determinations and violations among the interconnections and Regions. The Standard and its compliance measurements should not dictate whether a particular RA should operate in a predictive or a responsive mode (i.e., take action in advance to prevent an overload based on predictive analysis, or take steps to mitigate an actual overload only on occurrence)
Todd Lucas (6?) Southern Co #1	Yes There are differences in the interpretation and response to limit determinations and violations among the interconnections and Regions.
Thomas Pruitt Duke #1	Yes Standards need to be written to accommodate regulatory jurisdictions and the differences that exist between them. In certain jurisdictions, third party disaggregated functions will not be allowed, or will not be allowed to perform in the same manner as in other jurisdictions. The work of the OLDTF has shown that there are differences in the interpretation and response to limit determinations and violations among the interconnections and Regions. The Standard and its compliance measurements should not dictate whether a particular RA should operate in a predictive or a responsive mode (i.e., take action in advance to prevent an overload based on predictive analysis, or take steps to mitigate an actual overload only on occurrence).
FRCC	
FRCC 6-#1, 4-#2, 1-#2	Yes The FRCC Security Process (Reliability Plan) has requirements for real time and operations planning analysis. NERC needs to be very careful when attempting to require certain periodicity for studies as each region may already have established what it requires.
ERCOT	
Sam Jones ERCOT #2 OLDTF (9?) 6 - #2 1 - #1,5	Yes In the ERCOT Region, ERCOT uses ratings provided by the equipment owners to determine the limits. The TOP doesn't determine them. In some Regions or Interconnections, the RA may delegate certain tasks to other functions, though the RA is responsible for ensuring that these tasks are performed. There needs to be some kind of general statement to this effect. Perhaps this is being addressed in the Functional Model.
SERC	
Vern Colbert Dominion #1	Yes It has been shown that there are significant regional differences both in agreements between TOPs and RAs, and in the modeling capabilities and programs avbailable. The SAR states that regional differences are 'none identified'. This is not true. RA audits in SERC for one identified many differences that should be taken into consideration.
WECC	
Francis Halpin BPA Bus Line #5,6	Yes In the West, differences are settled through the WECC OTCPC process.

34. Is the draft standard missing any requirements that should be added. what you feel should be added.

Note – Only responses with a "yes" are included here

Compliance Mgrs Compliance Subcomm	There is a need to clearly establish the functional relationships in a NERC document. That is, all load must either be a BA or have a BA. Each BA must have an RA. And so on. With these relationships established, the requirements can be established for the RA and the RA can establish requirements for membership through contracts. This will help to get rid of some Regional differences. 1) The OLDTF has definitions that need to be considered prior to finalizing this standard. 2) Operating limits that should be secured should include voltage collapse transfer limits in addition to equipment ratings violations. 3) Confidentiality of data needs to be addressed. Transmission line flows and generator outputs have commercial implications in real-time market-based systems. The Standard should recognize this concern.
Susan Morris SERC #2 Thomas Pruitt Duke #1 Todd Lucas (6?) Southern Co #1 Robert Reed TS (See List)	Yes 1) The OLDTF has definitions that need to be considered prior to finalizing this standard. 2) Operating limits that should be secured should include voltage collapse transfer limits in addition to equipment ratings violations. 3) Confidentiality of data needs to be addressed. Transmission line flows and generator outputs have commercial implications in real-time market-based systems. The Standard should recognize this concern.
OLDTF (9?) 6 - #2 1 - #1,5 Sam Jones ERCOT #2	Yes Should consider the definitions and recommendations developed by the Operating Limit Definition Task Force as endorsed by the Operating Committee.
FRCC 6-#1, 4-#2, 1-#2	Yes See comments to the questions. We have already identified some of these, especially with regard to the BA, TOP etc implementing mitigation plans, providing data etc.
Tony Jankowski We-Energies #4	Yes Need to define when operations transfer to "Abnormal and Emergency" Standard Requirements.
Toni Timberman BPA #1	Yes Requirement that "TOP Shall Provide" data, as specified
Todd Lucas (6?) Southern Co #1	Yes The standard should incorporate requirements to provide "real time" data as indicated in earlier comments.
Roger Green Southern Co #5	Yes The standard clearly identifies the obligation of generators to provide data to the RA's and TOP's stating in the background that there are various ways generators may be obligated to provide data. A requirement needs to be added addressing

	the obligation of the RA's and TOP's to likewise provide data to the generators. Additions, deletions, or other changes to the bulk transmission system can impact the accuracy of models used to monitor and assess the adequacy of generating plants, their protective schemes and their interconnections to the grid. An example is any system changes affecting system impedance or changes in transmission relay settings that require coordination with plant relays. One miscoordination between plant relays and transmission relays could result in the tripping of an entire four unit 4000MW plant which is not a contingency normally planned for. Another is any system impedance changes that can affect generator excitation system settings (MEL and URAL) which can result in reactive limits being reached and cascading unit trips.
Richard Schwarz PNSC #2	Yes TOP shall provide data as specified.
Raj Rana AEP #1,3,5,6	Yes There is no requirement that reliability data recipients have to be a signatory to the NERC Data Confidentiality agreement. This needs to be codified somewhere in the new standards. This standard should define the minium type of data that is to be provided to the RA, similar to Policy 4B and Appendix 4B requirements today. There should be a requirement that the TOP, BA, IA, PA, and Generators provide data on a continuing basis as requested (or as per the defined minimum data requirements suggested in #2 above) and needed by the RA to perform their reliability analysis. There needs to be a definition of operational planning analysis and a requirement that sets the minimum standards of scope and frequency for such analysis. There needs to be a requirement for the minimum frequency of performance of real-time analysis.
Peter Burke ATC #1	Yes It is unclear how fines are levied based on $'s or $'s/MW. Some examples may be of value that show people the cost of non-compliance. The pricing signals may (or may not) push people to improve their processes to achieve compliance sooner than later.
Mike Miller Southern Co #1	Yes Previous comments
Lloyd Linke MAPP #2	Yes See comments already made above regarding the scope of the definition of system operating limits.
Kim Warren IMO #2	Yes Local Areas Clearly differentiate between electrical areas that can cause instability, uncontrolled seperation or cascading outages that advesely impact the reliability of the bulk transmission system and those areas that don't (Local Areas).
Kathleen Goodman ISO NE #2	Yes In the current format of the existing draft SARs, it appears as though two very fundamental reliability requirements may be lost: (1) a Reserve Requirement; and (2) a CPS2-like requirement (a standard which accounts for ACE variations in addition to frequency control).
Joseph Buch Madison #4	Yes The standard refers to "data" which is to be requested or provided. However what

	constitutes this data is vaguely defined or undefined. Certain key items which constitute part of this data need definition either as part of the initial issuance of this standard or as part of the next revision. See comments in question 47.
ECAR Ops Panel #1 – 8 #5 – 1 #2 – 2 Ed Stein Ray Morella Joanne Borrell Firstenergy #1,3,6	Yes Throughout the standard the term Reliability Authority is used. This term is out of date and has been replaced by Reliability Coordinator. Is the Reliability Authority in this questionnaire identical to the Reliability Coordinator function? This issue needs clarification. If the Reliability Authority in this questionnaire is different than the Reliability Coordinator function, there needs to be an explaination of the difference. Throughout the standard the term 'system operating limit' is used. This term should be replaced with the term 'Operating Security Limit'. There are many different system operating limits. These standards do not apply to all of them. This standard only applies to Operating Security Limits violations. The term Operating Security Limit should be used and defined to distinguish it from the multitude of system operating limits that are routinely used in everyday operation. Throughout the standard replace the term Reliability Authority with Reliability Coordinator. Throughout the standard replace the term 'system operating limit' with Operating Security Limit. Write a definition of Operating Security Limit.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 – 5 David Kiguel Hydro One #1	Yes We are questioning whether voltage collapse reqts. should be acknowledged. Confidentiality issues could be addressed
Gregory Campoli NY ISO #2	It is difficult to assess what additional requirements should be captured in this standard without a full compliment of standards to review. Our overall concern is that this that a) requirements for real time analysis and operational analysis need to be defined independently, b) requirements for real time data and modeling data need to be defined independently and c) levels compliance should only be determined once the requirement has been well defined and agreed to.
Francis Halpin BPA Bus Line #5,6	Yes This standard needs to discuss a process or point to a process by which all of the operational planning studies (the 'seasonal base case data') and 'mitigation plans' (our operating procedures) are developed, reviewed, discussed and agreed upon. This is a very big gap in this standard.
Charles Yeung Reliant Energy #6	Yes As stated in comments to Question #32, there must be coordination between the reliability mitigation procedures and business procedures for congestion management. Coordination requirements with business standards for congestion management.
Bob Burkard NCMPA1 # 3,4,5	Other than the comments above
Alan Boesch NPPD #1	Yes The Standard does not require the RA or TOP to provide evidence that they have the authority to take necessary actions. This requirement is currently included in the Certification SARs. This Standard should reference the Certification Standard and any other

	applicable Standards.

35. Which form of the Standard do you prefer?

Ed Stein Firstenergy Sol #6	A It will be easier to modify the standards if each requirement is in a stand alone item.
Ray Morella FirstEnergy #1	A It will be easier to modify the standards if each requirement is a stand alone item.
Joanne Borrell FirstEnergy Sol #3	A It will be easier to modify the standards if each requirement is a stand alone item.
Alan Boesch NPPD #1	A Version A is very clear easy to follow. Version B is harder to follow and relate the Measurement, Outcomes,etc for the particular requirement. This is reflected in this response form because it requests that Version A be used to provide the response. Please note that version B has two 201 (f) sections and no 202 (f) section.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	A It will be easier to modify the standards if each requirement is a stand alone item There was not complete agreement on this item. Eight companies preferred Version A - Each Requirement Separate. Two companies preferred Version B - Related Requirements Combined.
Alan Johnson Mirant #6	A Version A makes it easier to cite specific measures and/or requirements. However, by simply adding some numbered sub-bullets, the same could be said for Version B.
Alan Boesch NPPD #1	A Version A is very clear and easy to understand the Requirement, Measurement, Outcomes, etc for the particular requirement.
Doug Hils Cinergy #1	A
John Blazekovich Exelon #1,3,5,6	A
James Stanton Calpine #5	A
Tony Jankowski We-Energies #4	A
Tom Petrich (5) PG&E #1	A
Stuart Goza TVA #1	A
Roger Green Southern Co #5	A
Mike Miller Southern Co #1	A
Kathleen Goodman	A

ISO NE #2	
Darrel Richardson Illinois Power #1, 3	We really do not have a preference. We can operate with either form.
Compliance Sub Compliance Mgrs	The structure where the requirements are posed on TOP that are mirrors of RA functions are not appropriate because the RA is responsible. Should not be parallel authorities. Delegation will be dealt with another forum. Version B is not required. (This is not consistent among the commenters. Some prefer version B.
OLDTF (9?) 6 - #2 1 - #1,5	Neither version provides a completely orderly and logical flow. That being said, if there is a requirement to pick one over the other, Version B is much more preferable. (follows a more logical flow of the two). Requirements are not buried like requirements 10 / 11 / 12 in version "A".
FRCC 6-#1, 4-#2, 1-#2	B It is much easier to understand when related items are together. Version B is more clearly written and easier to follow.
Peter Burke ATC #1	B Version B is shorter
Lloyd Linke MAPP #2	B I think version B is written more clearly than version A and is easier to follow. I think that the entities that are responsible for complying to this standard will find it easier to determine what is required of them for compliance. I also think that the levels of Non-Compliance are spelled out more clearly, there is less room for interpretation.
cJoseph Buch Madison #4	B Version B collects all the requirements for each entity in one location. Version A is could result in an entity accidentally overlooking a requirement since they have several sections in which to look.
Joe Minkstein PG&E #5	B Version A is streamline and forthright, but version B lays out the requirements in such fashion that an auditee should know what the documentation requirements are and have agreement with an auditor when a finding of non-compliance is reported
Kim Warren IMO #2	B I prefer that the Standard have all RA requirements/information together. Same for TOP's, TOW's, BA's, IA's and Generator Owners. In other words a different section of the standard for each of the different authorities/owners where all their requirements are stated in one place.
Toni Timberman BPA #1	B Liked Version B because it lays out separately the requirements for each entity, but the compliance information should be associated with each requirement rather than in the big list at the bottom. It is difficult to sort out which compliance refers to which requirement.
Todd Lucas (6?) Southern Co #1	B An adequate review of any of the standards requires a significant effort. A 30 day comment period does not allow for appropriate review and well thought out feedback.
Susan Morris SERC #2 Thomas Pruitt	B Version B is written more clearly than Version A and is easier to follow. Entities that are responsible for complying with this standard will find it easier to determine what is required of them for compliance. In addition, the levels of non-compliance

Duke #1 Robert Reed TS (See List)	are spelled out more clearly; there is less room for interpretation.
Raj Rana AEP #1,3,5,6	B We prefer neither of the versions. Neither version allows the reader to easily know what each Authority or entity is responsible for. Version B comes the closest.
William Smith Allegheny Pwr #1	B
Vern Colbert Dominion #1	B
Sam Jones ERCOT #2	B
Roman Carter So Co Gen 3,5,6 (6 members)	B
Richard Schwarz PNSC #2	B
Richard Kafka Pepco #1	B
Ken Skroback AL Elec Coop #4	B
Karl Kohlrus CWL&P #5	B
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	B
Gregory Campoli NY ISO #2	B
Gerald Rheault Manitoba #1,3,5,6	B
Francis Halpin BPA Bus Line #5,6	B
Dilip Mahendra SMUD #1	B
David Kiguel Hydro One #1	B
Albert M. DiCaprio MAAC #2	B
Ed Riley CA ISO #2	The CAISO would like to suggest a third option for the organization of the Standard, dividing the requirements up by function, such as Reliability Authority, Transmission Operator, etc., rather than by task.

36. If you have comments on the format of the standard, please share them with us.

FRCC 6-#1, 4-#2, 1-#2	All assumptions and definitions should be included in the standard.
OLDTF (9?) 6 - #2 1 - #1,5	Building upon comments above, no entities should have to search through a number of Compliance templates to find all of the requirements applicable to them. Version B still has this in that 207 remains buried after TOP requirements.
William Smith Allegheny Pwr #1	Add descriptive titles to the subsections for ease of reading.
Toni Timberman BPA #1	highlighting the requirements better and using tabs and font sizes to delineate between the different sections could improve format.
Thomas Pruitt Duke #1	1) Subtitles should be added to sectionalize the standard and a table of contents added. 2) Since all references to functions, such as, RA, BA, PA, TOP, etc. are listed in standards documents as "entities" for convenience, all NERC standards documents should contain a clarification statement explaining that the functions are not organizations and that all references to the functions should be interpreted as "entities responsible for --- function". 3) All assumptions should be listed in the standards document. 4) Footnotes of definitions should be repeated for each requirement write-up. 5) There should always be at least two levels of non-compliance defined.
Roger Green Southern Co #5	You are encouraged to make them as simple as possible. Organization and means to find content needs to be very clear. Realizing that these are very complex, perhaps they need to be followed up with summaries by function or subjecj, such as Compliance Requirements, Planning Requirements, Operating Requirements, etc.
Compliance Mgrs Compliance Sub Robert Reed TS (See List) Susan Morris SERC #2	1) Subtitles should be added to sectionalize the standard and a table of contents added. 2) Jim Byrd presented Functional model issues to the NERC PC/OC/MIC on March 19, 2003 in Birmingham and stated that one of the major issues with the Functional model is that the functions are perceived to be organizations. Jim stated that efforts will be made to clarify that the functions are not organizations. Since all references to functions, such as, RA, BA, PA, TOP, etc. are listed in standards documents as "entities" for convenience; for example, sentences begin: "The RA shall…" instead of "Entities responsible for RA functions shall…", then all NERC standards documents should contain a clarification statement explaining that the functions are not organizations and that all references to the functions should be interpreted as "entities responsible for --- function". 3) All assumptions should be listed in the standards document. 4) Footnotes of definitions should be repeated for each requirement write-up. 5) There should always be at least two levels of non-compliance defined.
Raj Rana AEP #1,3,5,6	As one reviewer stated, "this draft standard is worse then reading the Federal Register."
Peter Burke ATC #1	While it seems repetitive there is no other way to better mirror the NERC Functional Model. Although version B is clearer than version A, version B might be better if altered

	so that the requirements for each type of entity are grouped. That is, all the requirements for the RA should be in one section so that the RA need not search the entire document for any remaining requirements that apply to them. Obviously, this would apply to all types of entities, IA, BA, Generator, TOW and TOP so they one have to look in one place.
Lloyd Linke MAPP #2	The Outcome section should have 100% Compliance Requirement added to it. 100% Compliance is identified in the Comment document but not in the standard itself. I think this should be added throughout the document. Section 204(e) is incorrectly numbered as 203(e) (Version B) Section 204 (e) and (f) are mislabled 205(e) and (f) (Version A) Section 202(f) is mislabled as 201(f) (Version B) The Compliance Monitoring sections are not evaluated above - this comment applies to them: In the Compliance Monitoring Process section it states that the entity responsible for complying shall have the following data available upon request of the Compliance Monitor; it does not state the time period within which the entity must respond. I think that a specific time requirement in which the information shall be provided needs be added. Adding the specific time to provide the information makes the requirement more measurable. This is true for Sections 201 - 206.
Kathleen Goodman ISO NE #2	Additional comments: ISO New England, nor NPCC members, subscribe to the use of monetary penalties to enforce compliance and we (ISO New England) in no way are a party to any contracts which allows NERC to do so.
Karl Kohlrus CWL&P #5	The organization of the document makes it very difficult to read. Much of the data is similar and repetitive. Maybe the document should be organized differently, either separate standards applicable to RA only, the IA only, the BA only, and the TOP only. Then each entity would have to read and comply only with the standard that is applicable to him. An alternative method would be to state in each section that this is applicable to RA, IA, BA or TOP.
Joseph Buch Madison #4	Other standards organizations include a table of contents as part of the standard. This standard should also include a table of contents. In section 201 (a) Requirement, each item should be identified by a number and this number should be correlated with the other subsections of 201. For example, the first requirement (a) covers monitoring and under (b) Measures the monitoring requirements should all be grouped together and If you have comments on the format of the standard, please share them with us. Comments: Other standards organizations include a table of contents as part of the standard. This standard should also include a table of contents. In section 201 (a) Requirement, each item should be identified by a number and this number should be correlated with the other subsections of 201. For example, the first requirement (a) covers monitoring and under (b) Measures the monitoring requirements should all be grouped together and assigned the same number as the requirements. Similarly, the second item under requirements (a) data collection and specification should be listed as item two under (b) Measures. [In this draft it is number three] This format should be continued for subsections (c), (d), (e), (f) and (g). Note that under (d) Regional Differences the same comment could apply to all the requirements. The fourth item in Section 201 (a) covers notification of the Compliance Monitor when data is not provided. In the long form of this standard, this item is included as part of the data specification and collection. This item should be combined with the second item in this section. Similarly, the third item should be combined with the second item. Version B combines most of the RA requirements in Section 201, however the

	requirements for a mitigation plan and for documentation of instances of exceeding limits are still in separate sections 203 and 205. For consistency in combining all RA requirements together sections 203 and 205 should be combined into section 201. This same comment also applies to TOPs. Sections 208 to 211 cover the responsibilities of Balancing Authorities, Interchange Authorities, Transmission Owners and Generator Owners to supply data covering new facilities or modifications to existing facilities. Sections 207 covers the same requirements for the Reliability Authority to provide data to associated (adjacent) Reliability Authorities and/or Transmission Operators. Although it is beneficial to keep these sections on data together, it is not consistent with the goal of keeping all the requirements for each entity together in one section. This standard requires generator owners to supply data as requested to the requesting RA or TOP no less than 7 days prior to energization of new facilities or changes to existing facilities with a level 4 non-compliance if this data is not provided. This is not acceptable. The standard does not spell out the data required, it is left up to the RA or TOP to determine. Some data such as winter ratings is not crucial to system operation and associated level 4 non-compliance along with the sanctions for this level of non-compliance is simply not appropriate. What may be acceptable is to classify non-compliance with this standard as written as level 1. A future revision to this standard including an itemized listing of the specified data could then be developed along with appropriate levels of non-compliance. For example, generator data for dynamic stability provided between 5 and 7 days before energization could be given a level 1 non-compliance. I also noted several typo's in the section numbers.
ECAR Ops Panel #1 – 8 #5 – 1 #2 - 2	(1) The application of the Sanctions table is difficult to understand. A few examples on how to apply sanctions would be helpful. (2) Add descriptive titles to the subsections.
Guy Zito (See List) NPCC #2 – 2 NPCC #1 - 5	Subtitles should be added to sectionalize the standard and a table of contents added.
Francis Halpin BPA Bus Line #5,6	It seems to be too long! The drafting team should look to consolodate where ever possible. Requirements 5, 6, 7, 8, & 9 seem to be prime candidates for incorporation into a single requirement which is applicable to the different entities.
Ed Stein Firstenergy Sol #6	I believe that NERC has taken the old hardware/software problem and increased it exponentially. There is a computer problem; hardware blames software and software blames hardware. It appears that NERC has set up the condition where there will be finger pointing between the IA,RA, BA,and TO. Because of this potential it is very important to get this correct before it goes to drafting committee. Another concern that I have is that the whole RTO/SAR process has taken away the common sense factor. As an example: The temperature is 30 degrees below zero and the wind speed is 20 miles per hour. The associated high loads has caused the transmission lines into the area to become overloaded based on an operating limit developed at zero degrees and a wind speed of 10 miles per hour. The only solution is to reduced load in the area through rotating theopening of distribution breakers throughout the area. The problem is that once a distribution breaker is opened there is a good chance that it will not close when called upon due to the cold weather. The RA or TO or whatever does not call for load reductions due to exceeding the operating limit, serves the load with no problem because the true limits are higher than the reported limits or a small amount of loss of life is taken out of the lines. My fear is that because a limit has been

	violated the TO or RA will be placed on the NERC rack and tortured. Once that happens the next time you will see load shedding causing even more problems. I do support ECAR's responses and much of PJM's responses. After reviewing all of this TO, IA, BA, and RA I am heading to AA because I really want a drink.

37. Please list any other comments you may have in the space below.

Compliance Subcomm, Compliance Mgrs (14?)	See Attachment A
Toni Timberman BPA #1	there were content differences in addition to format differences between Version A and Version B. These differences should be resolved. I will use Version B as the reference: 1. Page 1 of 19, footnote 1 – data can be analog or digital 2. Page 2 of 19, 201(b) 6. does not appear in Version A. "Reliability Analysis Programs analyze all system operating limits….. 3. Page 3 of 19, 201(e), third mark – the language "and identifies any problems…." Does not appear in Version A 4. Page 3 of 19, 201(e), 6th mark does not appear in Version A. "Reliability analysis programs analyze all system operating limits 5. Page 3 of 19, 201(f) 3, second mark is not in Version A "No analysis tool was available for use…" 6. Page 3 of 19, 201(f) 3, fourth mark is not in version A "there was a system operating limit violation, but…" 7. Page 5 of 19, 202(b) #6, is not in Version A 8. footnote at bottom of page 5 should include operator assessment as part of the definition of Reliability Analyses 9. Page 7 of 19, 201(f)3, second mark is not in verson A "no analysis tool was available" 10. Page 8 of 19, 203(a) : words "approved, documented" were not in Version A 11. Page 8 of 19, 203(b) language is different than in Version A 12. Page 9 of 19, 204(a) word "approved " was not in Version A 13. Page 9 of 19, 204(b) shoul reference TOP instead of RA 14. Page 10 of 19, 205(a) Requirement is written much differently than in Version A 15. Page 10 of 19, 205(b) Version A uses better language for the Measures 16. page 11 of 19, 205(f)4, second mark – does not exist in Version A General comment: please get rid of the "marks" and make every item clearly identifiable with a number or letter reference. That's all for this round of comments….
Raj Rana AEP #1,3,5,6	Obviously, we believe this draft is not yet ready for going to ballot. Of course, that wasn't your intent at this point. However, we question the wisdom of this standard ever going to ballot before the Facilities Rating Standard is also developed and ready to go to ballot. We would suggest that this standard should be developed the Facility Rating Standard. Otherwise assumptions regarding limits and violations made by this standard may turn out to be vastly different then the intent of the Facility Ratings Standard. We appreciate the hard work of the standards drafting team and look forward to the next draft.
Doug Hils Cinergy #1	202 (a) Requirement section. Under "The TOP shall:" the fifth bullet needs to be removed or reworded. If the bullet is not removed, a suggested wording would be: Operate within equipment ratings or system operating limits determined by the Reliability Authorities' short-term reliability analysis. (The wording change needs to reflect the fact that the TOP may not have the information that would be

	needed from other utilities to perform an effective bulk transmission analysis. The Reliability Authority should have the information to do such an analysis and provide the TOP with any limits.) Wording in 202 (b) Measures, 202 (c) Outcomes, and 202 (e) Compliance Monitoring Process and 202 (f) Levels of Non-compliance may need minor changes to reflect the change in the 202 (a) Requirement section.
Dilip Mahendra SMUD #1	Sanctions should be applied only if a regulatory body governing the entity in non-compliance endorses the sanctions table.
David Kiguel Hydro One #1	Subtitles should be added to sectionalize the standard and a table of contents added.

Add Raj's examples here

Comments on Operating Within Transmission Limits Standard (OWL)

Simplify the Standard

There is a fairly consistent theme across the comments that the draft OWL Standard should be simplified and clarified. The standard is focusing too much on data reporting, documentation, tools, etc. and is missing the key point to get operators to take appropriate actions in the right time frame to address OSL violations.

The OWL standard should focus on the **monitoring** of transmission system data and status and **Operating Security Limits**, to prevent Operating Security Limit **violations**, mitigate violations within specific time frames when they occur, and **report** such violations to NERC.

Operating Security Limits

There are several comments that propose that the definition of an Operating System Limit (OSL) is too narrow. A "System Operating Limit is a limit that has been "identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system."

"As conceived, this standard does not result in any entity assuring that bulk power system is operating within limits. It only results in operating within those limits for which violations result in instability/cascading outage risk. Any defined operating limit, which has been identified as potentially threatening bulk reliability and thereby require monitoring and adherence, should be covered by this standard."

Proposal

The Transmission System elements that have "established limits" to comply with the Disturbance Performance Table should be included in the OSL monitoring list.

Violations

The sanction measures in the draft standard are too focused on reporting and documentation, and rather should focus on OSL violations (violation meaning the limit has been exceeded by both a magnitude and time duration specification).

The levels of noncompliance as stated in the draft standard will be very difficult to measure, and should be replaced with measurable requirements that are practical to administer and that achieve desired results.

Reporting

There is a suggestion that there needs to be some definition of what should be "reportable" and that perhaps all incidents of OSL violations may not have to be reported.

Requirement #1

The RA shall monitor (in real time) the system operating limits (identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system) and the actual real time data associated with those limits.

Proposal

The RA shall monitor (in real time) transmission system data and equipment status related to specific system operating limits and direct actions to prevent OSL violations.

Levels of non-compliance based on time over limit, and magnitude of limit violation. (Something similar to the matrix that is used in the WSCC would provide for the practical measuring of non-compliance.)

Requirement #2

Proposal

Delete: Duplication of effort between RC and TOP

Requirement #3

Proposal

The RC is required to do "Real Time Monitoring" of data and equipment status that relates to specific, current, System Operating Limits, therefore there should be a measure for this requirement, with sanctions indicated for non-compliance

Acceptable parameters of monitoring must be defined. On the assumption that the transmission elements that will be monitored have been determined, and the Operating Security Limits have been defined, then:

1. Acceptable update frequency and accuracy of “Real Time Monitoring” of the data and equipment related to the OSL must be defined.
2. What data and equipment will be monitored must be established by the Reliability Coordinator and agreed to by the Transmission Provider.
3. The Transmission Provider must provide the data and equipment status information as required by the Reliability Coordinator. (Within agreed frequency of update and accuracy of data.)

Requirement #4

Proposal

The TOP is required to provide the RC the data and equipment status that relates to specific, current, System Operating Limits, at a pre-determined frequency of update, and accuracy of data. Therefore there should be a measure for this requirement, with sanctions indicated for non-compliance.

Requirement #5 to #9

The proposed requirements deal with data collection to support the models for system analysis.

Proposal

The requirement for data provision/collection/timing and model development, and related compliance measurements and levels of non-compliance should be dealt with through the present working groups that are doing this work.

Requirement #10

"The Reliability Authority (RA) shall perform reliability analyses to identify where on its system the RA may encounter problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system."

Proposal

There should be some qualifiers that define a NERC minimum periodicity to complete reliability analysis. The RA should establish their particular cycle for doing reliability analysis, and that information should be included in their Certification documentation.

Need to define what types of analysis are expected: actual flows versus limits, contingency analysis of all possible contingencies? Analysis of only those conditions defined in the day-ahead or seasonal studies? Is the requirement to do a "reliability analysis" every day? every shift? everytime a change in system configuration demands etc.

Requirement #11

Proposal

Delete: Duplication of effort between RC and TOP

Requirement #12

"The Reliability Authority (RA) shall use the results of real time monitoring and/or reliability analyses to take actions necessary to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system."

There are two parts to the Requirement. The first is a requirement to use the monitoring and analysis information to prevent an OSL. If this is done, there are no further requirements since there are no violations.

The second part of the proposed requirement is to determine how well the entity rectified (mitigated) the situation after a violation occurred. This will be part of the report and possible investigation after a violation occurs, and therefore will be part of the process of Requirement #1.

Proposal

Delete Requirement #12

Requirement #13

RA does analysis of power system. The TOP shall implement actions in very few cases (line switching control actions and load shedding). If the TOP is to held to this requirement then there better be one for each of the other entities that the RA directs to take action (BA, IA, Generator Operators, LSE, etc.)

Proposal

Delete this requirement

Requirement #14

The Reliability Authority (RA) shall have a mitigation plan that includes actions to take to prevent and mitigate exceeding system operating limits.

Proposal

Delete this requirement

See Comments under Requirement #12

Requirement #15:

The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.

Proposal

Delete this requirement

Requirement #16:

The Reliability Authority (RA) shall document instances of exceeding identified system operating limits and shall document, log and report on instances where a system operating limit has been exceeded for a specified period of time.

Proposal

Delete

There is no requirement to have a separate Performance Standard for a report. It seems that this would be more appropriately included in the Compliance Program. As example, as part of the Compliance Program, there would be a requirement for the RA to file a report within 72 hours of exceeding a System Operating Limit for greater than 30 minutes.

The information required in the report would be included in the compliance program. Similarly, other data which should be included in the Compliance program, but not in the Performance Standard would be:

- Type of Compliance Assessment required: Periodic Audit, Investigation, Self Assessment etc
- Applicable to
- Monitoring responsibilities
- Compliance assessment notes
- Multipliers for penalties
- Reset Periods
- Data Retention requirements
- Occurrence period

Requirement #17:

The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

Proposal

Delete

See Requirement #16

STD Comment Form for 1st Posting of Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard

Note – This form is to comment on version 1 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard.

The latest version of this Standard (OPER_WITHN_LMTS_05_01) *is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html*

E-mail this form between February 15 – March 30, 2003, to: sarcomm@nerc.com with "Comments" in the subject line.

Please review the two versions of the draft standard and answer the questions in the yellow boxes.

If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

Background

The Standards Drafting Team prepared this standard in two different formats – Version A keeps each requirement clearly separated from all other requirements – Version B combines related requirements together. We are seeking your input into which format you prefer. (Note – there are no differences in the requirements, functions that must comply with the requirements, or with the measures associated with each requirement.)

Assumptions:

- The coordination of operations between Reliability Authorities is addressed in the Coordinate Operations SAR.
- "Base data" needed to run reliability analyses will be provided as part of certification for the Reliability Authority (RA) and/or Transmission Operator (TOP) functions. This draft standard only addresses the changes to this "base data" that occur following the certification award – such as additions, deletions, or other changes to system facilities that would impact the accuracy of models used to monitor and assess the bulk transmission system. As changes to the electric system occur, this "base data" needs to be updated. This standard requires that RAs and TOPs provide a specification document to let others know what data needs to be provided. It would not be cost-effective to require a specification document that addresses both the 'base data" and the new data – this standard only addresses documentation to reflect changes to system components post initial certification.
- There are various ways generators may be obligated to provide data. A generator that connects to the system may provide its data to the Reliability Authority through a Transmission Operator but may also provide the data directly to the Reliability Authority.

Explanation of Terms Used:

- A definition for a "System Operating Limit" and a definition for a "System Operating Limit Violation" will be established by the Facility Ratings SAR DT. The definition of a System Operating Limit Violation should include both a time duration component and a magnitude component. For the purposes of this draft standard, the term "System Operating Limit Violation" is a situation where a specific system operating limit has been exceeded for a specified period of time.
- Data – Data may be real, state-estimated or other calculated values
- Reliability Analyses - Reliability analyses includes both real time and operational planning analyses and may be conducted through manual or automated studies, and system operator assessments
- Industry Accepted Format – a generally accepted format used by the electric power industry to specify the parameters that must be addressed in development of the system model and/or to transmit data

STD Commenter Information (For Individual Commenters)
Name
Organization
Industry Segment #
Telephone
E-mail

Key to Industry Segment #'s:

1 – Trans. Owners
2 – RTO's, ISO's, RRC's
3 – LSE's
4 – TDU's
5 - Generators
6 - Brokers, Aggregators, and Marketers
7 - Large Electricity End Users
8 - Small Electricity Users
9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)	
Name of Group:	**Group Chair:** **Chair Phone:** **Chair Email:**

List of Group Participants that Support These Comments:

Name	**Company**	**Industry Segment #**

1. **The draft standard uses the term 'data' to allow for real, state-estimated or other calculated values. Do you agree?**

   ☐ **Yes**

   ☐ **No**

   Comments:

2. **The draft standard uses the term 'Reliability Analysis' to mean those manual or automated studies, and system operator assessments. Reliability analyses includes both real time and operational planning analyses.**

   Do you agree?

   ☐ **Yes**

   ☐ **No**

   Comments:

3. **This draft standard assumes that data needed to run reliability analyses has been provided as part of certification for the RA and/or TOP functions. This standard only addresses the changes to this "base data" that occur following the certification award – such as additions, deletions, or other changes to system facilities that would impact the accuracy of models used to monitor and assess the bulk transmission system. The intent is to minimize unecessary documentation. Do you agree with this assumption?**

   ☐ **Yes**

   ☐ **No**

   Comments:

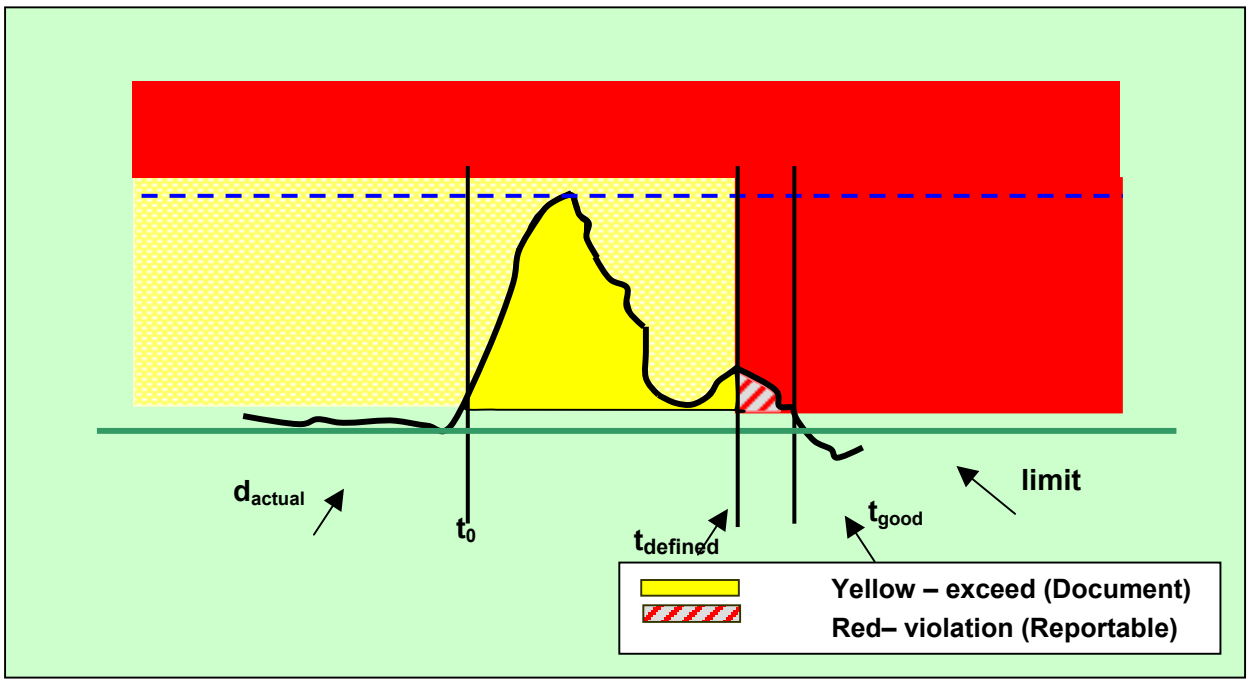
4. **The draft standard uses the term "Industry Accepted Format" to mean a generally accepted format used by the electric power industry to specify the parameters that must be addressed in development of the system model and/or to transmit data**.

   Do you agree?

   ☐ **Yes**

   ☐ **No**

   Comments:



5. Based on the above graph, do you agree with the concept that operation within the "yellow zone" is exceeding an operating limit, but not a reportable violation? ☐ **Yes** ☐ **No** **Comments:**
6. Based on the above graph, do you agree with the concept that operating within the "red zone" is a reportable violation? ☐ **Yes** ☐ **No** **Comments:**

7. If you feel there are additional terms used in this draft standard that should be formally defined, please list those terms here.

If possible, please provide us with a definition for each of these terms.

8. Who should provide the RA with generation data needed for system analyses? (This data consists of the generator operational characteristics.)

Please check all that apply.

- ☐ **BA**
- ☐ **TOP**
- ☐ **Generator**
- ☐ **Planning Authority**

Comments

9. Who should provide the TOP with generation data needed for system analyses? (This data consists of the generator operational characteristics.)

Please check all that apply.

- ☐ **RA**
- ☐ **BA**
- ☐ **Generator**
- ☐ **Planning Authority**

Comments

Please use Version A of the draft standard to answer these questions.

Requirement 1:

The RA shall monitor (in real time) the system operating limits (identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system) and the actual real time data associated with those limits.

Measure(s):

1. System operating limits are available in real time
2. Actual real time data is available in a form that can be compared to the system operating limits

Outcome(s) (100% Compliance):

The RA shall monitor real time system operating limits and compare these against actual data associated with those limits.

10. Do you agree with this requirement and its associated performance/outcome and measure/s?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Actual telemetered data needed for monitoring system operating limits unavailable, so surrogate value was monitored for up to 24 hours
2. Actual telemetered data needed for monitoring system operating limits was unavailable, so surrogate data was monitored for up to 48 hours
3. Not Applicable
4. System operating limit(s) were not being compared to actual data

11. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 2:

The TOP shall monitor (in real time) the system operating limits (identified to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system) and the actual real time data associated with those limits.

Measure(s):

1. System operating limits are available in real time
2. Actual real time data is available in a form that can be compared to the system operating limits

Outcome(s) (100% Compliance):

The TOP shall monitor real time system operating limits and compare these against actual data associated with those limits.

12. Do you agree with this requirement and its associated performance/outcome and measure/s?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Actual telemetered data needed for monitoring system operating limits unavailable, so surrogate value was monitored for up to 24 hours
2. Actual telemetered data needed for monitoring system operating limits was unavailable, so surrogate data was monitored for up to 48 hours
3. Not Applicable
4. System operating limit(s) were not being compared to actual data

13. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 3:

The Reliability Authority (RA) shall specify and collect the data it needs [from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Transmission Operators (TOPs) and other associated RAs] to maintain the models needed to support real time monitoring and reliability analyses.[1]

The RA shall specify when to supply data (based on the RA's hardware and software requirements, and the time needed to do the operational planning analysis.)

The RA shall notify the Compliance Monitor if an RA, BA, IA Generator or TOP does not provide data as requested.

Measure(s):

1. Documented specification for data needed to implement changes to existing system models (Specification shall include industry-accepted format, timeframe, and notation that data be technically accurate and complete.)
2. Documented specification for data needed to implement changes for real time monitoring (Specification shall include industry accepted format, timeframe, and notation that data be technically accurate and complete.)
3. Record of correspondence requesting new data needed (for monitoring and reliability analyses) with identification of data not received.

Outcome(s) (100% Compliance):

The RA shall specify and collect the data it needs [from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Transmission Operators (TOPs) and other RAs] to maintain the models needed to support real time monitoring and reliability analyses. The RA shall maintain a record that shows data requested but not received.

14. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Data specification(s) was not complete (missing either industry accepted format, timeframe or some data technically inaccurate or incomplete)
2. Data was not requested or there was no record of specification
3. Not Applicable
4. Not Applicable

15. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

[1] Reliability analyses includes both real time and operational planning analyses

Requirement 4:

The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators, Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.[2]

The TOP shall specify when to supply data (based on the TOP's hardware and software requirements, and the time needed to do the operational planning analysis.)

The TOP shall notify the Compliance Monitor if an RA, BA, IA, Generator or TOP does not provide data as requested.

Measures:

1. Documented specification for data needed to implement changes to existing system models (Specification shall include industry-accepted format, timeframe, and notation that data be technically accurate and complete.)
2. Documented specification for data needed to implement changes for real time monitoring (Specification shall include industry accepted format, timeframe, and notation that data be technically accurate and complete.)
3. Record of correspondence requesting new data needed (for monitoring and reliability analyses) with identification of data not received.

Outcome(s) (100% Compliance):

The TOP shall specify and collect the data it needs [from its associated Balancing Authorities (BAs, Interchange Authorities (IAs), Generators, TOPs and Reliability Authorities (RAs)] to maintain the models needed to support real time monitoring and reliability analyses. The TOP shall maintain a record that shows data requested but not received.

16. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Data specification(s) was not complete (missing either industry accepted format, timeframe or some data technically inaccurate or incomplete)
2. Data was not requested **OR** there was no record of specification
3. Not Applicable
4. Not Applicable

17. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

[2] Reliability analyses includes both real time and operational planning analyses

Requirement 5:
The Reliability Authority (RA) shall provide data, as specified, by an (associated) RA and/or Transmission Operator (TOP), no less than 7 days prior to the energization of new facilities or changes to existing facilities

Measures:
Provide specified data, as requested (industry accepted format, timeframe, and technically accurate and complete), to requesting RA or TOP, no less than 7 days prior to the energization of new facilities/changes to existing facilities.

Outcomes (100% Compliance):
The RA shall provide data as requested, to its (associated) RA and/or TOP.

18. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Not Applicable
2. Not Applicable
3. Not Applicable
4. Data for new/revised facilities was not provided as requested

19. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 6:
The Balancing Authority (BA) shall provide data, as specified by an (associated) Reliability Authority (RA) and/or Transmission Operator (TOP), no less than 7 days prior to the energization of new facilities or changes to existing facilities.

Measure(s):
Provide specified data, as requested (industry accepted format, timeframe, and technically accurate and complete), to the requesting RA or TOP, no less than 7 days prior to the energization of new facilities or changes to existing facilities.

Outcome(s) (100% Compliance):
The BA shall provide data, as requested, to its (associated) RA and/or TOP.

20. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Not Applicable
2. Not Applicable
3. Not Applicable
4. Data for new/revised facilities was not provided as requested

21. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 7:
The Interchange Authority (IA) shall provide data, as specified by an (associated) Reliability Authority (RA) and/or Transmission Operator (TOP), no less than 7 days prior to the energization of new facilities or changes to existing facilities

Measure(s):

Provide specified data, as requested (industry accepted format, timeframe, and technically accurate and complete), to the requesting RA or TOP, no less than 7 days prior to the energization of new facilities or changes to existing facilities.

Outcome(s) (100% Compliance):

The IA shall provide data, as requested, to its (associated) RA and/or TOP.

22. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Not Applicable
2. Not Applicable
3. Not Applicable
4. Data for new/revised facilities was not provided as requested

23. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 8:
The Transmission Owner (TOW) shall provide data, as specified by an (associated) Reliability Authority (RA) and/or Transmission Operator (TOP), no less than 7 days prior to the energization of new facilities or changes to existing facilities

Measure(s):

Provide specified data, as requested (industry accepted format, timeframe, and technically accurate and complete), to the requesting RA or TOP, no less than 7 days prior to the energization of new facilities or changes to existing facilities.

Outcome(s) (100% Compliance):

The TOW shall provide data, as requested, to its (associated) RA and/or TOP.

24. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Not Applicable
2. Not Applicable
3. Not Applicable
4. Data for new/revised facilities was not provided as requested

25. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 9:
The Generator Owner shall provide data, as specified by an (associated) Reliability Authority (RA) and/or Transmission Operator (TOP), no less than 7 days prior to the energization of new facilities or changes to existing facilities.

Measure(s):
Provide specified data, as requested (industry accepted format, timeframe, and technically accurate and complete), to the requesting RA or TOP, no less than 7 days prior to the energization of new facilities or changes to existing facilities.

Outcome(s) (100% Compliance):
The Generator Owner shall provide data, as requested, to its (associated) RA and/or TOP.

26. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Not Applicable
2. Not Applicable
3. Not Applicable
4. Data for new/revised facilities was not provided as requested

27. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 10:
The Reliability Authority (RA) shall perform reliability analyses to identify where on its system the RA may encounter problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

Measure(s):
Analysis program(s) run(s) when requested and identifies any problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system

Outcome(s) (100% Compliance):
The RA shall run reliability analysis program(s) and the program(s) shall identify problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

28. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Reliability analysis did not run when requested, but ran within 8 hours
2. Reliability analysis did not run when requested, but ran in 8 - 24 hours
3. Reliability analysis did not run when requested, and did not run within 24 hours
4. Not Applicable

29. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 11:
The Transmission Operator (TOP) shall perform reliability analyses to identify where on its system the TOP may encounter problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

Measure(s):
Analysis program(s) run(s) when requested and identifies any problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system

Outcome(s) (100% Compliance):
The TOP shall run reliability analysis program(s) and the program(s) shall identify problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

30. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Reliability analysis does not run when requested, but runs within 8 hours
2. Reliability analysis does not run when requested, but runs in 8 - 24 hours
3. Reliability analysis does not run when requested, and does not run within 24 hrs
4. Not Applicable

31. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 12:
The Reliability Authority (RA) shall use the results of real time monitoring and/or reliability analyses to take actions necessary to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

The RA shall document actions taken.

Measure(s):
Documentation showing that actions were taken to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

Outcome(s) (100% Compliance):
The RA shall document actions taken to mitigate/prevent identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

32. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Not Applicable
2. Monitoring and/or reliability analyses identified a problem – no actions or incorrect actions were taken but no limit violations occurred
3. Monitoring and/or reliability analyses identified a problem – no actions (or incorrect actions) were taken but no violation occurred
4. System operating limit violated and resulted in instability, uncontrolled separation or cascading outages that adversely impacted the reliability of the bulk transmission system

33. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 13:
The Transmission Operator (TOP) shall use the results of real time monitoring and/or reliability analyses to take actions necessary to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

The TOP shall document actions taken.

Measure(s):

Documentation showing that actions were taken to prevent/mitigate identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

Outcome(s) (100% Compliance):
The TOP shall document actions taken to mitigate/prevent identified problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

34. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Not Applicable
2. Monitoring and/or reliability analyses identified a problem – no actions or incorrect actions were taken but no limit violations occurred
3. Monitoring and/or reliability analyses identified a problem – no actions (or incorrect actions) were taken but no violation occurred
4. System operating limit violated and resulted in instability, uncontrolled separation or cascading outages that adversely impacted the reliability of the bulk transmission system

35. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 14:
The Reliability Authority (RA) shall have a mitigation plan that includes actions to take to prevent and mitigate exceeding system operating limits.

Measures(s):
Mitigation plan/procedure(s) that identify actions the RA shall take to remain/return to a state that is within system operating limits.

Outcome(s) (100% Compliance):
The RA shall have a documented, approved mitigation plan that identifies actions to remain/return to within system operating limits. (Note: an emergency operations plan may be used to satisfy this requirement if the emergency operations plan addresses actions to take to prevent exceeding identified system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

36. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Mitigation Plan and/or procedure(s) exists but wasn't approved
2. Not Applicable
3. Not Applicable
4. No mitigation plan or procedure exists

37. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 15:
The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.

Measure(s):

Mitigation plan/procedure(s) that identify actions the TOP shall take to remain/return to a state that is within system operating limits.

Outcome(s) (100% Compliance):
The TOP shall have a documented, approved mitigation plan that identifies actions to remain/return to within system operating limits. (Note: an emergency operations plan may be used to satisfy this requirement if the emergency operations plan addresses actions to take to prevent exceeding identified system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.)

38. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Mitigation Plan and/or procedure(s) exists but wan't approved
2. Not Applicable
3. Not Applicable
4. No mitigation plan or procedure exists

39. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 16:
The Reliability Authority (RA) shall document instances of exceeding identified system operating limits and shall document, log and report on instances where a system operating limit has been exceeded for a specified period of time.

Measure(s):
1. Data exists and is retrievable that documents instances of exceeding identified system operating limits
2. Record of violations is in existence for at least three years that identifies violations (instances where a system operating limit has been exceeded for a specified period of time)
3. Complete report filed with applicable Compliance Monitor within 72 hours of exceeding a system operating limit for a specified period of time (includes data and time of event, magnitude and duration of violation, actions taken and explanation of results of actions

Outcome(s) (100% Compliance):
The RA shall have retrievable information that documents exceeding identified system operating limits. The RA shall have daily operating logs and supporting documentation to show the magnitude and duration of violations (EMS or other source of data). Logs and supporting documentation shall be available for review for at least three years. The RA shall file a complete report (including date and time of event, magnitude and duration of violation, actions taken and explanation of results of actions) with its Compliance Monitor when a defined limit has been exceed for a specified time period. The report shall be filed within 72 hours of the event.

40. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:
1. Report was filed on time but was incomplete
2. Not Applicable
3. One of the following:
   - Logs were available but supporting documentation was unavailable
   - Supporting documentation indicated unlogged violation
   - An incident occurred and there was no report within 72 hours
4. Documentation didn't exist

41. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

Requirement 17:
The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

Measure(s):
Data exists and is retrievable

Outcome(s) (100% Compliance):
The TOP shall have retrievable information that documents instances when it exceeded identified system operating limits.

42. Do you agree with this requirement?

☐ **Yes**

☐ **No**

Comments:

Levels of Non-compliance for this Requirement:

1. Not Applicable
2. Not Applicable
3. Not Applicable
4. Documentation didn't exist

43. Do you agree with these levels of non-compliance for this requirement?

☐ **Yes**

☐ **No**

Comments:

44. Are you aware of any Regional or Interconnection Differences that should be included in this Standard?

☐ **Yes**

☐ **No**

Comments:

If yes, please identify what you feel should be added.

45. Is the draft standard missing any requirements that should be added?

☐ **Yes**

☐ **No**

Comments:

If yes, please identify what you feel should be added.

46. Which form of the Standard do you prefer?

☐ **Version A – Each Requirement Separate**

☐ **Version B – Related Requirements Combined**

Comments:

47. If you have comments on the format of the standard, please share them with us.

Comments:

200 ¾ Operate within Limits

201 Monitor

202 Perform Analyses

203 Use Analyses

204 Action Plan

205 Documentation

206 Specify Data

207 Provide Data

Purpose: The purpose of this standard is to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.

Applicability: This standard applies to entities performing various electric system functions, as defined in the functional model approved by the NERC Board of Trustees in June 2001. NERC is now developing standards and procedures for the identification and certification of such entities. Until that identification and certification is complete, this standard applies to the existing entities (such as control areas, transmission owners and operators, and generation owners and operators) that are currently performing the defined functions.

Given the decision to call it a violation when Tv has been passed – suggest this be revised to say, ". . . IROLs are being approached or exceeded"

201 **Monitor**

1. Requirement

1.1. The entity performing the reliability authority function shall monitor, in real time, system operating parameters used to determine if interconnection reliability operating limits are in violation.

2. Measure(s)

2.1. The responsible entity shall have interconnection reliability operating limits available in real time

2.2. The responsible entity shall have real time data available in a form that can be compared to the interconnection reliability operating limits

2.3. The responsible entity shall monitor system operating parameters and compare these against its interconnection reliability operating limits

3. Regional Differences

None identified.

4. Compliance Monitoring Process

5. Levels of Non-compliance

6. Sanctions

202 Perform Analyses

1. Requirement

1.1. The entity performing the reliability authority function shall perform reliability analyses to identify credible problems, in its reliability area, that could cause instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk transmission system. These studies shall, at a minimum, assess the next day and current day of operations.

2. Measure(s)

2.1. The responsible entity shall perform reliability analyses intended to identify credible problems, if any, that could cause instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk transmission system. The responsible entity shall conduct these analyses on a periodic basis, but no less frequently than at least once a day.

3. Regional Differences

None identified.

4. Compliance Monitoring Process

5. Levels of Non-compliance

6. Sanctions

203 Use Analyses

1. Requirement

1.1. The entity performing the reliability authority function shall use results of monitoring or analyses to act, or direct others to act, to prevent or mitigate exceeding interconnected reliability operating limits.

1.2. The responsible entity shall document actions taken.

2. Measure(s)

2.1. The responsible entity shall have documentation of actions or directions taken to prevent or mitigate exceeding interconnected reliability operating limits.

3. Regional Differences

None identified.

4. Compliance Monitoring Process

5. Levels of Non-compliance

6. Sanctions

204 Action Plan

1. Requirement

1.1. The entity performing the reliability authority function shall have an action plan that identifies actions it shall take, or actions it shall direct others to take, to remain within or to return to a state that does not exceed its interconnection reliability operating limits.

2. Measures

2.1. The responsible entity shall have a documented action plan for resolving pre-defined conditions that would result in violation of an interconnection reliability operating limit. The plan shall be coordinated with those entities responsible for acting and with those impacted by such actions.

2.1.1. The action plan may be a process or procedure for resolving interconnected reliability operating limit violations. (Note: an emergency operations plan may be used to satisfy this requirement if the emergency operations plan addresses actions to prevent exceeding interconnected reliability operating limits.)

3. Regional Differences

None identified.

4. Compliance Monitoring Process

5. Levels of Non-compliance

6. Sanctions

205 Documentation

1. Requirement

1.1. The entity responsible for performing the reliability authority function shall document instances of exceeding interconnection reliability operating limits and shall document and complete the Interconnection Reliability Operating Limit Violation Report for instances of exceeding interconnection reliability operating limits for time greater than T_v.

2. Measure(s)

2.1. The responsible entity shall have data that exists and is retrievable that documents instances of exceeding interconnection reliability operating limits

2.2. The responsible entity shall have daily operating logs and supporting documentation to show the magnitude and duration of each interconnection reliability operating limit violation (This data may be from the responsible entity's energy management system or may be from some other source.)

2.3. The responsible entity shall maintain a record of each interconnection reliability operating limit violation for at least three years

2.4. The responsible entity shall file an Interconnection Reliability Operating Limit Violation Report with its Compliance Monitor within five business days after exceeding an interconnection reliability operating limit. (The report includes date and time of event, magnitude and duration of violation, actions taken and results of actions)

3. Regional Differences

None identified.

4. Compliance Monitoring Process

5. Levels of Non-compliance

6. Sanctions

206 Data Collection

1. Requirement

1.1. The entity performing the reliability authority function shall specify and collect the data it needs to maintain the models needed to support real time monitoring and reliability analyses. The entity performing the reliability authority function shall specify and collect the data it needs from those entities that have facilities monitored by the entity performing the reliability authority function. This includes data from other entities performing the following functions:

- Balancing authority
- Generator owner
- Interchange authority
- Reliability authority
- Transmission operator
- Transmission owner

Note – original didn't include both the transmission owner and operator – but wouldn't they both provide some data?

1.2. The entity performing the reliability authority function shall specify when to supply data (based on its hardware and software requirements, and the time needed to do the operational planning analysis.)

1.3. The entity performing the reliability authority function shall notify the Compliance Monitor if the responsible entity does not provide data as requested.

2. Measure(s)

2.1. The responsible entity shall have a documented specification for data needed to implement changes to existing system models (Specification shall include industry-accepted format, timeframe, and notation that data be technically accurate and complete.)

2.2. The responsible entity shall have a documented specification for data needed to implement changes for real time monitoring (Specification shall include industry accepted format, timeframe, and notation that data be technically accurate and complete.)

2.3. The responsible entity shall have a record of correspondence requesting new data needed (for monitoring and reliability analyses) with identification of data not received.

3. Regional Differences

None identified.

4. Compliance Monitoring Process

5. Levels of Non-compliance

6. Sanctions

203 Provide Data

1. Requirement

1.1. The entities performing the balancing authority, transmission owner, transmission operator and generator owner functions shall provide data, as specified, to the entity responsible for the reliability authority with which it has a reliability relationship. The requested data shall be provided no less than 7 days prior to the energization of new facilities and no less than 7 days prior to changes to existing facilities.

- Balancing authority
- Generator owner
- Interchange authority
- Transmission operator

1.2. The entities performing the reliability authority function shall provide data, as specified, to other entities performing the reliability function that are within the same interconnection.

2. Measure(s)

2.1. The responsible entity shall provide specified data, as requested (industry accepted format, timeframe, and technically accurate and complete), to the requesting entity, no less than 7 days prior to the energization of new facilities and no less than 7 days prior to changes to existing facilities.

3. Regional Differences

None identified.

4. Compliance Monitoring Process

5. Levels of Non-compliance

6. Sanctions

Given the decision to call it a violation when Tv has been passed – suggest this be revised to say, ". . . IROLs are being approached or

201 Control

1. Requirement

1.1. The entity performing the reliability authority function shall:

1.1.1. Monitor, in real time, system operating parameters used to determine if interconnection reliability operating limits are in violation.

1.1.2. Perform reliability analyses to identify credible problems, in its reliability area, that could cause instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk transmission system. These studies shall, at a minimum, assess the next day and current day of operations.

1.1.3. Use results of monitoring or analyses to act, or direct others to act, to prevent or mitigate exceeding interconnected reliability operating limits.

1.1.4. Document actions taken to prevent or mitigate exceeding interconnected reliability operating limits.

2. Measure(s)

2.1. The responsible entity shall have interconnection reliability operating limits available in real time

2.2. The responsible entity shall have real time data available in a form that can be compared to the interconnection reliability operating limits

2.3. The responsible entity shall monitor system operating parameters and compare these against its interconnection reliability operating limits

2.4. The responsible entity shall perform reliability analyses intended to identify credible problems, if any, that could cause instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk transmission system. The responsible entity shall conduct these analyses on a periodic basis, but no less frequently than at least once a day.

2.5. The responsible entity shall have documentation showing actions or directions taken to prevent or mitigate exceeding interconnected reliability operating limits. The action plan may be a process or procedure for resolving interconnected reliability operating limit violations. (Note: an emergency operations plan may be used to satisfy this requirement if the emergency operations plan addresses actions to prevent exceeding interconnected reliability operating limits.)

3. Regional Differences

None identified.

4. Compliance Monitoring Process

5. Levels of Non-compliance

6. Sanctions

Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits
SDT Working Document

Requirement 1
The RA shall monitor (in real time) the operating limits (identified to prevent cascading outages, instability, uncontrolled separation that adversely impact the reliability of the bulk transmission system) and the actual real time values associated with those limits.
Function(s)
Reliability Authority
Expected Performance/Outcome
Real time operating limits are monitored, and compared against the actual values associated with those limits. (link to other requirement for analysis)
Measure(s)
Operating limits are available in real time. Actual real time values are available in a form that can be compared to the limits.
Data/Information Needed to Demonstrate Compliance
Real time operating limits identified to prevent cascading outages, instability, uncontrolled separation that adversely impact the reliability of the bulk transmission system. Display Real time values associated with these real time operating limits
Entity Responsible for Providing the Data/information
RA responsible for having real time information (limits and actual values)
Entity Responsible for Evaluating the Data/information
Compliance Monitor (RRO today)
Process Used to Evaluate Data/information (self-certification or other process)
Self-certification with re-certification on a schedule established by the Compliance Monitor[1]
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Periodic Reviews Spot Reporting (each year, 1/3 of the total # of RAs under the Compliance Monitor's authority) Triggered Investigation
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
One year
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving
3 years – Compliance Monitor keeps audited data – Reliability Authority keeps data on limits

[1] At this point in time, the Compliance Monitor is the Regional Council

Level 1	Actual telemetered value for a critical facility unavailable, so surrogate value monitored for up to 24 hours
Level 2	Actual telemetered value for a critical facility unavailable, so surrogate value monitored for up to 48 hours **OR** Values monitored don't include all critical facilities – one facility missing
Level 3	
Level 4	Operating limits are not being monitored or actual values associated with operating limits are not being monitored

Requirement 2
The RA shall specify what data it needs to perform transmission reliability analyses and shall collect that data needed.
Function(s)
RA
Expected Performance/Outcome
There shall be data specified and collected to perform short-term transmission reliability analyses. Changes to data associated with critical facilities shall be provided no less than 7 days prior to the energization of new facilities or changes to existing facilities.
Measure(s)
Keep a copy of correspondence requesting new data needed to perform transmission reliability analyses and not received
Data/Information Needed to Demonstrate Compliance
Data specification needed for reliability analyses
Entity Responsible for Providing the Data/information
RA
Entity Responsible for Evaluating the Data/information
Compliance Monitor
Process Used to Evaluate Data/information (self-certification or other process)
Self-certification
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Periodic Spot Triggered
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
One year
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving
Three years - Compliance Monitor keeps audited data – Reliability Authority keeps data specification document

Level 1	
Level 2	
Level 3	
Level 4	RA aware of change to critical facility, but data needed for analyses not in place at time of energization or change to existing facilities.

Requirement 3
Provide requested data to the RA.
Function(s)
BA, IA, TOW, TOP, GEN, LSE
Expected Performance/Outcome
Requested data was provided as requested(industry accepted format, timeframe, quality) by the RA
Measure(s)
RA confirms that requested data was provided
Data/Information Needed to Demonstrate Compliance
RA indicates it has received data requested
Entity Responsible for Providing the Data/information
(list all)
Entity Responsible for Evaluating the Data/information
Compliance Monitor
Process Used to Evaluate Data/information (self-certification or other process)
(self-certification N/A)
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Exception Reporting Triggered Investigations Periodic Reviews
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
12 months without a violation from the time of the last violation
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving
Three years - RA

Level 1	
Level 2	
Level 3	
Level 4	**Data for new/revised critical facilities was not provided as requested**

Requirement 4
The RA shall perform short-term reliability analyses to identify where on its system the RA may encounter potential problems that could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.
Function(s)
RA
Expected Performance/Outcome
Short term reliability analysis was performed and produced results that identified any potential problems.
Measure(s)
Analysis results exist
Data/Information Needed to Demonstrate Compliance
Analysis results
Entity Responsible for Providing the Data/information
RA
Entity Responsible for Evaluating the Data/information
Compliance Monitor
Process Used to Evaluate Data/information (self-certification or other process)
Self-certification
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Periodic reviews Spot Review (each year, 1/3 of the total # of RA's under the Compliance Monitor's authority)
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
One year
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving
Analysis results for three years - RA

Level 1	(look at timeliness of running the analyses or depth of studies)
Level 2	No study results available and no system problems occurred
Level 3	Analysis performed but incomplete and system problems occurred that weren't identified in the analysis.
Level 4	Either no analysis was performed or the results of the analyses failed to identify a potential problem and system problems (instability, uncontrolled separation or cascading outages) occurred.

Requirement 5
The RA shall use the results of these analyses to direct actions necessary to prevent instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.
Function(s)
RA
Expected Performance/Outcome
When the analysis shows a potential problem, actions will be taken to mitigate or prevent the problem and these actions will be documented
Measure(s)
Documentation showing that actions were taken to mitigate/prevent an identified problem
Data/Information Needed to Demonstrate Compliance
Documentation showing that actions were taken when there is an identified problem
Entity Responsible for Providing the Data/information
RA
Entity Responsible for Evaluating the Data/information
Compliance Monitor
Process Used to Evaluate Data/information (self-certification or other process)
Self-certification with re-certification on a schedule established by the Compliance Monitor
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Periodic Reviews (on site, per a schedule) Spot Review (each year, 1/3 of the total # of RAs under the Compliance Monitor's authority, unscheduled) Triggered Investigation
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
One year
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving
3 years – Compliance Monitor keeps audited data – Reliability Authority keeps data on limits

Level 1	Analysis identified a problem – no actions or incorrect actions were taken and no disturbance occurred
Level 2	
Level 3	
Level 4	Analysis identified a problem – no actions or incorrect actions were taken and instability, uncontrolled separation or cascading outages occurred that impacted the reliability of the bulk transmission system.

Requirement 6
The RA shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding identified operating limits. (These are the limits that if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.)
Function(s)
RA
Expected Performance/Outcome
There is an approved documented plan/procedure(s) that identifies the actions the RA will take to keep within operating limits that, if exceeded, would risk instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system.
Measure(s)
Mitigation plan/procedure(s) that identify actions the RA will take to remain/return to a state that is within operating limits.
Data/Information Needed to Demonstrate Compliance
Mitigation plan and/or procedures
Entity Responsible for Providing the Data/information
RA, TOP
Entity Responsible for Evaluating the Data/information
Compliance Monitor
Process Used to Evaluate Data/information (self-certification or other process)
Self-certification
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Periodic Spot Triggered
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
One year
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving
Plan/procedure in place – RA, TOP

Level 1	Plan/procedure(s) exists but isn't approved
Level 2	Plan/procedure(s) contains actions that are incomplete/wrong but would not be detrimental to the reliability of the interconnected bulk electric system
Level 3	Plan/procedure(s) contains actions that are incomplete/wrong and would be detrimental to the reliability of the interconnected bulk electric system
Level 4	No plan/procedure exists

Requirement 7
The RA shall document instances of exceeding identified operating limits
Function(s)
RA, TOP
Expected Performance/Outcome
There shall be retrievable information that documents exceeding identified operating limits
Measure(s)
Data exists and is retrievable
Data/Information Needed to Demonstrate Compliance
Documentation (usually EMS historical data)
Entity Responsible for Providing the Data/information
RA, TOP
Entity Responsible for Evaluating the Data/information
Compliance Monitor
Process Used to Evaluate Data/information (self-certification or other process)
Self-certification
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Periodic Spot Triggered
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
One year
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving
Three years – RA, TOP

Level 1	
Level 2	
Level 3	
Level 4	Documentation doesn't exist

Requirement 8
The RA shall document and log violations (instances where an operating limit has been exceeded for a specified period of time) and maintain the record for at least 3 years.
Function(s)
RA
Expected Performance/Outcome
Logs and supporting documentation (EMS or other source) of violations shall be available for review for at least three years.
Measure(s)
Record in existence for at least three years
Data/Information Needed to Demonstrate Compliance
Daily Operating Logs and supporting documentation
Entity Responsible for Providing the Data/information
RA
Entity Responsible for Evaluating the Data/information
Compliance Monitor
Process Used to Evaluate Data/information (self-certification or other process)
Self-certification
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Periodic Spot Triggered
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
One year (May be regional difference)
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving
Three years - RA

Level 1	
Level 2	
Level 3	Logs available but supporting documentation unavailable OR Supporting documentation indicates unlogged violation
Level 4	Logs/supporting documentation not available

Requirement 9
The RA shall file a report with its Regional Reliability Authority when specified criteria are exceeded.[2]
Function(s)
RA
Expected Performance/Outcome
If a limit has been violated, a complete report has been filed with the RA's Compliance Monitor
Measure(s)
Report filed with applicable Compliance
Data/Information Needed to Demonstrate Compliance
Entity Responsible for Providing the Data/information
Entity Responsible for Evaluating the Data/information
Process Used to Evaluate Data/information (self-certification or other process)
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving

Level 1	
Level 2	
Level 3	
Level 4	

[2] [2] If an area bounces over a limit, whether it is caused by a contingency or not, this doesn't need to be reported to NERC as long as the area re-prepares within the NERC guidelines. If the NERC criteria are not met, then these violations should be reported.

Requirement 10
Data requested by the RA necessary to perform reliability analyses shall be provided to the RA 24 hours a day, 7 days a week. If data can't be provided for any reason, the RA and the providing entity shall agree upon and implement a solution.
Function(s)
Expected Performance/Outcome
The __ shall provide the requested data without interruption, 24 hours a day, 7 days a week
Measure(s)
The RA shall request an investigation into the problem within 10 minutes of receiving the associated alarm. If an entity discovers that some of its data is inaccurate or if the data can't be provided, the entity with the problem shall resolve the problem or propose a mutually agreed upon solution (to the problem) with the RA.
Data/Information Needed to Demonstrate Compliance
Entity Responsible for Providing the Data/information
Entity Responsible for Evaluating the Data/information
Process Used to Evaluate Data/information (self-certification or other process)
Frequency of Measuring Performance (Periodic reporting, spot reporting, exception reporting, periodic reviews, triggered investigations)
Time Period in Which Performance or Outcomes is Measured, Evaluated, and then Reset
Measurement Data Retention Requirements and Assignment of Responsibility for Data Archiving

Level 1	
Level 2	
Level 3	
Level 4	

Monitor and Assess Short-term Reliability — Operate Within Transmission System Limits

April 28–29, 2003 SDT Meeting in New Orleans

Parking Lot Issues

The "Monitor and Assess Short-term Reliability — Operate Within Transmission System Limits" Standard Drafting Team (OWL Standard DT) identified a number of issues and concerns, relative to the standard, that could not be answered by the team. The "Parking Lot Issues" will be forwarded to the NERC, Director–Standards for evaluation and disposition. The list can possibly to be given to a subcommittee, group, task force or individual to address. The OWL Standard DT will address or collaborate with others to address concerns (e.g. standard definitions) if requested by the NERC Director–Standards.

The following issues are perceived to go beyond the scope of the OWL Standard DT.

Parking Lot Issues

1. **"Transmission Operator" vs. "Transmission Owner" Functional Language**
   The Functional Model (previously identified as the Reliability Model) definitions and responsibilities of "Transmission Operator" and "Transmission Owner" conflict with actual functional operations. As a specific example PJM was identified as a "transmission operator" but does not perform Reliability Model defined responsibilities. PJM, as the "Transmission Operator," does not perform switching, maintenance, etc. The respective "Transmission Owners" performs these tasks.

2. **"Standing Committee" vs. "Appropriate Body" language**
   The NERC Reliability Standards Process Manual identifies most Supporting Reference Documents as being approved and authorized by "Standing Committees." With the future of the NERC Standing Committees in question, the language does not appear to be correct to the OWL Standard DT. A possible solution is to remove the language referring to who develops the associated reference documentation from "Standing Committees" and replace with "Appropriate Entity".

3. **Proposed "Operate Within Limits" Standard Definitions**
   The OWL Standard DT identified the following terms that will be used in the standard. However, most are generic industry terms that may be addressed and defined by other entities such as other SAR/Standard Drafting Teams, Functional Model Review Task Group, Data Exchange Working Group, Operating Reliability Subcommittee, Operating Committee, Planning Committee, Market Interface Committee, the Standard Process Manager, Operating Limits Definition Task Force, etc.

   Definitions to support the "Operate Within Limits" Standard that are needed:

   Data Quality
   Industry Accepted Format
   System Operating Limit * Defined by another standard

Reliability Analysis (Reliability analyses includes both real time and operational planning analyses)

4. **NERC Authority Over "Non-Reliability Model" Entities**
   What authority does NERC have over "Non-Functional Model" entities to supply data to RA or other functions in the Functional Model? Identification of which bulk power system(s) NERC has authority over is necessary.

5. **OSL / SOL / ORL Definitions by Various Groups**
   Many entities are developing and defining Operating Security Limits (OSL) / Security Operating Limits (SOL) / Reliability Operating Limits (ROL) definitions and limits (e.g. Dave Hilt's Operating Limits Definition Task Force, "Facility's Rating" SAR, RCWG, FMTG, etc.). A lot of players are contributing their input into defining various "operating limits." A consensus on the various definitions is necessary.

6. **Functional Model Function Equivalent to the Current RRO**
   How do we designate a supervisory or administrative function equivalent to the current RRO, which is not found in the Functional Model? In WECC individual "operating security limits" will not be reported to NERC since any "OSL" violations fall under the RRO - WECC Reliability Management System contract which has a confidentiality clause. Only a WECC aggregate number will be reported to NERC, is that sufficient? The OWL Standard DT believes a supervisory function such as to "The Entity Responsible for Regional Responsibilities" may be needed.

   The NERC Reliability Standards Process Manual identifies "NERC and Regional Reliability Council Members," "Regional Differences," "Regional Standards," "Criteria for Regional Standards and Regional Differences," and yet the Reliability Model does not identify the Regions, the RROs, or "Entities Responsible for Regional Responsibilities" in the model. At times the Standard Drafting Team identified RROs in developing Standard Requirements, Expected Performance / Outcome and Measures. To address the lack of RRO or equivalent in the Functional Model, "Compliance Monitor" was used.

7. **Compliance of Non-Regional Entities**
   Compliance-wise, what happens to those entities that are not currently part of a region? How are they picked up within the Reliability Model?

8. ***** Separation of Standard Reliability Elements and Compliance Aspects *****
   The OWL Standard DT questions the appropriateness of the Standard DT designating the respective compliance criteria, including levels of non-compliance and sanctions. The Standard DT believes a separate compliance group such as the Compliance Subcommittee should do this task. The Standard Drafting Team strongly believes the compliance of the standards including the level of non-compliance and sanctions should be done by an independent entity and not by the body that is writing the standard.

9. **Data Quality**
   The "Operate Within Limits" Standards do not address the "quality" of the data that is being monitored and assessed. The specification of data quality needs to be addressed, local area differences, sign notation, multipliers (format, timeframe, quality). Example: From a Compliance perspective that RAs and BAs may have sign conventions that are opposite and there will be challenges to who is right and who is wrong. Who is king — who determines the

quality of the data? Note: In "Operate Within Limits" Draft Standard the following language is used: "Industry accepted format, timeframe, quality" — who defines these criteria?

10. Timelines for Standards Parameters

The timelines for all of the standards requirements, expected performance / outcomes, measures, compliance factors, etc., need to be defined. Factors that play into this issue are data retention requirements, reporting criteria, auditing criteria, etc. — who defines these criteria?

11. Quality of Tool Accuracy

The state estimator or tool used to perform monitoring and analysis in order to meet this standard and future standards needs to have an "accuracy" criteria. This standard does not address this issue. Does it need to be captured somewhere? If so, then where is the "accuracy" criteria captured? Who defines "consistent" and "accuracy" criteria?

12. Contingency Criteria

When evaluating the need for requirements concerns arose regarding contingency analysis, N-1, levels of non-conformance, etc. — specifically tests of severity for each parameter. This concern was raised from a Compliance point of view. Who defines these criteria?

13. Compliance Monitor

In cases where a RA (e.g. RTO) has geographical boundaries in more than one RRO, what criteria is used to identify which Compliance Monitor (i.e. regional perspective) the respective RA (e.g. RTO) will comply with. It is not clear if the most restrictive or least restrictive Compliance Monitor (RRO) requirements will be followed. How are RAs in multi-RROs to develop standards that are consistent with each RRO directives?

14. Link to other SAR and SDT efforts.

Several comments made by the OWL Standard DT require further definition and possible modifications to the "Determine Facility Ratings System Operating Limits and Transfer Capability" SAR effort and may require a subset of each group to collaborate via conference call or meeting. There will be future instances where one group's progress is impacted and inhibited by another SDT. How does the SDT address such instances? What does the Standards Process Manual instruct the SDTs to do? Is a revision needed?

15. DOE Form 417

The fourth issue was a concern for clarification of the
DOE Form 417 needs to be reviewed and determined if the form will satisfy OWL standard requirement 216 "RA Shall Document Instances fo Exceeding Identified IROLs." If the form contains the information necessary for reporting an IROL, then a new form does not need to be developed. If the form is not satisfactory for the OWL SDT purposes, a new form will be developed. This parking lot issue will be short lived and should be closed by the next meeting.