

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

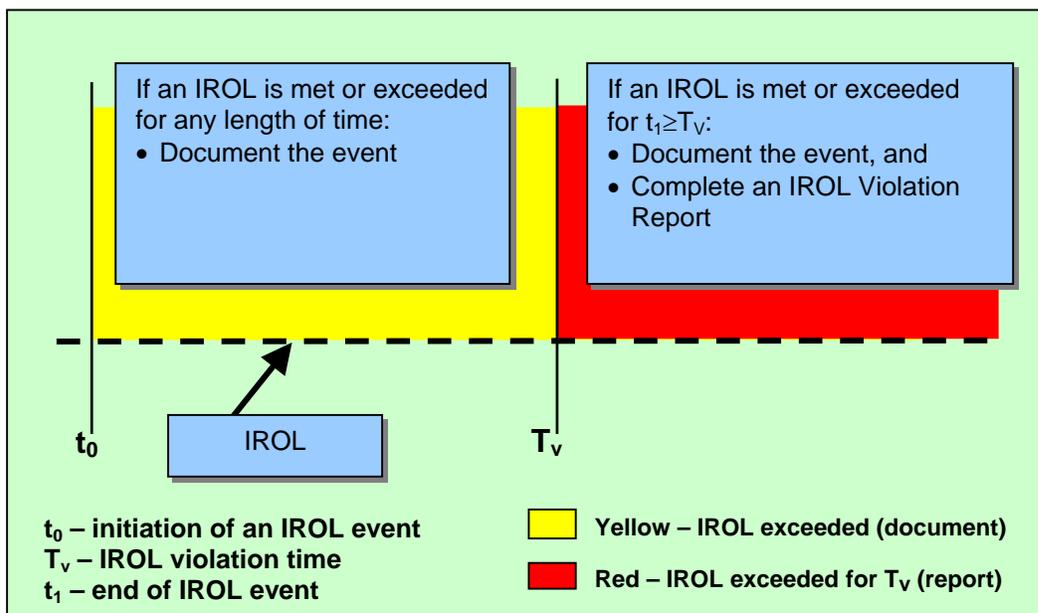
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

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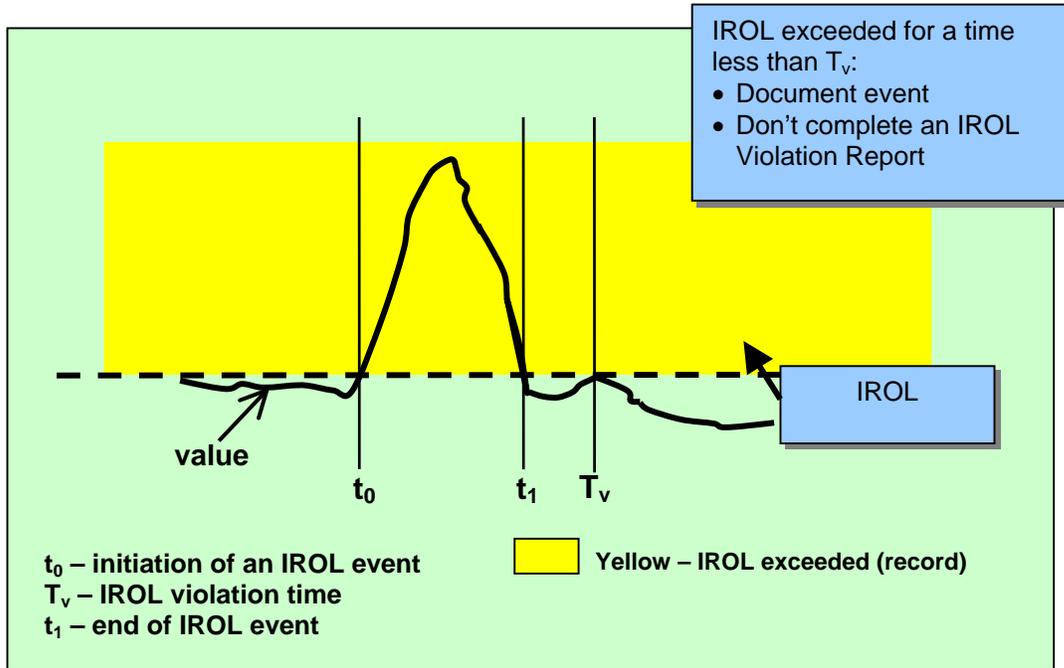
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

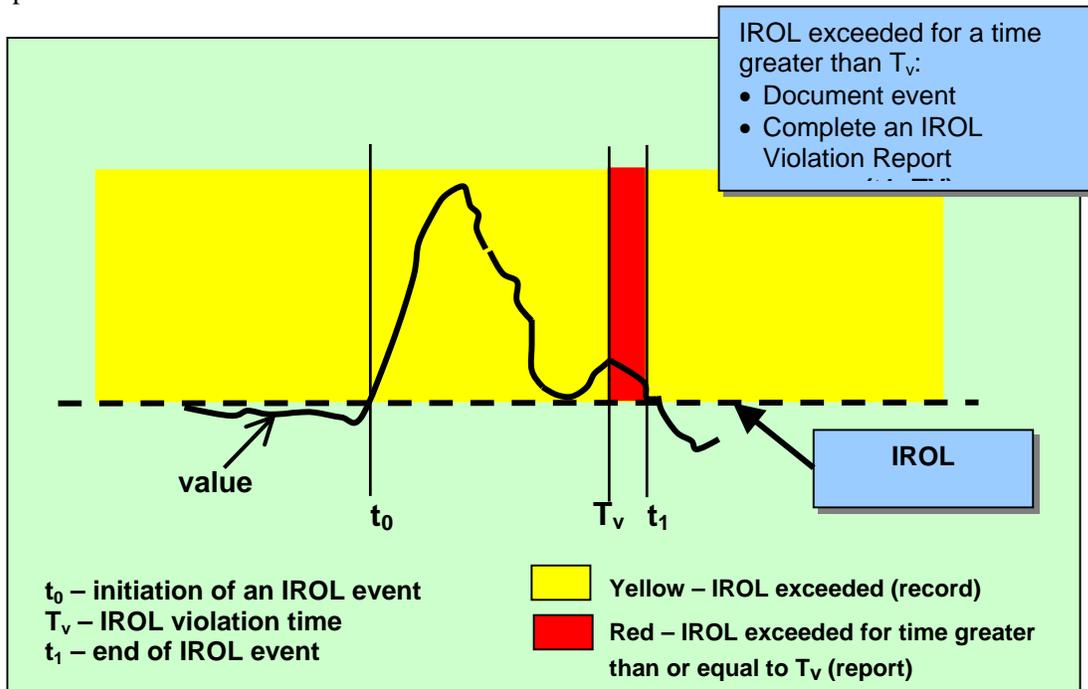


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**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
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- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
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In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.  
**I would suggest that the terms Documentable IROL Violation and IROL Event be combined in a single definition. Offer the following:**

**IROL Event: An instance.....for any length of time. These events are documentable IROL violations.**

**Similarly for IROL Violation and Reportable IROL Violation.**

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

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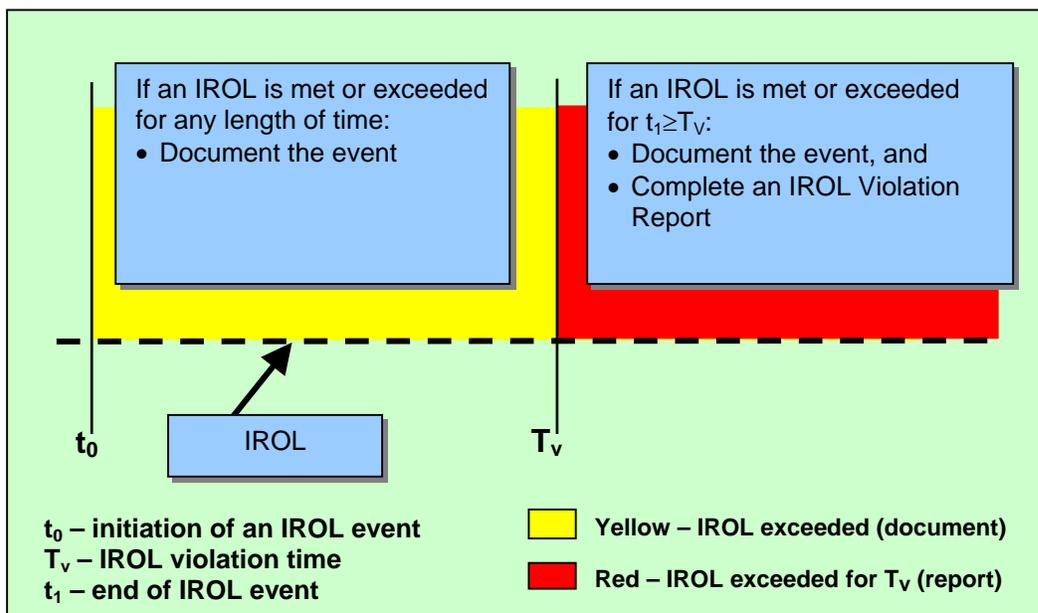
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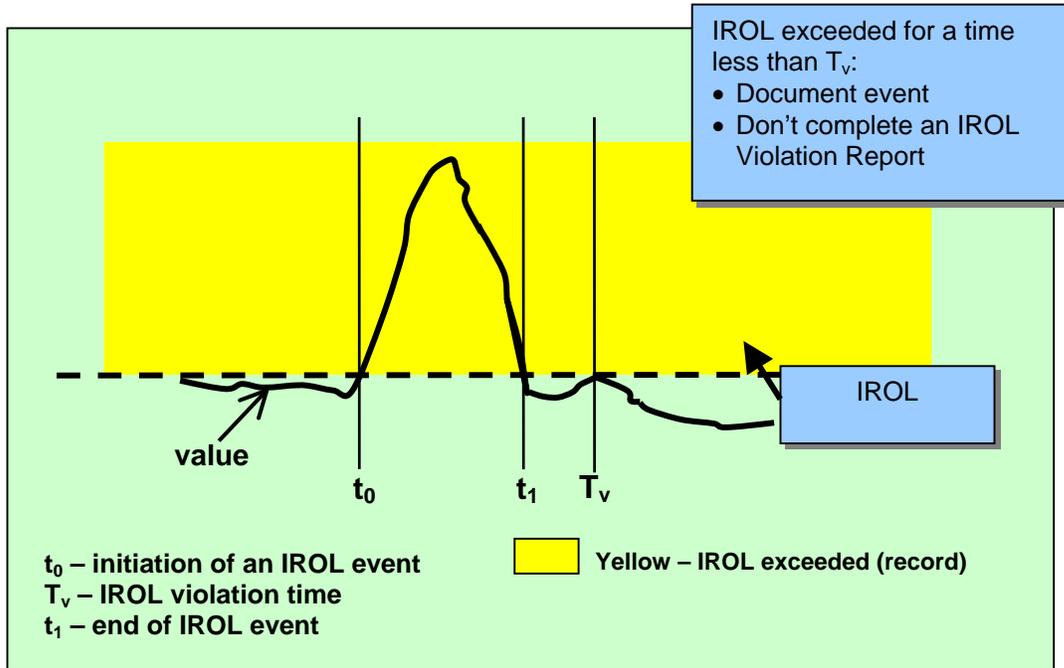
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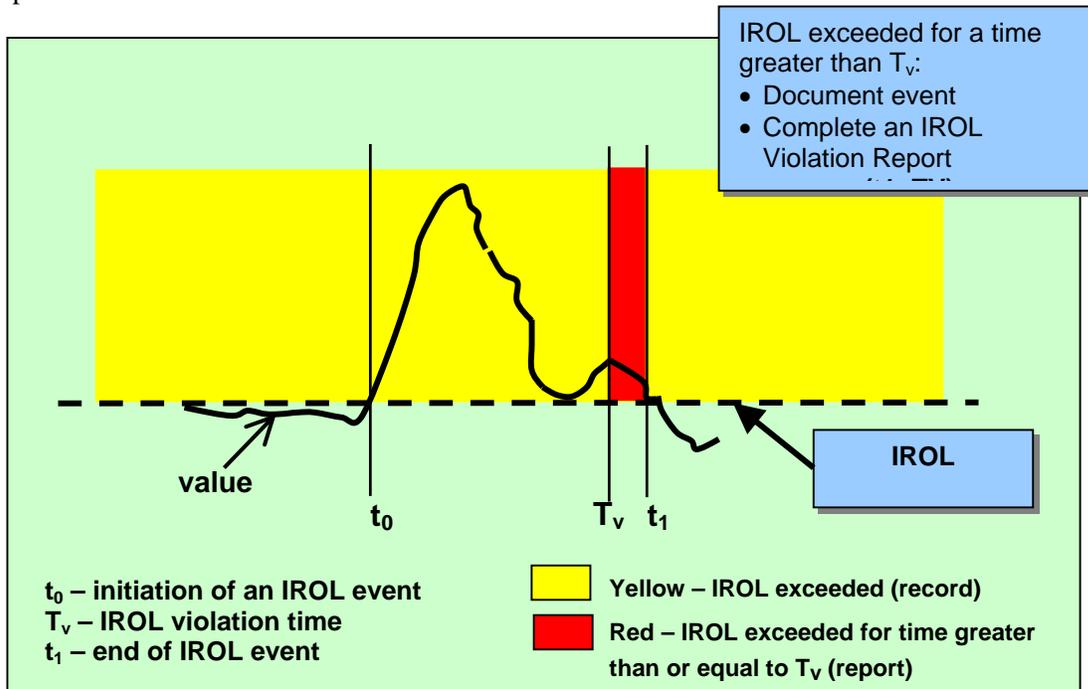


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- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201: Don't understand why the standard references the Planning Authority and "entity responsible. Isn't the Reliability Authority the function ultimately responsible for determining IROLs? Also believe that section 1.2.1 should be revised to read: "The reliability authority shall identify a maximum response time (Tv) for all interconnection reliability operating limits within its reliability area." Regarding the levels of non-compliance, believe there should be a level (level 3?) for a partial list of IROLs.

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202: Regarding compliance monitoring, suggest that section 4.3.2 be added to allow compliance monitor inspection of RA audited limit data. With respect to levels of non-compliance, seems that items 5.4.2 an 5.4.3 should have some sort of time boundaries associated

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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with them before sanctions can be assessed. For example, is the sanction the same regardless of whether real-time data is unavailable for 5 minutes or 5 days?

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205: A little concerned that the entities required to provide data not have to submit the same data to multiple authorities. For example, some of the data that the RA will want from a generator operator for its models, should be the same data required by the PA for its models. The generator operator should only have to submit this data one time (to some central data

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collecting point), to be utilized by all functions that have a need for it. This should make the data collection processes more efficient for all and decrease the possibility of data errors.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206: In the requirements and measures section, would like to see language added that will be more specific as to where entities can obtain RA specifications for data provision. For example, section 1.1 could be modified to read as follows: " Each entity performing one of the following functions shall provide data, as specified *in the RA's business practice manual*, to the reliability authority(ies) with which is has a reliability relationship."

Regarding the compliance monitoring process, section 4.3.1 may be inconsistent since the method of transmitting data is not specified.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207: Suggest adding a requirement that the RA notify those entities impacted by the action plan, of their responsibilities within the action plan. This will enable them to incorporate the required actions into their own operating plans.

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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34. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 208: Suggest that the generator operator function be added to section 1.1. Regarding the levels of non-compliance, agree that an entity should be penalized for not following a RA's directive, but question whether it is appropriate to take every violation to level four.

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments** If information critical to the reliability of the power system is not being provided to the RA, notifying the compliance monitor of this fact as soon as possible, rather than waiting for annual self-certification under section 206 of the standard, seems to be a reasonable response.

**37. Any other comments on this standard?**

None

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

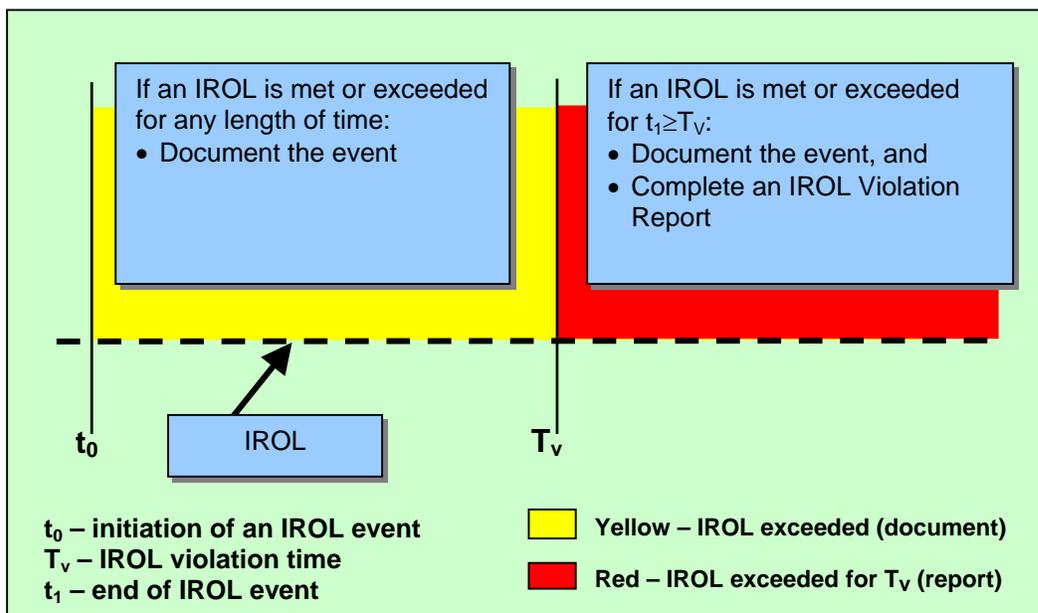
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

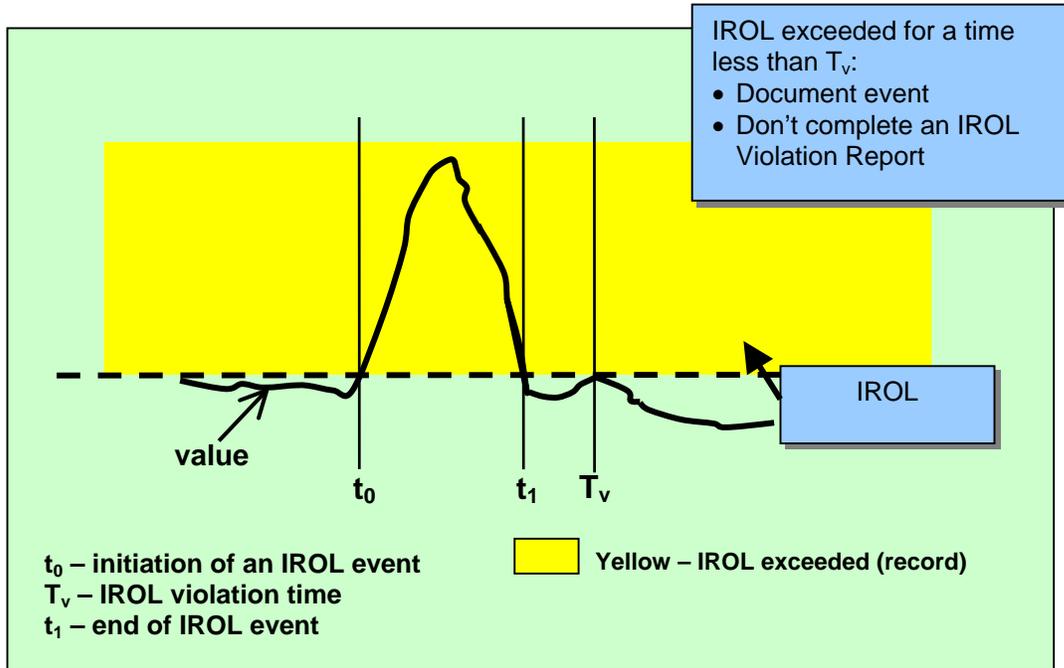
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

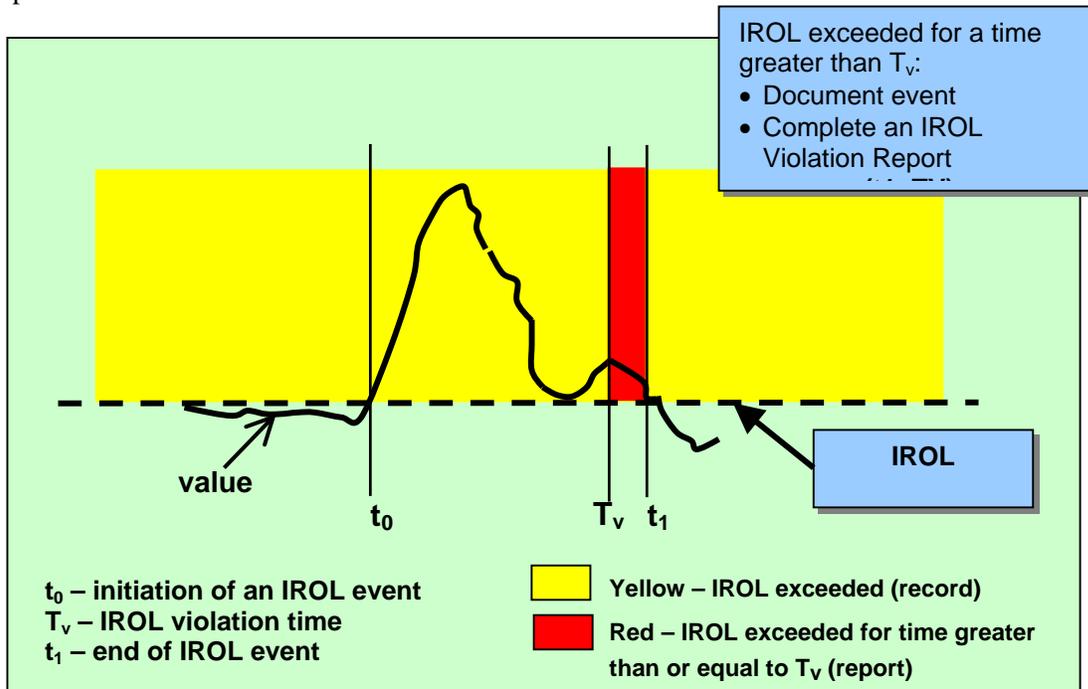


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

---

**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
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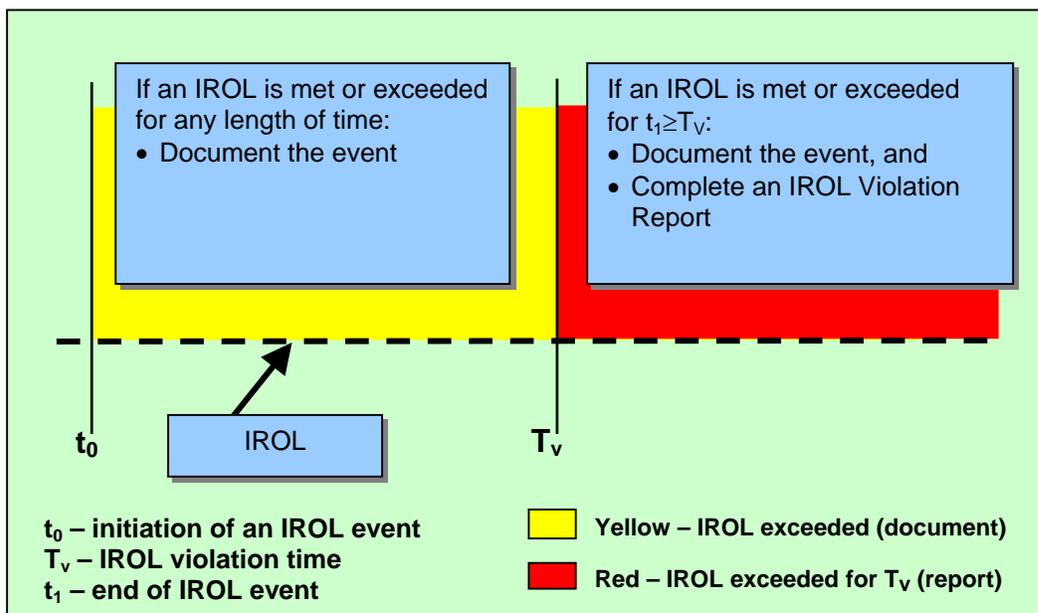
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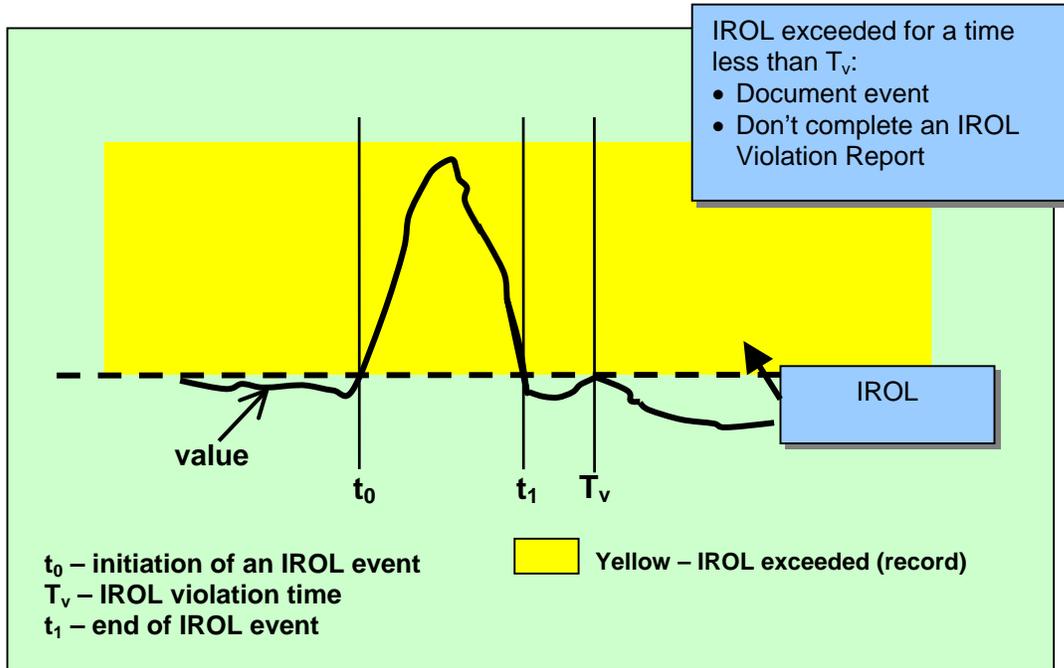
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When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

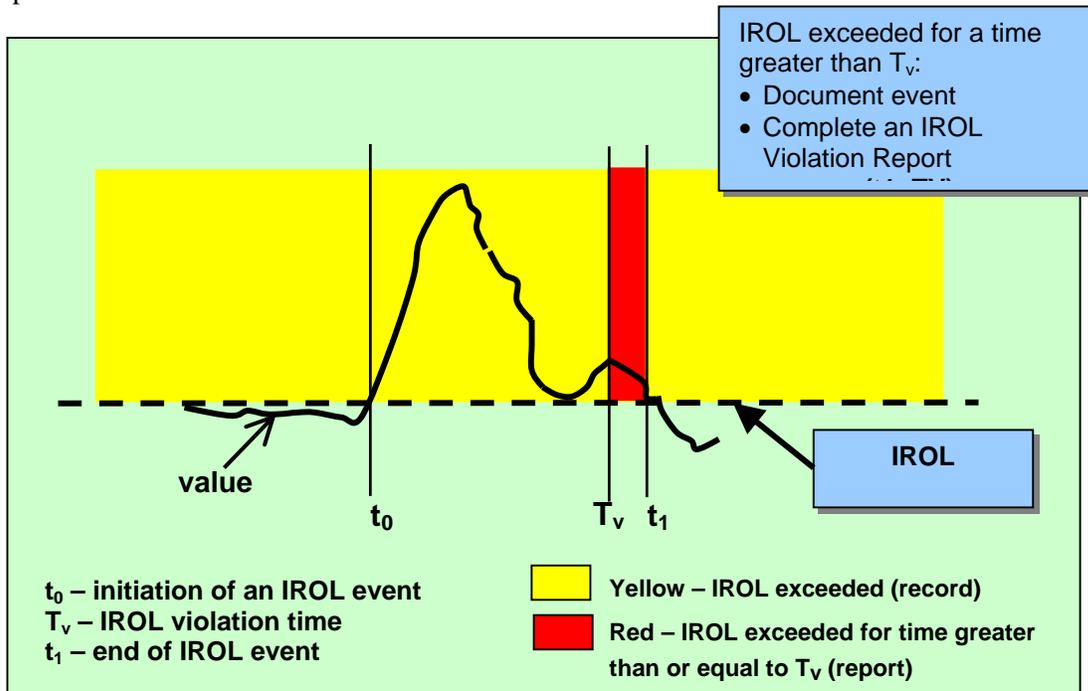


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

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**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
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**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.  
We do not understand the total reason for changing Operations Security Limit to Interconnection Reliability Operating Limit, given its implications.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments We agree with removing redundancy, but not coordination.

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:  
We believe the reliability of the real-time bulk transmission system is a coordinated effort between the Reliability Authority and Transmission Operator and the data should be provided to both functions.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207: We believe that for an action plan to mitigate events it must be coordinated between involved parties, i.e. Reliability Authorities and Transmission Operators.

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:



**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

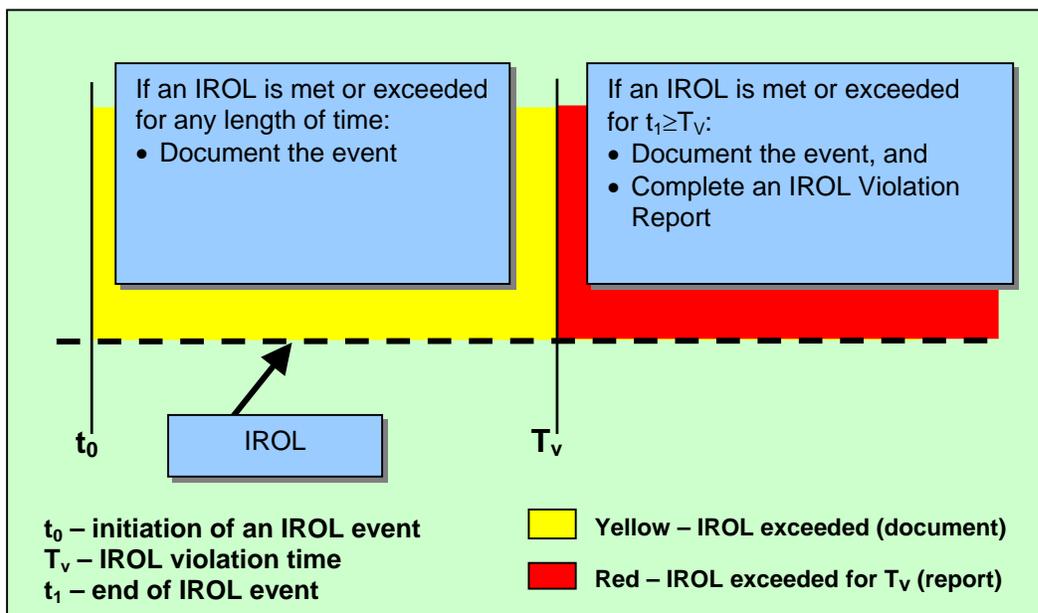
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

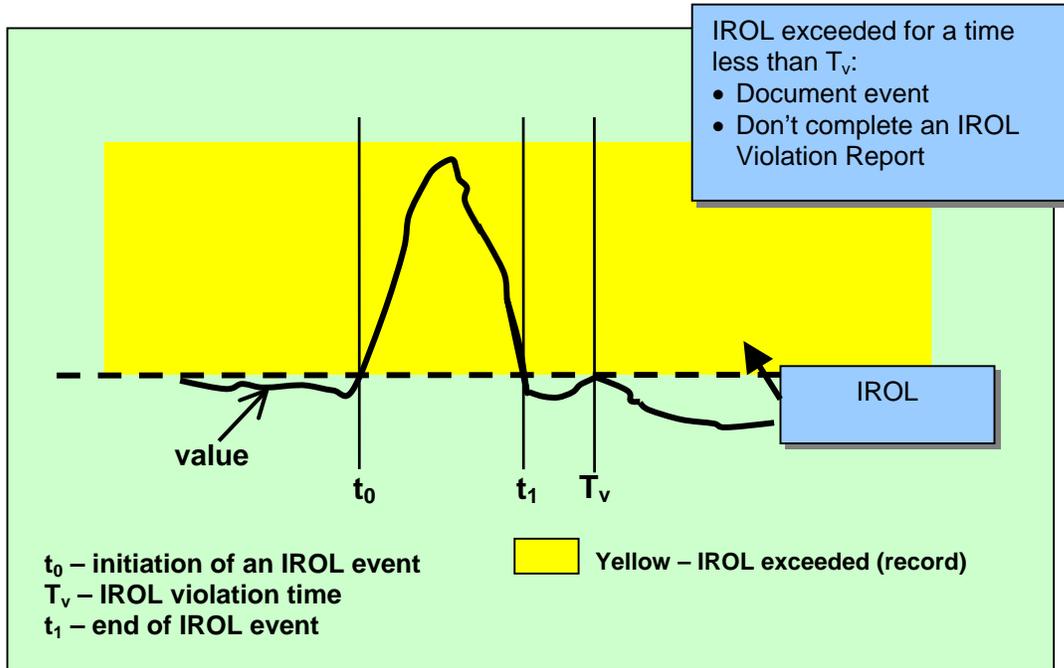
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

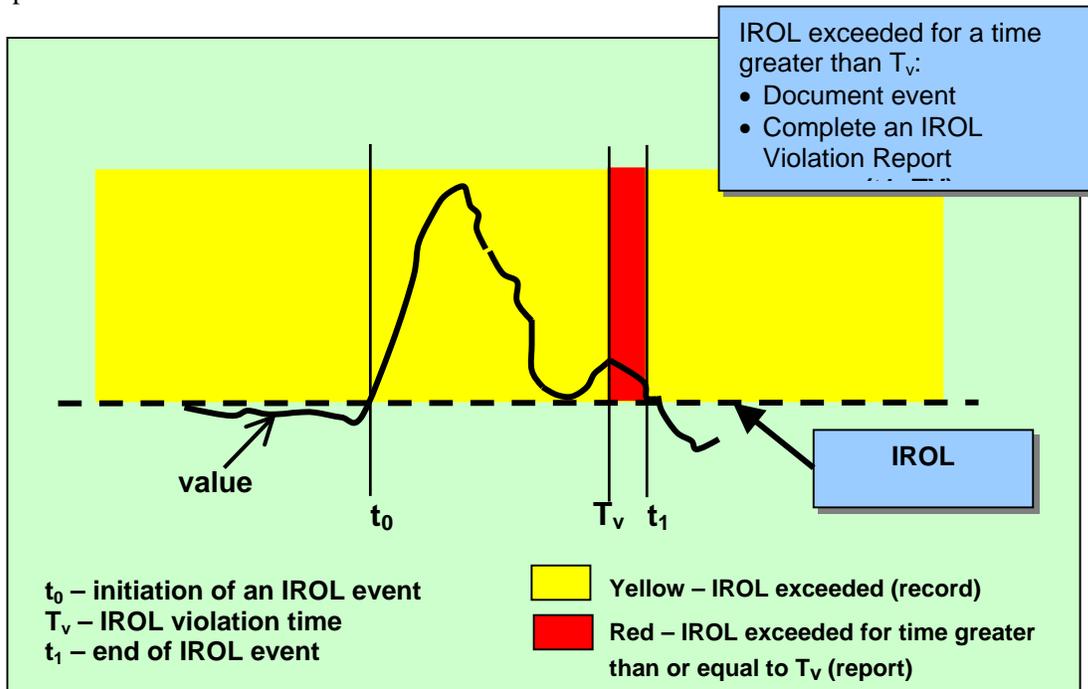


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<b>STD Commenter Information (For Individual Commenters)</b>	<b>Key to Industry Segment #'s:</b> 1 – Trans. Owners 2 – RTO's, ISO's, RRC's 3 – LSE's 4 – TDU's 5 - Generators 6 - Brokers, Aggregators, and Marketers 7 - Large Electricity End Users 8 - Small Electricity Users 9 - Federal, State, and Provincial Regulatory or other Govt. Entities
<b>Name</b>	
<b>Organization</b>	
<b>Industry Segment #</b>	
<b>Telephone</b>	
<b>E-mail</b>	

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> <i>Transmission Subcommittee</i>	<b>Group Chair:</b> <i>Robert E. Reed</i>	
	<b>Chair Phone:</b> (610) 666-8862	
	<b>Chair Email:</b> <a href="mailto:reed@pjm.com">reed@pjm.com</a>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>Robert E. Reed</i>	<i>PJM</i>	
<i>Daniel Cooper</i>	<i>Michigan Public Power Agency</i>	
<i>Ken Donohoo</i>	<i>ERCOT</i>	
<i>Michael Gildea</i>	<i>Duke-Energy, North America</i>	
<i>Francis Halpin</i>	<i>Bonneville Power Administration</i>	
<i>Tom Mallinger</i>	<i>Midwest ISO</i>	
<i>Darrick Moe</i>	<i>Western Area Power Administration</i>	
<i>Scott Moore</i>	<i>American Electric Power</i>	
<i>Bill Slater</i>	<i>Florida Power Corporation</i>	
<i>Tom Stuchlik</i>	<i>Western Resources</i>	
<i>Joseph Styslinger</i>	<i>Southern Company</i>	
<i>David Thorne</i>	<i>D. H. Thorne Consultants, Inc</i>	
<i>Robert Waldele</i>	<i>New York ISO</i>	
<i>Roman Carter</i>	<i>Southern Company</i>	
<i>John Ahr</i>	<i>Alleghany Power Systems</i>	
<i>Susan Morris</i>	<i>SERC</i>	
<i>Ed Pfeiffer</i>	<i>Ameren</i>	
<i>Ray Palmieri</i>	<i>ECAR</i>	
<i>Tom Vandervort</i>	<i>NERC</i>	

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

- 1) All of the definitions should be cross-referenced against the Functional Model and other standards to ensure the same term has a consistent definition. For example "Reliability Authority Area" and "Transmission Operator" within this standard is different than in the Functional Model.
- 2) "Bulk Electric System" definition within this standard is a bit ambiguous. The TS knows that "Bulk Electric System" is a controversial term that has different meanings to different individuals, but a more in-depth definition is recommended (no suggestion).
- 3) "Documentable Interconnection Reliability Operating Limit Violation" and "Interconnection Reliability Operating Limit Event" have identical definitions.
- 4) Suggestion: "Real-time Monitoring" – Personnel are available to see and hear various real-time data sources as conditions dictate.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205: 1) Requirement 205, 1.1, The TS recommends enhancing the last sentence to read "This includes specifying and collecting data from entities such as:"  
2) The TS recommends adding "1.1.6. Planning Authority."  
3) The TS recommends enhancing 1.3. to read "The reliability authority shall notify its compliance monitor when an entity does not provide data as specified."



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

The TS recommends identifying the terms used in the standards that are found in the new Standards Process “Glossary of Terms” repository. The TS suggests small capital letters, highlighted letters, bold letters, italicized letters or other method of making the defined words, terms and acronyms stand out.

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

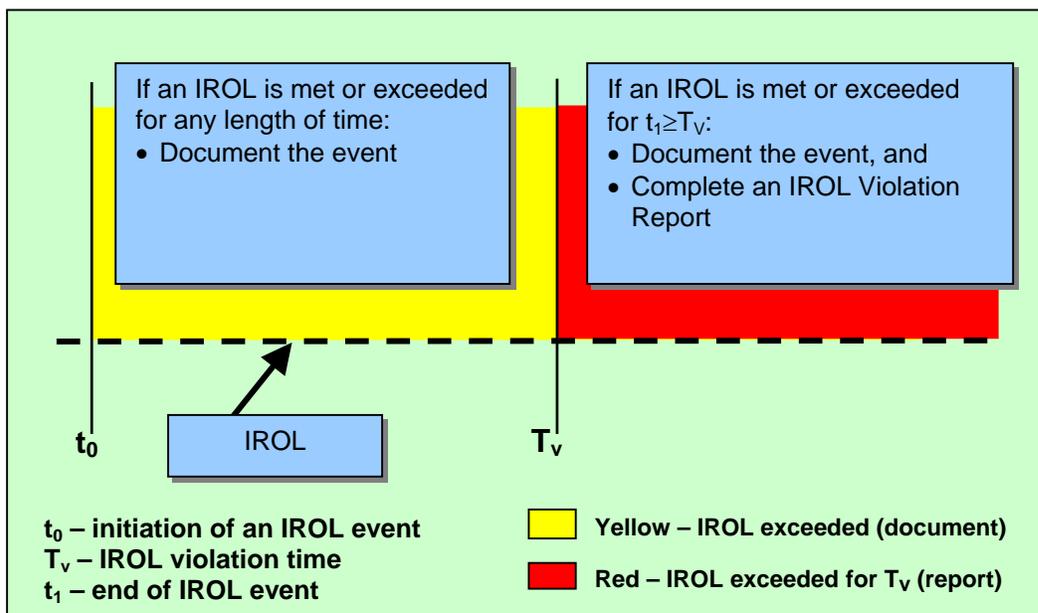
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

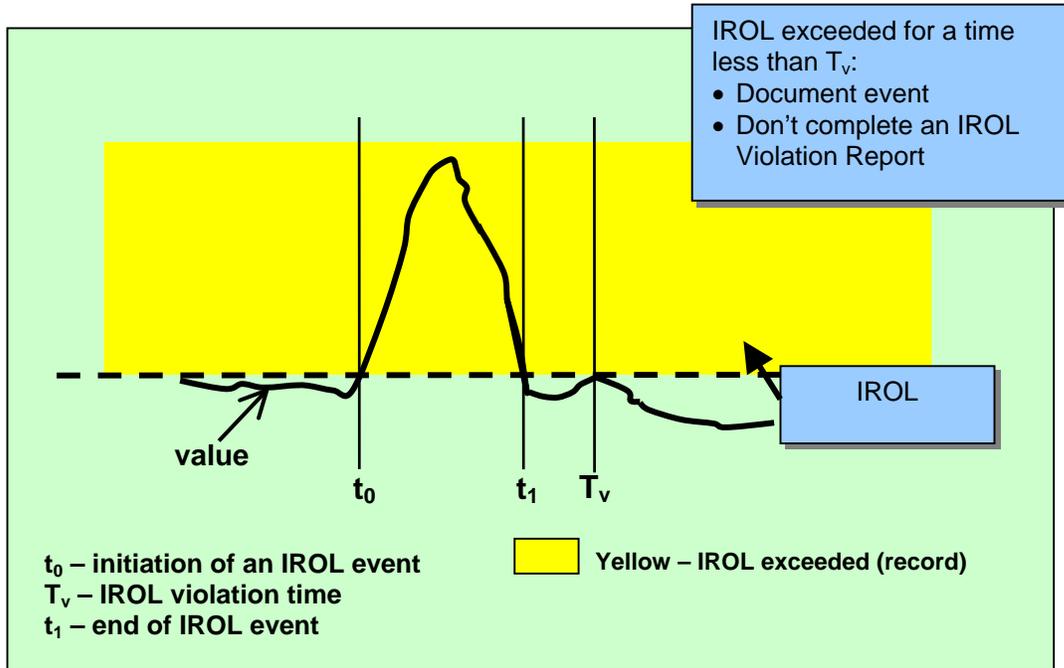
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

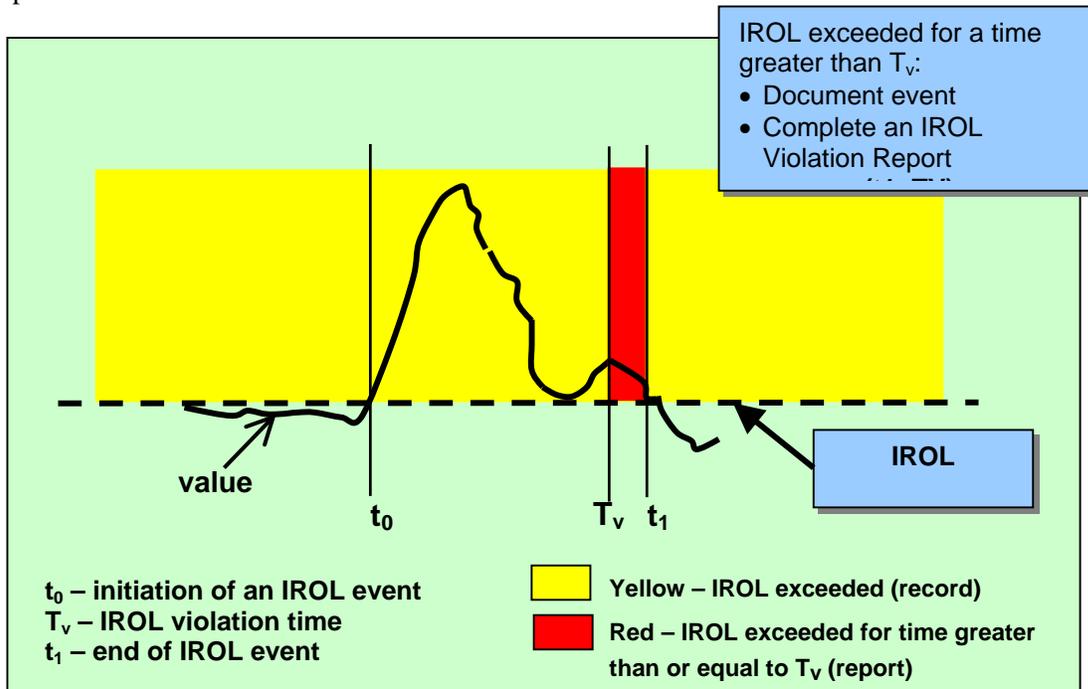


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

<b>STD Commenter Information (For Individual Commenters)</b>	<b>Key to Industry Segment #'s:</b> 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
<b>Name</b>	
<b>Organization</b>	
<b>Industry Segment #</b>	
<b>Telephone</b>	
<b>E-mail</b>	

<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> <i>Southern Co. Generation &amp; Energy Marketing</i>	<b>Group Chair:</b> <i>Roman Carter</i>	
	<b>Chair Phone:</b> <i>205.257.6027</i>	
	<b>Chair Email:</b> <i>jrcarter@southernco.com</i>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>Roman Carter</i>	<i>SCGEM</i>	<i>5, 6</i>
<i>Joel Dison</i>	<i>SCGEM</i>	<i>5,6</i>
<i>Tony Reed</i>	<i>SCGEM</i>	<i>5,6</i>
<i>Lucius Burris</i>	<i>SCGEM</i>	<i>5,6</i>
<i>David Deerman</i>	<i>SCGEM</i>	<i>5,6</i>
<i>Clifford Shepard</i>	<i>SCGEM</i>	<i>5,6</i>
<i>Michael Smith</i>	<i>SCGEM</i>	<i>5,6</i>
<i>Lloyd Barnes</i>	<i>SCGEM</i>	<i>5,6</i>
<i>Gary Miller</i>	<i>SCGEM</i>	<i>5,6</i>
<i>Terry Crawley</i>	<i>Southern Generation</i>	<i>5</i>
<i>Roger Green</i>	<i>Southern Generation</i>	<i>5</i>

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                      X No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

All the definitions should be cross-referenced against the Functional Model and other Standards to ensure the same term has a consistent definition. In particular, Reliability Authority Area and Transmission Operator have different wording than the Functional Model.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                      X No

Comments: It would be appropriate to leave the requirements for the Transmission Operator in the Standard as long as it is better clarified that the Transmission Operator is responsible for the local network system and not duplicating the Reliability Authority's responsibility for the overall Bulk electric system.

Furthermore, the comment on page 3, third paragraph in the Comment Form, "Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages" may need to be reworded or possibly removed in light of the recent Blackout. Does Local Network Integrity need to be addressed in a Standard itself?

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?

Yes                      X No

4. Do you agree with the measures?

X Yes                       No

5. Do you agree with the compliance monitoring process?

X Yes                       No

6. Do you agree with the levels of non-compliance?

X Yes                       No

Comments about Requirement 201: The Transmission Owner should be added to 201 1.1.1 and 201 1.2.1.

### Requirement 202 - Monitoring

7. Do you agree with the requirement?

Yes                      X No

8. Do you agree with the measures?

X Yes                       No

9. Do you agree with the compliance monitoring process?

X Yes                       No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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10. Do you agree with the levels of non-compliance?

X Yes       No

Comments about Requirement 202: Transmission Operator should be added to 202 1.1.1

**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?

Yes      X No

12. Do you agree with the measures?

X Yes       No

13. Do you agree with the compliance monitoring process?

X Yes       No

14. Do you agree with the levels of non-compliance?

X Yes       No

Comments about Requirement 203: The Transmission Operator should be added to 203 1.1.1, 203 1.1.2, 203 2.2.1.

**Requirement 204 - Actions**

15. Do you agree with the requirement?

X Yes       No

16. Do you agree with the measures?

X Yes       No

17. Do you agree with the compliance monitoring process?

X Yes       No

18. Do you agree with the levels of non-compliance?

X Yes       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes      X No

20. Do you agree with the measures?

X Yes       No

21. Do you agree with the compliance monitoring process?

X Yes       No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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22. Do you agree with the levels of non-compliance?

X Yes       No

Comments about Requirement 205: Transmission Operator should be added along with the Reliability Authority for section 205 1.1.1

**Requirement 206 - Data Provision**

23. Do you agree with the requirement?

X Yes       No

24. Do you agree with the measures?

X Yes       No

25. Do you agree with the compliance monitoring process?

X Yes       No

26. Do you agree with the levels of non-compliance?

X Yes       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?

X Yes       No

28. Do you agree with the measures?

X Yes       No

29. Do you agree with the compliance monitoring process?

X Yes       No

30. Do you agree with the levels of non-compliance?

X Yes       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?

X Yes       No

32. Do you agree with the measures?

X Yes       No

33. Do you agree with the compliance monitoring process?

X Yes       No

34. Do you agree with the levels of non-compliance?

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Yes

No

Comments about Requirement 208: If the RA makes an unreasonable request for data, whether it be the type of data needed or the timing of the data, the Transmission Operator, Balancing Authority, and the Interchange Authority will be considered totally (level 4) out of compliance if they do not fully comply. Therefore, a graduated scale is recommended.

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

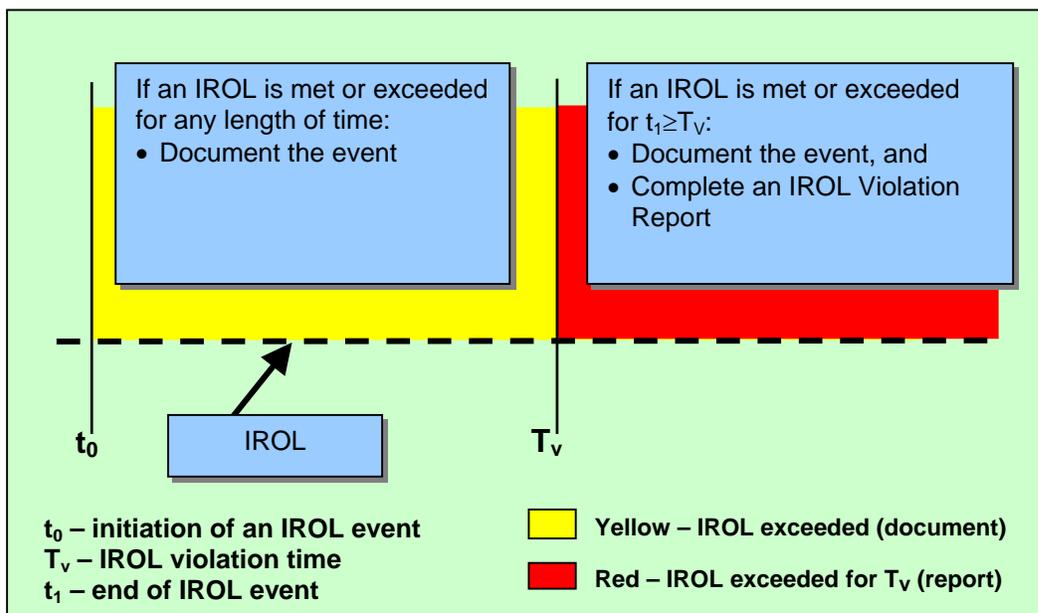
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

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The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

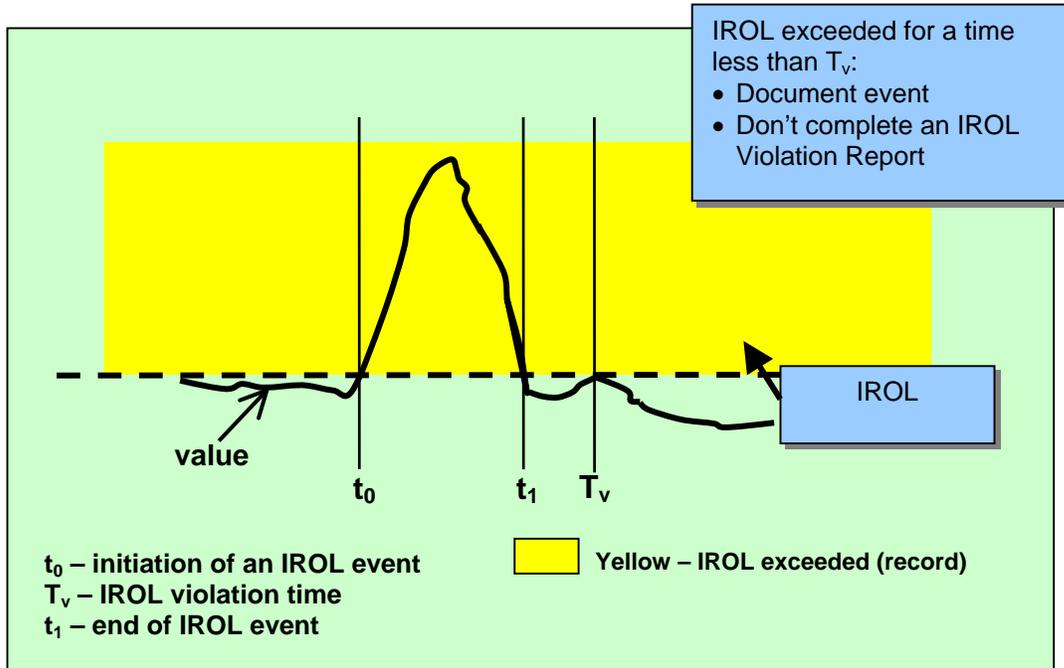
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

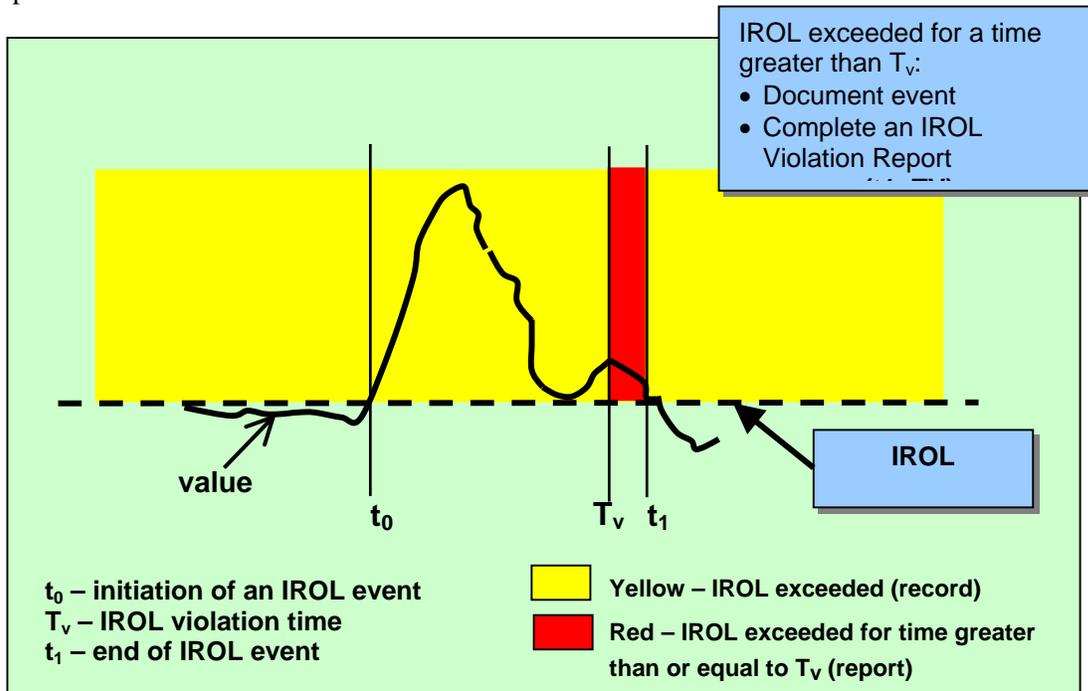


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The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

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<b>STD Commenter Information (For Individual Commenters)</b>	<b>Key to Industry Segment #'s:</b> 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
<b>Name</b>	
<b>Organization</b>	
<b>Industry Segment</b>	
<b>Telephone</b>	
<b>E-mail</b>	

<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> <i>SERC Operations Planning Subcommittee</i>	<b>Group Chair:</b> <i>Don Reichenbach</i>	
	<b>Chair Phone:</b> <b>704-382-3146</b>	
	<b>Chair Email:</b> <a href="mailto:dereiche@duke-energy.com">dereiche@duke-energy.com</a>	
<b>List of Group Participants that Support These Comments:</b>		
Name	Company	Industry Segment #
<i>Carter Edge</i>	<i>Southeastern Power Administration</i>	<i>4 &amp; 5</i>
<i>William Gaither</i>	<i>South Carolina Public Service Authority</i>	<i>1</i>
<i>Mike Miller</i>	<i>Southern Company</i>	<i>1</i>
<i>Roger Brand</i>	<i>Municipal Electric Authority of Georgia</i>	<i>1</i>
<i>Phil Creech</i>	<i>Progress Energy - Carolinas</i>	<i>1</i>
<i>Gene Delk</i>	<i>South Carolina Electric and Gas</i>	<i>1</i>
<i>Al McMeekin</i>	<i>South Carolina Electric and Gas</i>	<i>1</i>
<i>Greg Ott</i>	<i>Alcoa-Yadkin</i>	<i>1</i>
<i>Doug Newbauer</i>	<i>Georgia System Operations</i>	<i>1</i>
<i>Mike Clements</i>	<i>Tennessee Valley Authority</i>	<i>1</i>
<i>Don Reichenbach</i>	<i>Duke Energy</i>	<i>1</i>
<i>Lynna Estep</i>	<i>SERC</i>	<i>2</i>
<i>Mark Creech</i>	<i>TVA</i>	<i>1</i>

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

Based on the following definitions, we do not believe that the definition of “*Documentable Interconnection Reliability Operating Limit Violation*” is necessary (is it truly a violation?). It appears that it is identical to the definition of “*Interconnection Reliability Operating Limit Event*” and the fact that an “*event*” must be documented is contained in the definition of “*Interconnection Reliability Operating Limit*”.

- **Documentable Interconnection Reliability Operating Limit Violation:** An instance of exceeding an interconnection reliability operating limit for any length of time.
- **Interconnection Reliability Operating Limit Event:** An instance of exceeding an interconnection reliability operating limit for any length of time.
- **Interconnection Reliability Operating Limit Violation:** An instance of exceeding an interconnection reliability operating limit for time greater than or equal to  $T_v$ .
- **Interconnection Reliability Operating Limit:** A system operating limit that, if exceeded, could lead to instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk transmission system. The reliability authority must log each case of exceeding an interconnection reliability operating limit, and must report (to its compliance monitor) each case of exceeding an interconnection reliability operating limit for a time greater than or equal to  $T_v$ . Note that  $T_v$  may be zero.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments: This should not preclude the Transmission Operator from conducting independent analysis.

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

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- What happens if you identify another (unexpected) limit during real-time that is not on the list? Are you not responsible for this case as well? We all know that planning studies cannot predict all the challenges that are faced in real-time.
- Who determines  $T_v$  and what restrictions are placed on the entity establishing it?

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. This Standard could be improved by formatting (where possible) Measurement 2.1 to relate to Requirement 1.1 and Measurement 2.2 to relate to Requirement 1.2, etc. rather than listing the measures and requirements arbitrarily and independently.

In order to tie the OEC's to the Measures, Section 4 should be clarified to read:

4.3. The entity responsible shall have the following Objective Evidence for Compliance available upon the request of its compliance monitor:

- 4.3.1. List of interconnection reliability operating limits for the reliability authority's reliability area **as described in Measure 2.1 above**
- 4.3.2. List of facilities (or groups of facilities) in the reliability authority's reliability area that are subject to interconnection reliability operating limits **as described in Measure 2.2 above**

### **Requirement 202 - Monitoring**

- 7. Do you agree with the requirement?  
 Yes                       No
- 8. Do you agree with the measures?  
 Yes                       No
- 9. Do you agree with the compliance monitoring process?  
 Yes                       No
- 10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3.1 is too specific for the measures it supports. It may be a practical solution that the real-time data and interconnection reliability operating limits be made available to operators in the form of a "display", however this solution is not prescribed in the measures and should not be listed exclusively.

We suggest that section 4.3.1 be rewritten to read:

- 4.3.1. Process used for monitoring and comparing real time data associated with interconnection reliability operating limits in accordance with Measure 2.3 above.**

This may be accomplished through the use of an operator display and should demonstrate compliance with Measures 2.1 and 2.2.

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be rewritten to read:

**4.3. The reliability authority shall demonstrate in accordance with Measure 2.1, the following upon the request of the compliance monitor:**

**4.3.1. Ability to perform an operational planning analysis**

**4.3.2. Ability to perform a real time assessment**

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

We have a general concern that the Reliability Authority is the only function held responsible for instances where the IROL is exceeded. Currently, not all RAs have operating responsibility over their systems. Some functions are delegated. With this in mind, the levels of non-compliance would pertain only to RAs, while they may not have direct control. For instance, the operating entities could choose not to follow the RA's direction. It seems that there should be a complimentary standard that would penalize operating entities for not adhering to the direction of the RA. The penalties should be ranked according to the severity of the situation. In other words, the entities who actually have the operating responsibility must be held accountable.

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Has the Interconnection Reliability Operating Limit Violation Report been developed yet? Is this the existing NERC Operating Policy 5, Appendix 5F as modified with the results of the Reliability Coordinator IRLV Field Test?

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

In section 2, the measures do not capture the requirement to PREVENT instances where IROLs may be exceeded. The following re-wording is suggested. Section 4, below is also slightly modified to align with change in the measurement.

2.1. **The reliability authority shall document each instance where actions are taken to prevent exceeding or to mitigate the magnitude and duration of interconnection reliability operating limit:**

2.1.1. The reliability authority shall document, via an operations log or other data source, the actions taken or directives issued, the magnitude of the event, and the duration of the event. (This data may be from an operating log, may be from the entity's energy management system, or may be from some other source.)

2.2. The reliability authority shall report each instance of exceeding an interconnection reliability operating limit for time greater than or equal to  $T_v$ :

2.2.1. The reliability authority shall complete an Interconnection Reliability Operating Limit Violation Report and shall file the report with its compliance monitor within five business days of the initiation of the event. (The report includes the date and time of the event, identification of which interconnection reliability operating limit was violated and the  $T_v$  for that limit, magnitude and duration of exceeding the interconnection reliability operating limit, actions taken or directives issued, and explanation of results of actions or directives.)

4.3. The reliability authority shall have the following available upon the request of its compliance monitor:

4.3.1. Operations logs or other documentation **in accordance with Measure 2.1 indicating the magnitude and duration of each interconnection reliability operating limit event** and the actions or directives issued for each of these instances

4.3.2. Interconnection Reliability Operating Limit Violation Reports **completed in accordance with Measure 2.2**

### **Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes

No

20. Do you agree with the measures?

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Yes                       No

21. Do you agree with the compliance monitoring process?

Yes                       No

22. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 205:

The requirement for data collection should be tied to its impact on reliability. Requirement 1.3 should be modified to read:

1.3. The reliability authority shall notify its compliance monitor when an entity that has facilities monitored by the reliability authority does not provide data as specified **and this lack of data has an impact on reliability.**

Measurement 2.3.1 should be rewritten to read:

2.3.1. The notification shall take place within five business days of discovering that the data **having an impact on reliability** is missing.

In order to prevent a shotgun approach to data collection we propose Section 2.1.1 be modified to read:

2.1.1. Specification shall include a list of **minimum** required data, a mutually agreeable format, and timeframe and periodicity for providing data.

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be rewritten to read:

4.3. The reliability authority shall have the following available upon the request of the compliance monitor:

4.3.1. Data specification(s) **in accordance with Measure 2.1**

4.3.2. Proof of distribution of the data specification(s) **in accordance with Measure 2.2**

**Requirement 206 - Data Provision**

23. Do you agree with the requirement?

Yes                       No

24. Do you agree with the measures?

Yes                       No

25. Do you agree with the compliance monitoring process?

Yes                       No

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26. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 206:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3.1 is too specific for the measure it supports. A possible solution might be:

4.3.1. **Documentation** indicating data was sent to the reliability authority **in accordance with Measure 2.1**

Non-compliance in data submission could take several forms and levels of impact to reliability. Section 5 should be modified as follows:

5. Levels of Non-compliance:

5.1. Level one: **Data was provided, but not in the mutually agreed format**

5.2. Level two: **Data was provided, but not within the time-frame specified**

5.3. Level three: **Incomplete data was provided**

5.4. Level four: Data **was** not provided to the reliability authority as specified.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?

Yes  No

28. Do you agree with the measures?

Yes  No

29. Do you agree with the compliance monitoring process?

Yes  No

30. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 207:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. The Levels of non-compliance should be objectively determined based on the evidence.

Measure 2.1 should be modified to include:

2.1. The reliability authority shall have a documented action plan that addresses preventing and mitigating instances of exceeding interconnection reliability operating limits. The plan shall **identify and** be coordinated with those entities responsible for acting and with those entities impacted by such actions.

Section 4.3 should be modified to include:

4.3. The reliability authority shall make the following available for inspection by the compliance monitor upon request:

4.3.1 Action plan **developed in accordance with Measure 2.1**

Section 5 should be modified to include:

5. Levels of Non-compliance

- 5.1. Level one: Action plan exists but wasn't coordinated with all involved and impacted entities
- 5.2. Level two: Action plan exists but wasn't coordinated with any involved or any impacted entities
- 5.3. Level three: **Action plan is incomplete**
- 5.4. Level four: No action plan

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?

Yes                       No

32. Do you agree with the measures?

Yes                       No

33. Do you agree with the compliance monitoring process?

Yes                       No

34. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 208:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. Non-compliance could take several forms and levels of impact to reliability. The Levels of non-compliance should be objectively determined based on the evidence.

Section 4.3.1 should be modified to read:

4.3.1. Operations log or other data source(s) to show the following for each instance of being issued a reliability authority directive relative to an interconnection reliability operating limit:

4.3.1.1. Date and time of each of directive received

4.3.1.2. Directive issued

4.3.1.3. Actions taken in response to directive **in accordance with Measure 2.1**

Section 5 should be modified as follows:

5. Levels of Non-compliance

5.1 Level one: Operations log or other data source(s) do not show one of the following:

5.1.1 Date and time of each of directive received

5.1.2 Directive issued

5.1.3 Actions taken in response to directive

5.2 Level two: Operations log or other data source(s) do not show any of the following:

5.1.4 Date and time of each of directive received

5.1.5 Directive issued

5.1.6 Actions taken in response to directive

5.3 Level three: Not applicable.

5.4 Level four: Did not follow directives.

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### 35. List any Regional or Interconnection Differences for this standard:

None

### 36. Notifying the Compliance Monitor

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments** We believe that it is appropriate to include this in the standard with the comments noted in Section 205.

### 37. Any other comments on this standard?

Please note that throughout the standard the Tv term is used but is not formatted the same (Tv vs. T<sub>v</sub>). This is a minor, formatting issue, but should be consistent throughout to reduce confusion.

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
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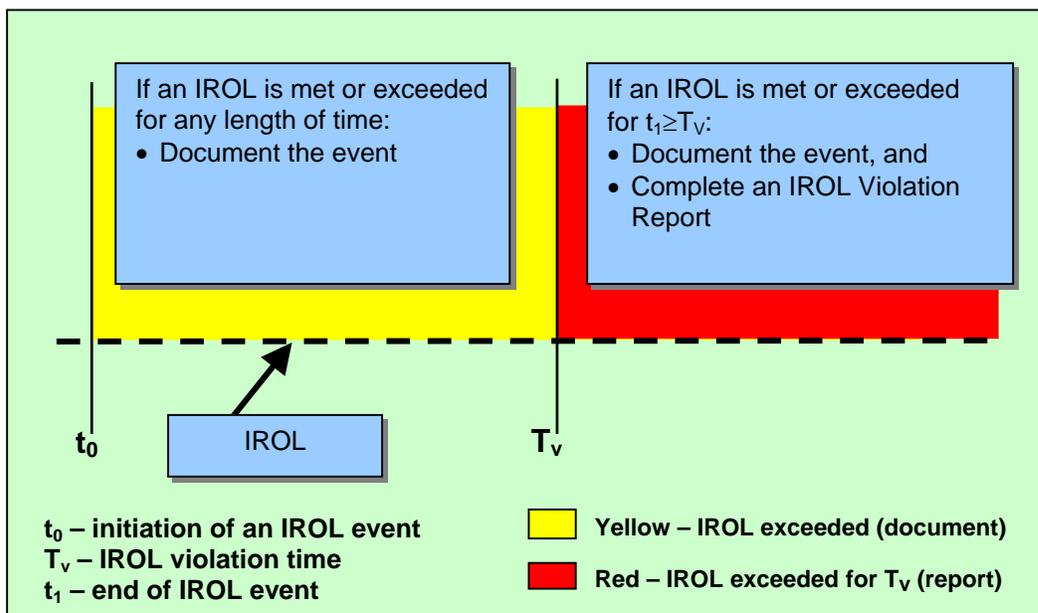
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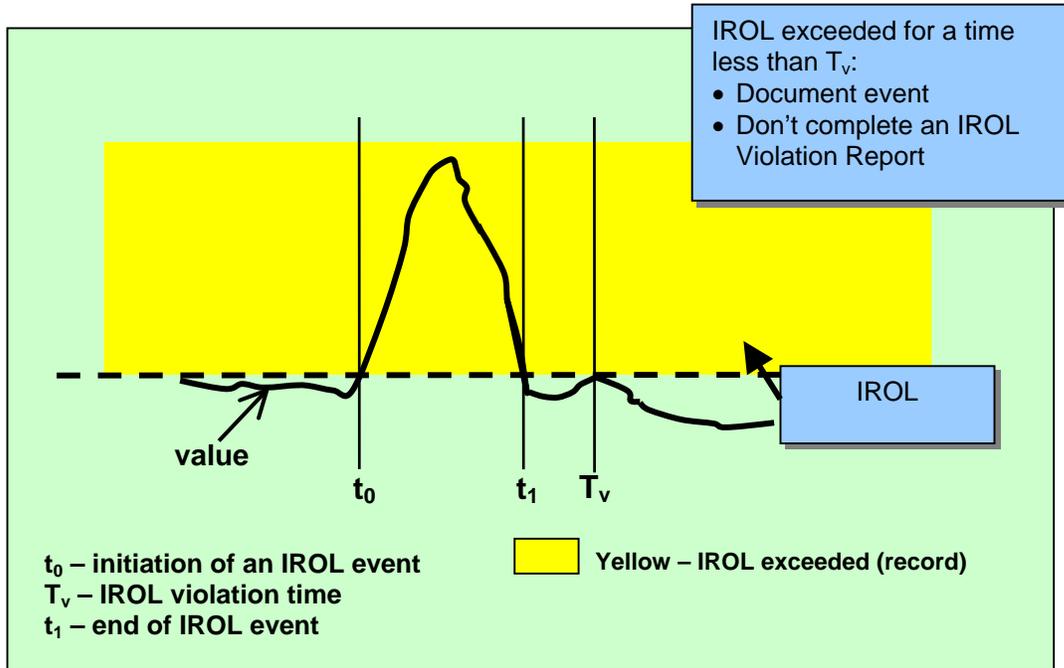
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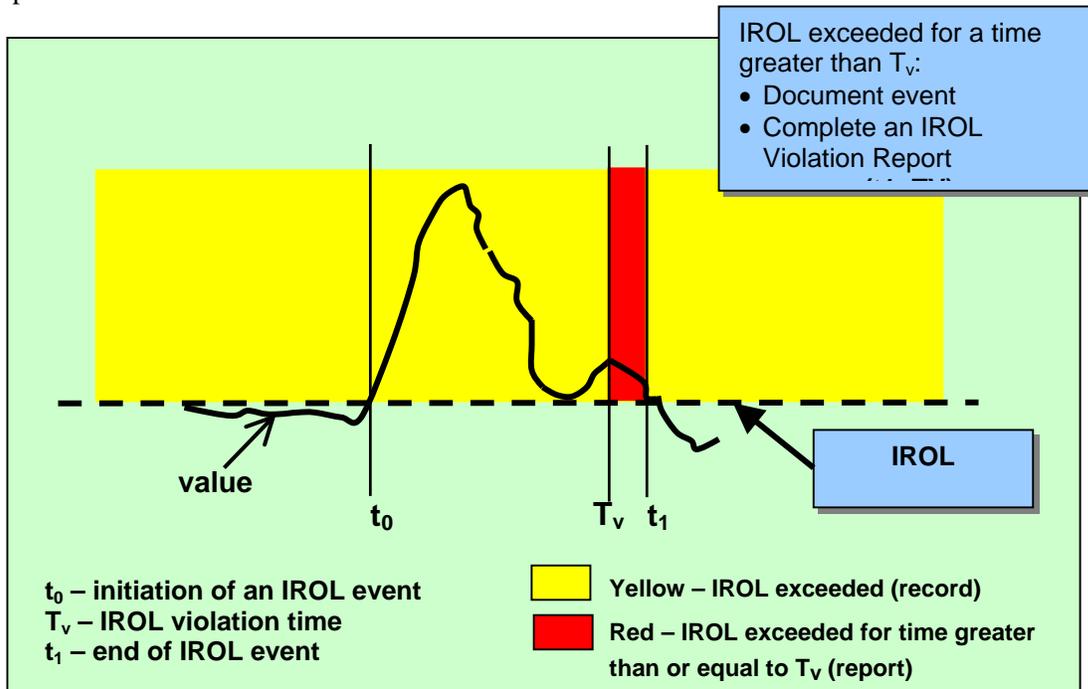


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
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**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.  
**I would suggest that the terms Documentable IROL Violation and IROL Event be combined in a single definition. Offer the following:**

**IROL Event: An instance.....for any length of time. These events are documentable IROL violations.**

**Similarly for IROL Violation and Reportable IROL Violation.**

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

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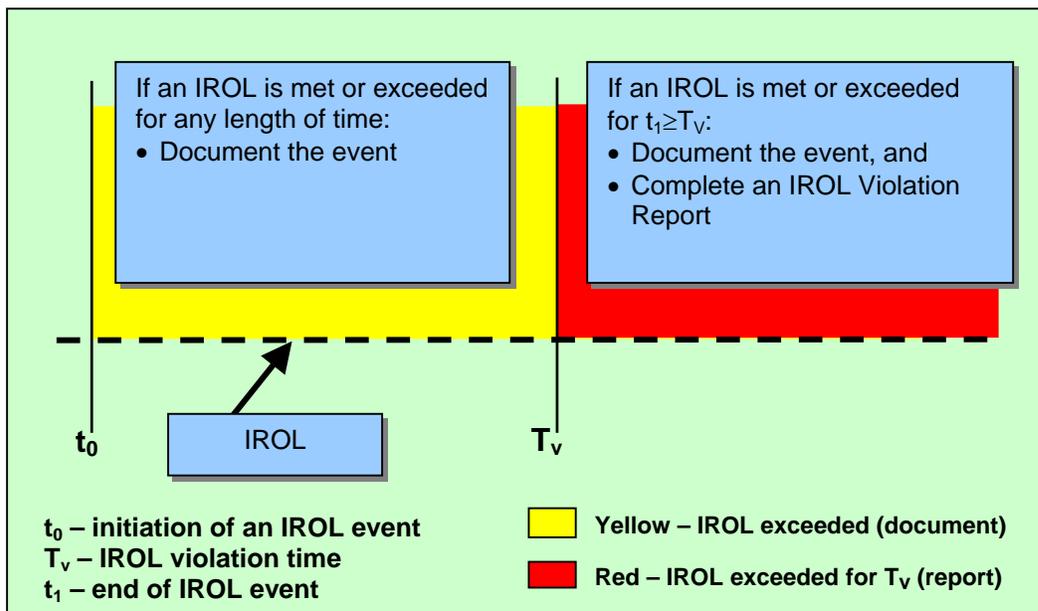
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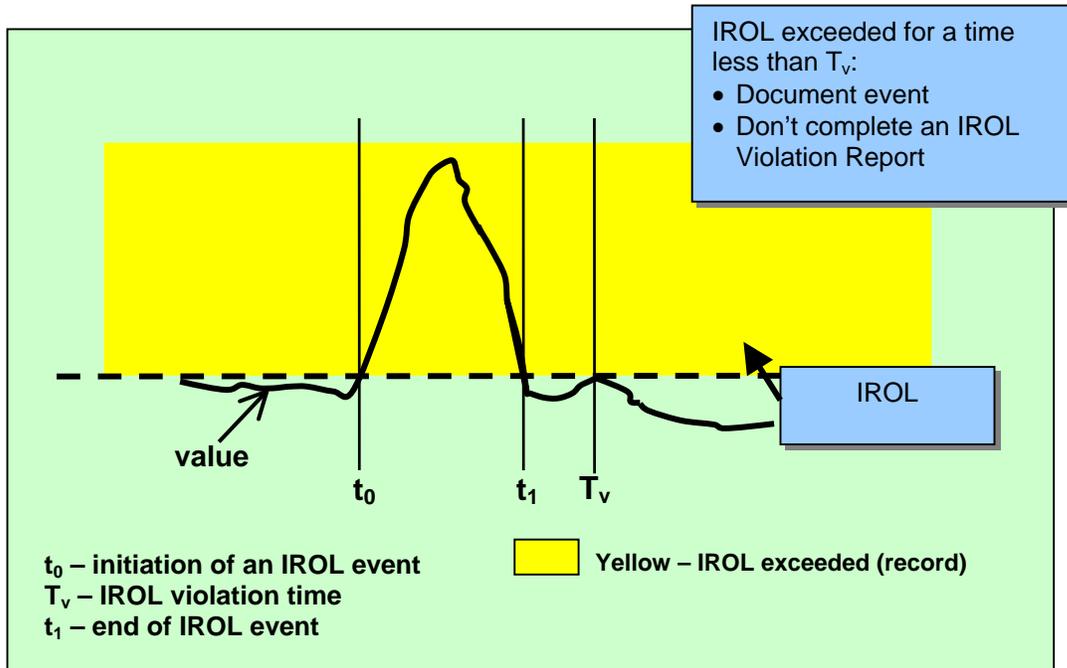
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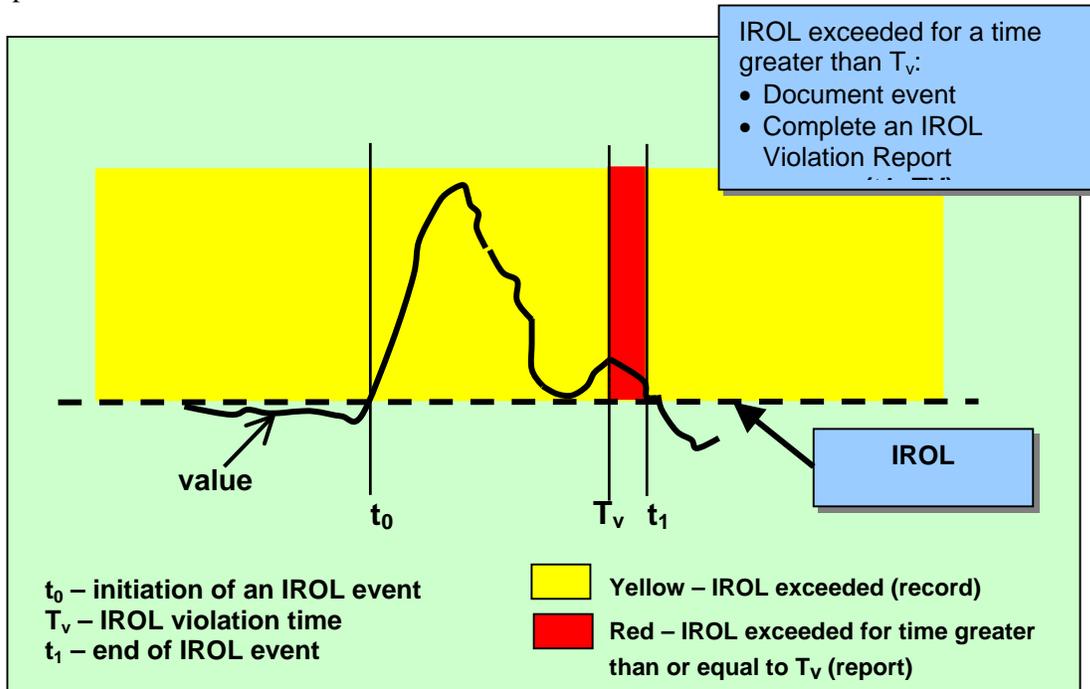


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**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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<b>STD Commenter Information (For Individual Commenters)</b>	
<b>Name</b>	Donald B. Idzior
<b>Organization</b>	Consumers Energy
<b>Industry Segment #</b>	4
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<b>Key to Industry Segment #'s:</b> 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
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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

**I would recommend the definition Tv and section 1.2.1 be made consistent.**

**As the standard now reads, the definition of Tv is the violation time associated with a limit. Section 1.2.1 refers to the identification of Tv as a response time.**

**Those are two very different things.**

**The response limit must be the total time from when a flow/voltage/stability limit is first violated to when operator action is initiated and finally the system (transaction curtailments/generation redispatch/switching/load control action...) responds to bring the violated operating limit back to below the limit.**

**The definition should be changed to bring it in line with the usage in the standard.**

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
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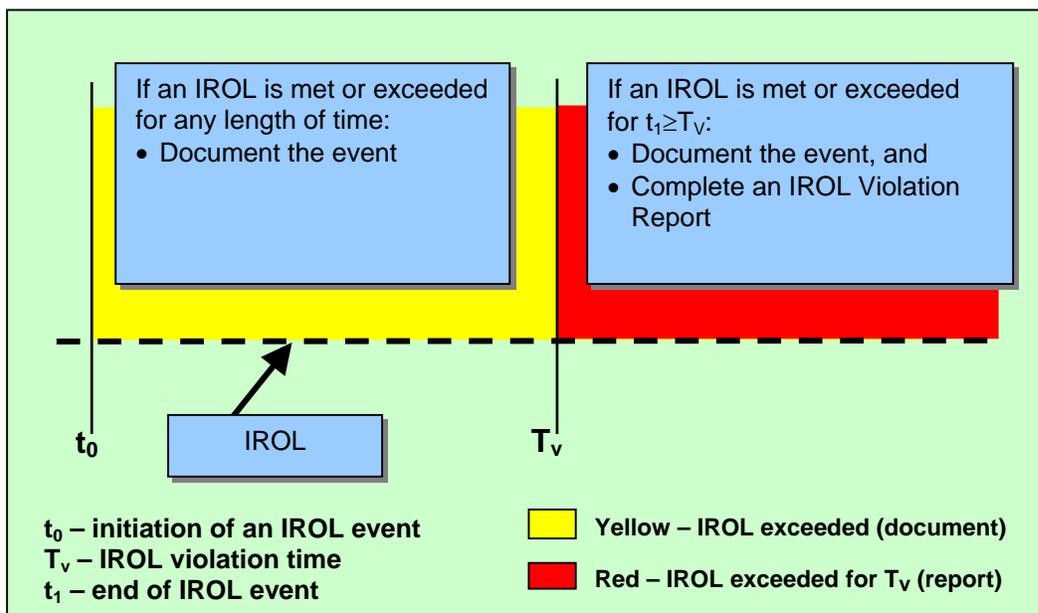
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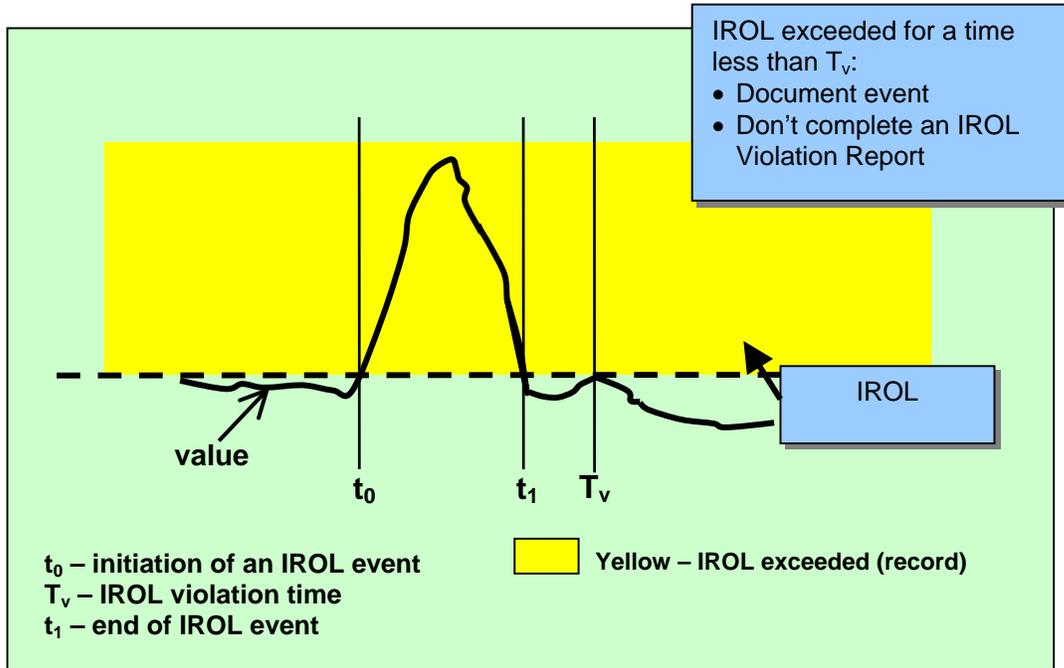
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When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

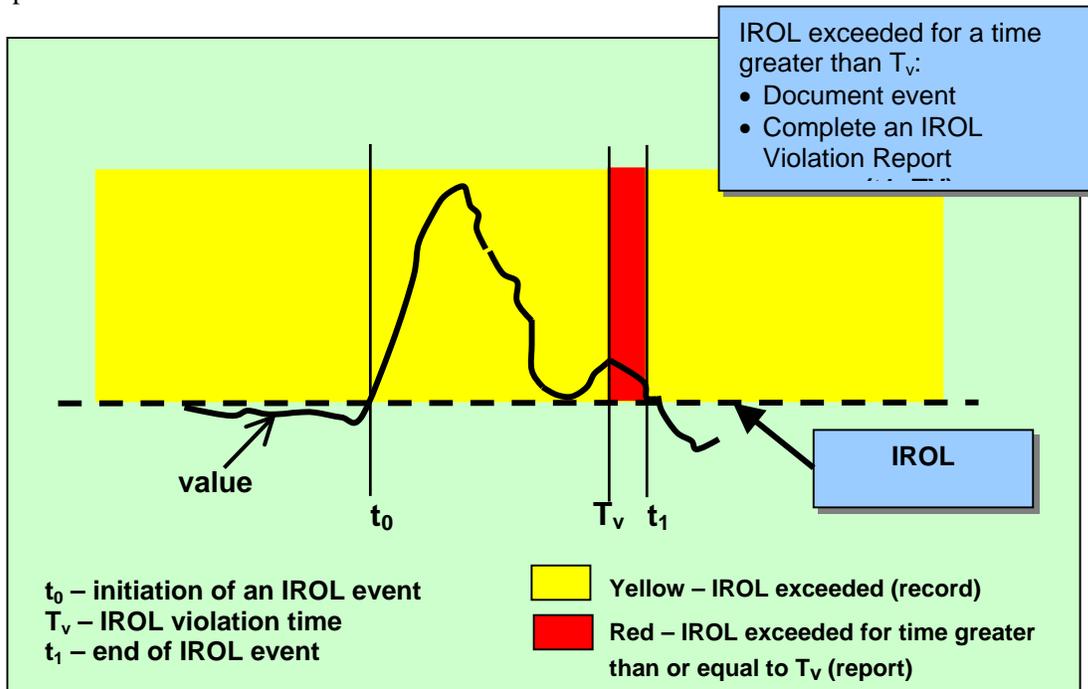


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

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This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

**The definitions involving Interconnection Reliability Operating Limit need to be cleaned up to increase clarity and to eliminate duplication.**

- a) **Remove the definition for “Documentable Interconnection Reliability Operating Limit Violation”**
- b) **Remove the definition for “Reportable Interconnection Reliability Operating Limit Violation”**
- c) **Change, as follows, the definition for “Interconnection Reliability Operating Limit Event: An instance of exceeding an Interconnection Reliability Operating Limit for any length of time. The event must be documented (logged).”**
- d) **Change, as follows, the definition for “Interconnection Reliability Operating Limit Violation: An instance of exceeding an Interconnection Reliability Operating Limit for a time greater than or equal to Tv. This is an event that has progressed to also become a violation. The event must be documented and the violation must be reported (to the compliance monitor).”**

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?

Yes                       No

4. Do you agree with the measures?

Yes                       No

5. Do you agree with the compliance monitoring process?

Yes                       No

6. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 201:

### Requirement 202 - Monitoring

7. Do you agree with the requirement?

Yes                       No

8. Do you agree with the measures?

Yes                       No

9. Do you agree with the compliance monitoring process?

Yes                       No

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10. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 202:

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
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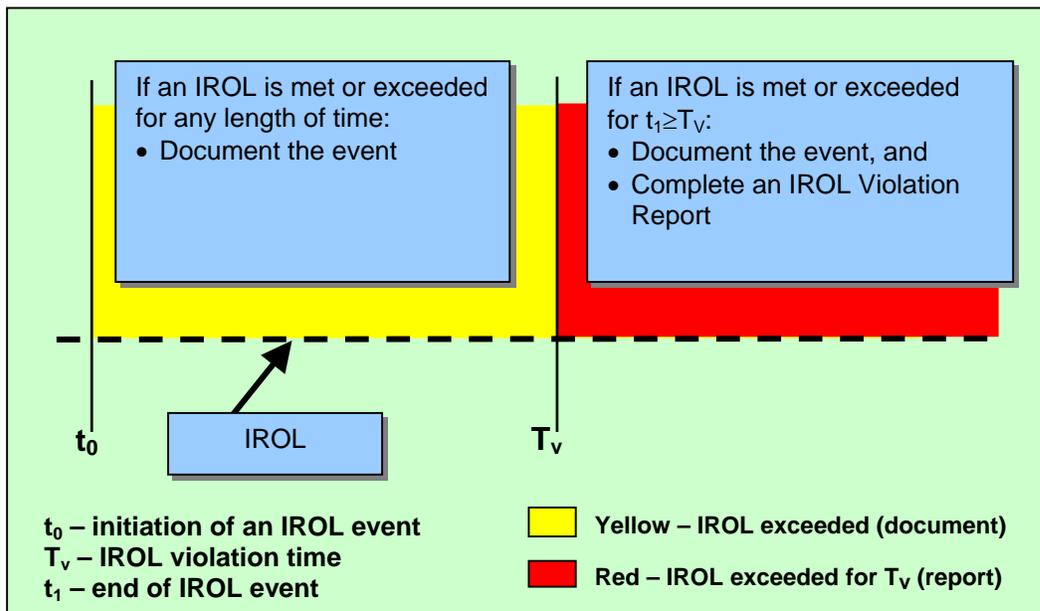
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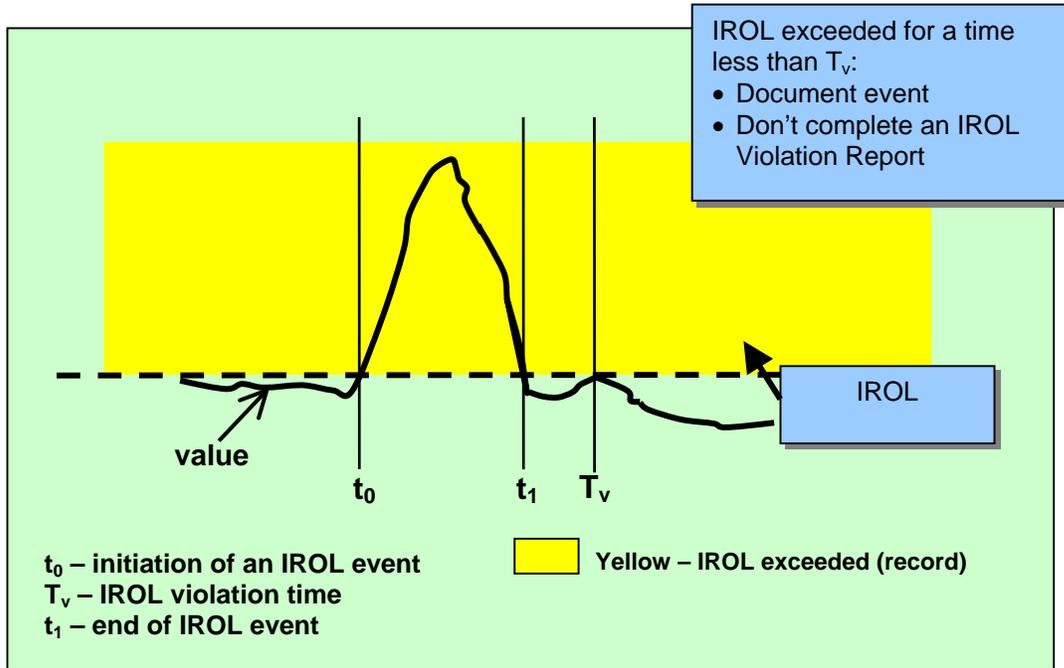
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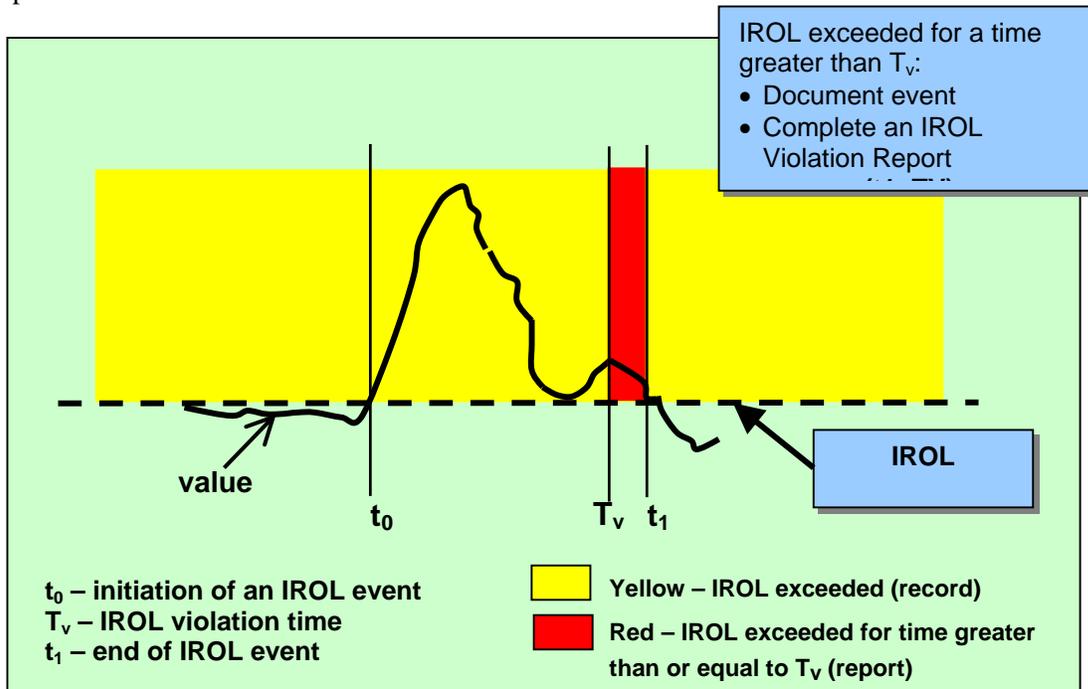


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The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

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**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
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- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

<b>STD Commenter Information (For Individual Commenters)</b>	<b>Key to Industry Segment #'s:</b> 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
<b>Name</b>	
<b>Organization</b>	
<b>Industry Segment #</b>	
<b>Telephone</b>	
<b>E-mail</b>	

<b>SAR Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> <i>Southern Company Transmission Planning</i>	<b>Group Representative:</b> <i>Todd Lucas</i>	
	<b>Representative Phone:</b> <b>404-506-3564</b>	
	Representative Email: <b>telucas@southernco.com</b>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>Todd Lucas</i>	<i>Southern Co</i>	<i>1</i>
<i>Joe Payne</i>	<i>Mississippi Power Company</i>	<i>3</i>
<i>Travis Koval</i>	<i>Southern Co</i>	<i>1</i>
<i>Bill Pope</i>	<i>Gulf Power Company</i>	<i>3</i>
<i>John Clark</i>	<i>Southern Co</i>	<i>1</i>
<i>David Johnson</i>	<i>Savannah Electric</i>	<i>3</i>

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### **Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

The term "Documentable Interconnection Reliability Operating Violation" is never used in the standard and has the same definition as "Interconnection Reliability Operating Event". Likewise, the term "Reportable Interconnection Reliability Operating Violation" is never used in the standard and has the same definition as "Interconnection Reliability Operating Violation". We suggest that the terms "Documentable Interconnection Reliability Operating Violation" and "Reportable Interconnection Reliability Operating Violation" be deleted from the list of definitions.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No

Comments It is not clear to us that the Transmission Operator would never be responsible for performing the requirements included in this standard. Similar to Standard 600, this requirement could apply to "the areas for which they are responsible".

### **Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201: The Transmission Owner should be added to this requirement if they can be held liable for violating IROL's.

### **Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202: The Transmission Operator should also be included in this requirement for "the areas for which they are responsible".

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203: The Transmission Operator should also be included in this requirement for "the areas for which they are responsible".

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205: The Transmission Operator should also be included in this requirement for "the areas for which they are responsible".

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

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### 35. List any Regional or Interconnection Differences for this standard:

We do not currently know of any Regional or Interconnection Differences at this time. However, during the initial phasing in of standards each region may find adopting or developing a different approach provides increased reliability. Therefore, we believe that differences should be considered as they are identified in the future.

### 36. Notifying the Compliance Monitor

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

### 37. Any other comments on this standard?

This standard should not be brought to ballot until the Planning Authority is defined in the Functional Model since the Planning Authority is assigned requirements in this standard.

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

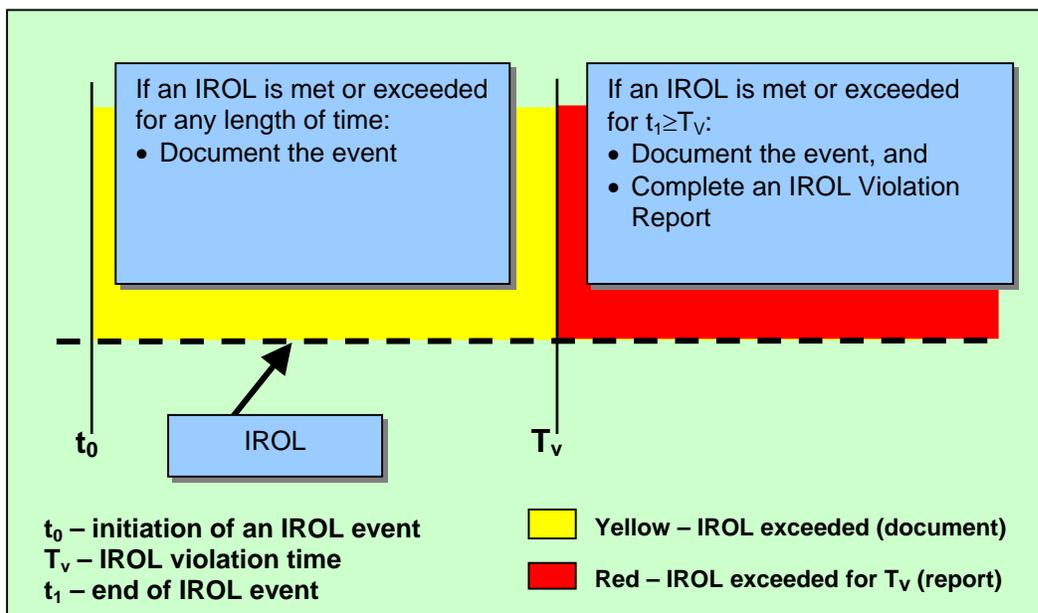
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

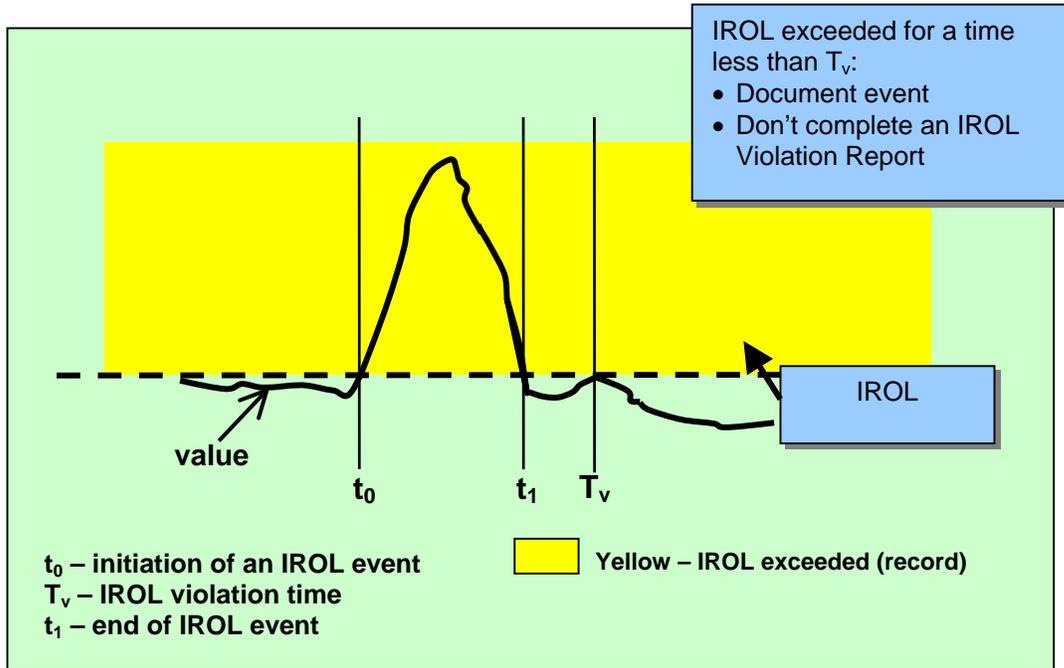
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

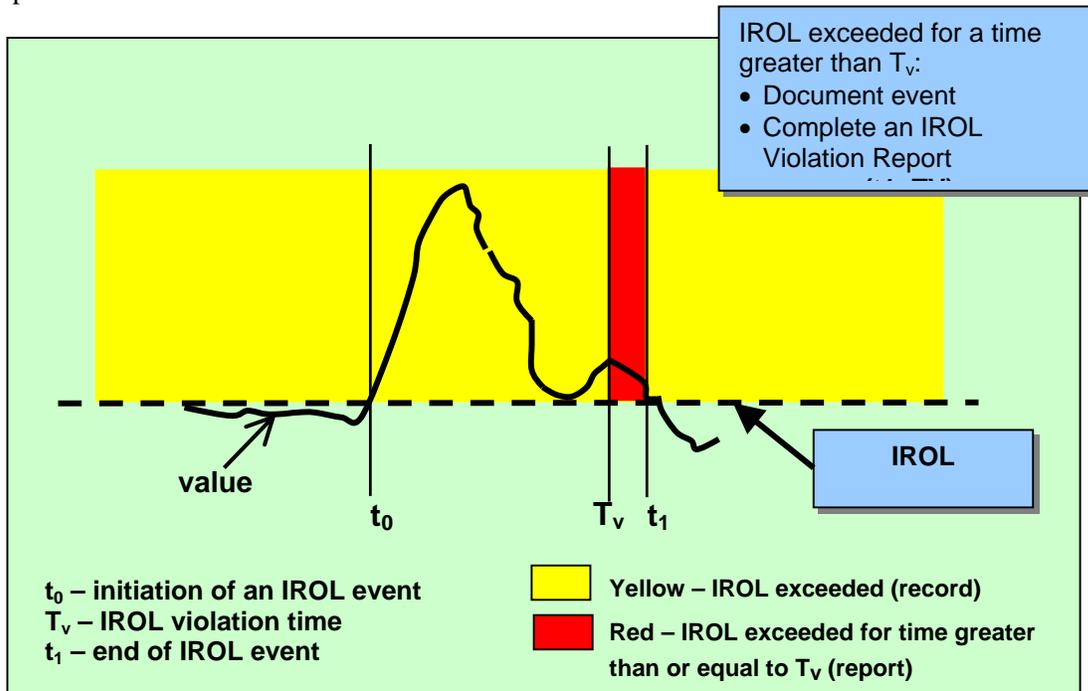


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
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**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

<b>STD Commenter Information (For Individual Commenters)</b>	<b>Key to Industry Segment #'s:</b> 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
<b>Name</b>	
<b>Organization</b>	
<b>Industry Segment</b>	
<b>Telephone</b>	
<b>E-mail</b>	

<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> <i>Bonneville Power Administration TBL</i>	<b>Group Chair:</b> <i>James Murphy</i>	
	<b>Chair Phone:</b> <i>360-418-2413</i>	
	<b>Chair Email:</b> <i>jpmurphy@bpa.gov</i>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>James Murphy</i>	<i>BPA</i>	<i>1</i>
<i>Mike Viles</i>	<b>BPA</b>	<i>1</i>
<i>James Randall</i>	<b>BPA</b>	<i>1</i>
<i>Al Johnson</i>	<b>BPA</b>	<i>1</i>
<i>Jeff Newby</i>	<b>BPA</b>	<i>1</i>
<i>Jim Gronquist</i>	<b>BPA</b>	<i>1</i>
<i>Sylvia Wiggerhaus</i>	<b>BPA</b>	<i>1</i>
<i>Brian Tuck</i>	<b>BPA</b>	<i>1</i>
<i>Dick Spence</i>	<b>BPA</b>	<i>1</i>
<i>Tracy Rolstad</i>	<b>BPA</b>	<i>1</i>
<i>Steve Hitchens</i>	<i>BPA</i>	<i>1</i>

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.  
Operational Planning Analysis - There should be no time component to this definition. As long as it has been completed prior to when it is needed. Tv - Should include maximum response time.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201: Should remove planning authority to obtain a single point of responsibility. Also, Remove maximum response time and use just Tv, this will apply to the entire definition associated with Tv.

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

- 11. Do you agree with the requirement?  
 Yes                       No
- 12. Do you agree with the measures?  
 Yes                          No
- 13. Do you agree with the compliance monitoring process?  
 Yes                          No
- 14. Do you agree with the levels of non-compliance?  
 Yes                          No

Comments about Requirement 203: 2.1.1 There should be no time frame, as long as the analysis is done prior to the need it shouldn't matter.

5.1 Remove - to indicate actions taken or directives issued to mitigate the instance. This additional verbage is not needed, the discription of the documentation is already covered in the requirements.

5.4 Remove at least once each day.

**Requirement 204 - Actions**

- 15. Do you agree with the requirement?  
 Yes                          No
- 16. Do you agree with the measures?  
 Yes                          No
- 17. Do you agree with the compliance monitoring process?  
 Yes                          No
- 18. Do you agree with the levels of non-compliance?  
 Yes                          No

Comments about Requirement 204: 5.4 Remove minutes, TV may be seconds and TV is already a time period by definition.

**Requirement 205 - Data Specification**

- 19. Do you agree with the requirement?  
 Yes                          No
- 20. Do you agree with the measures?  
 Yes                          No
- 21. Do you agree with the compliance monitoring process?  
 Yes                          No
- 22. Do you agree with the levels of non-compliance?  
 Yes                          No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

In the Northwest, where there isn't a RTO in place, there seems to be some confusion on what current entity would be the RA? Who makes the decision or assigns who is the RA? We have also heard that a RA can direct TOP or others to do operational planning analysis, but we have not been able to find it in the Functional Model or this document. If that is the intent then it should be included in the Functional Model or this document. If you could direct us in these matters it would greatly improve our understanding of the document. Thank you for your help.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)

The latest version of this Standard (OPER\_WITHIN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

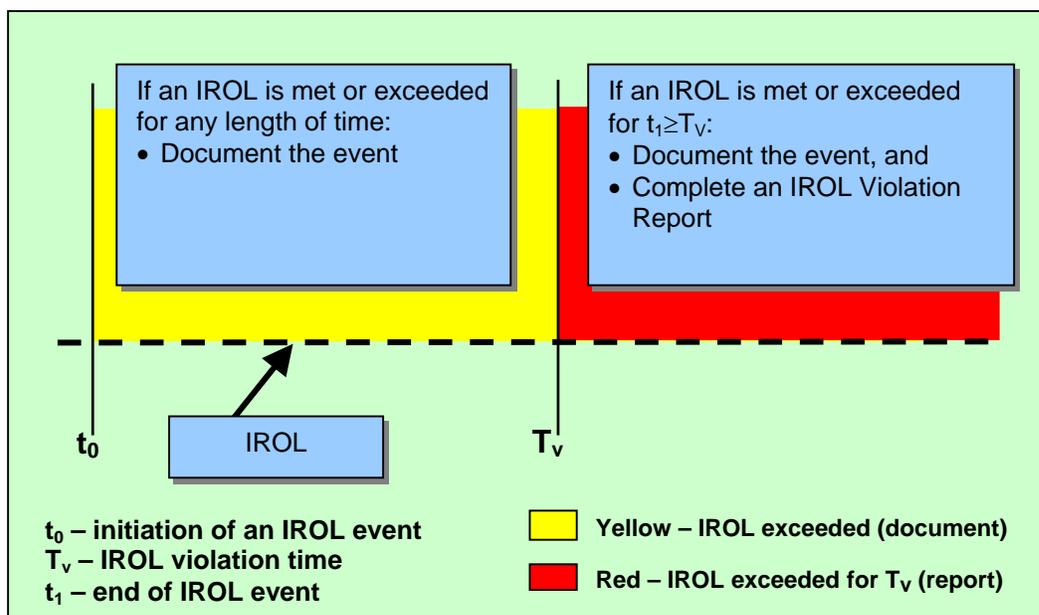
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

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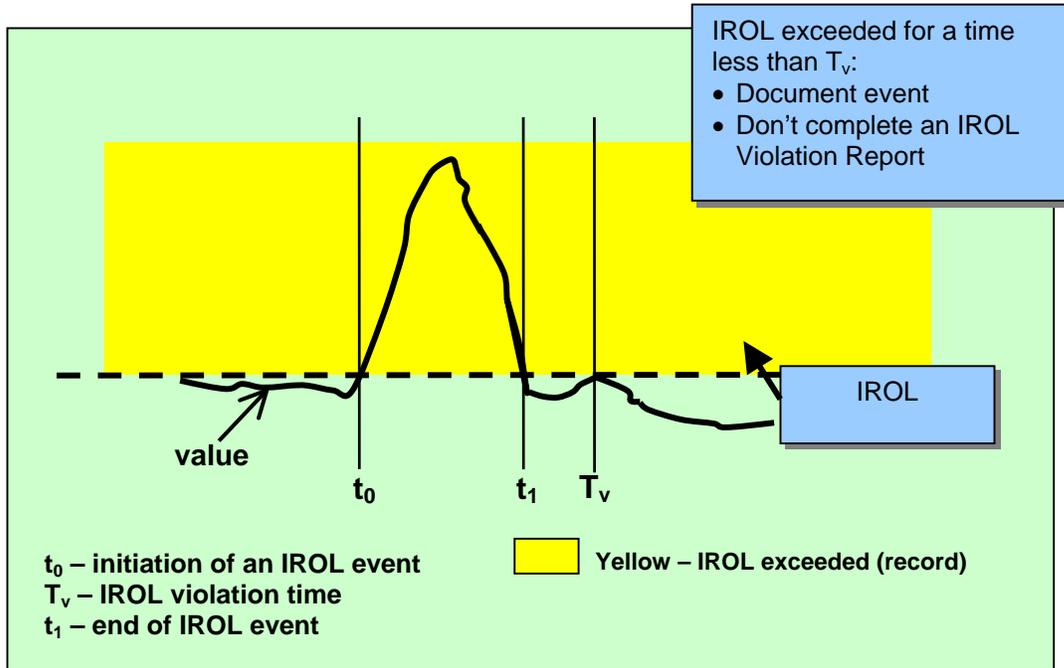
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

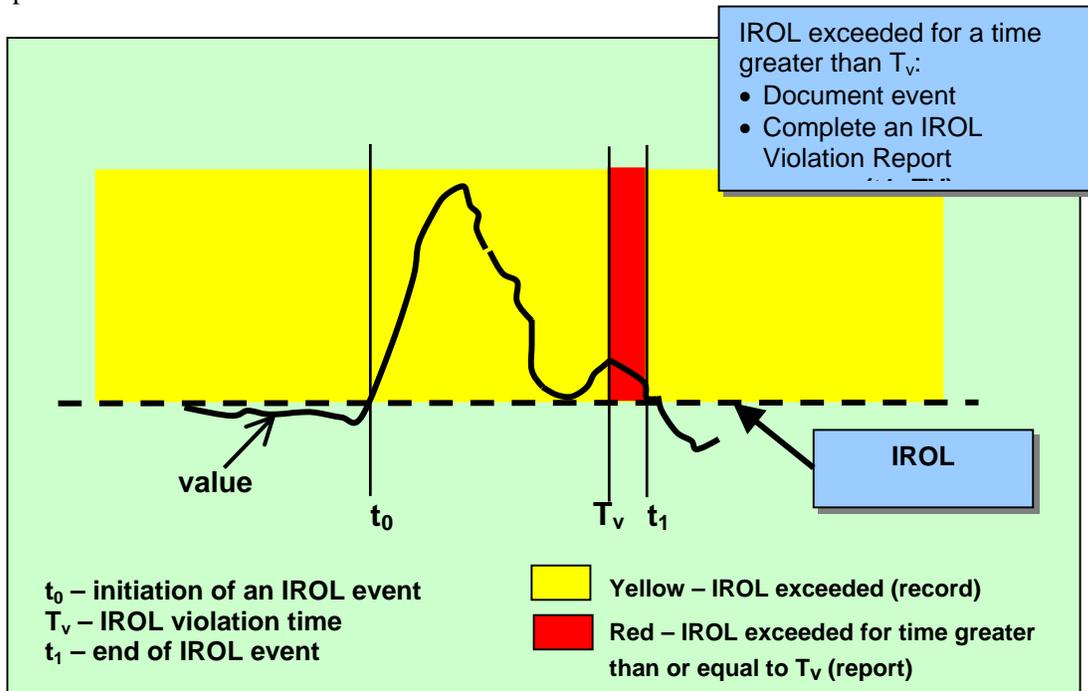


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

**I would suggest that the terms Documentable IROL Violation and IROL Event be combined in a single definition. Offer the following:**

**IROL Event: An instance.....for any length of time. These events are documentable IROL violations.**

**Similarly for IROL Violation and Reportable IROL Violation.**

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?

Yes                       No

4. Do you agree with the measures?

Yes                       No

5. Do you agree with the compliance monitoring process?

Yes                       No

6. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?

Yes                       No

8. Do you agree with the measures?

Yes                       No

9. Do you agree with the compliance monitoring process?

Yes                       No

10. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
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 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
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 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
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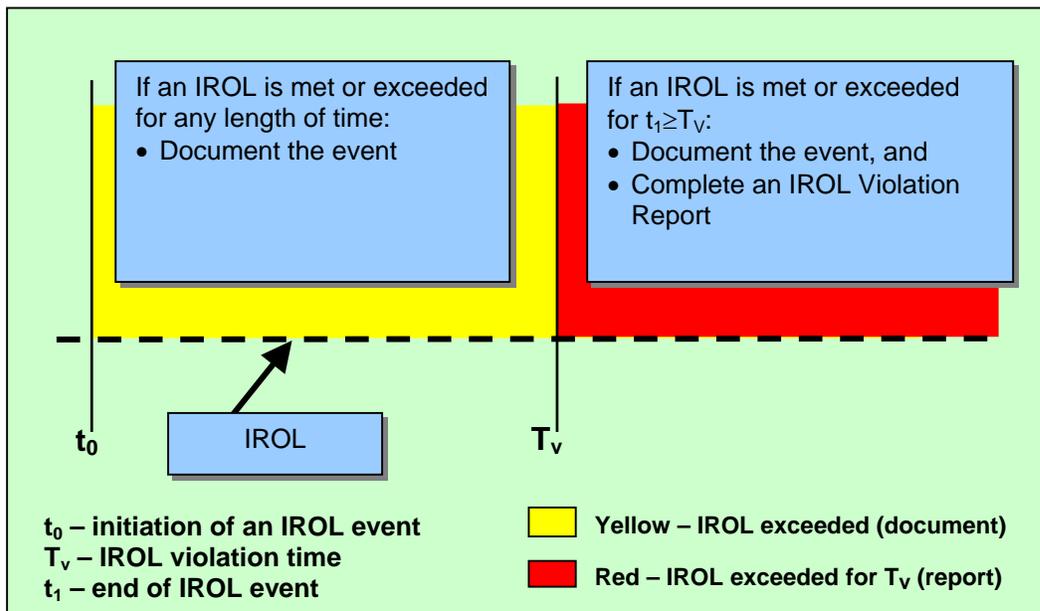
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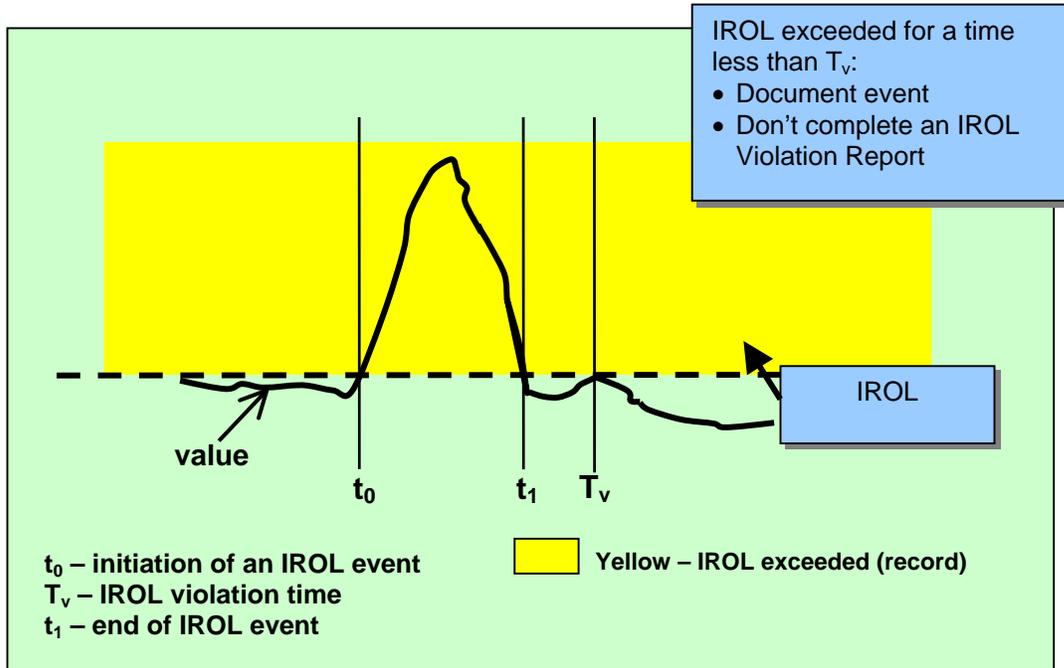
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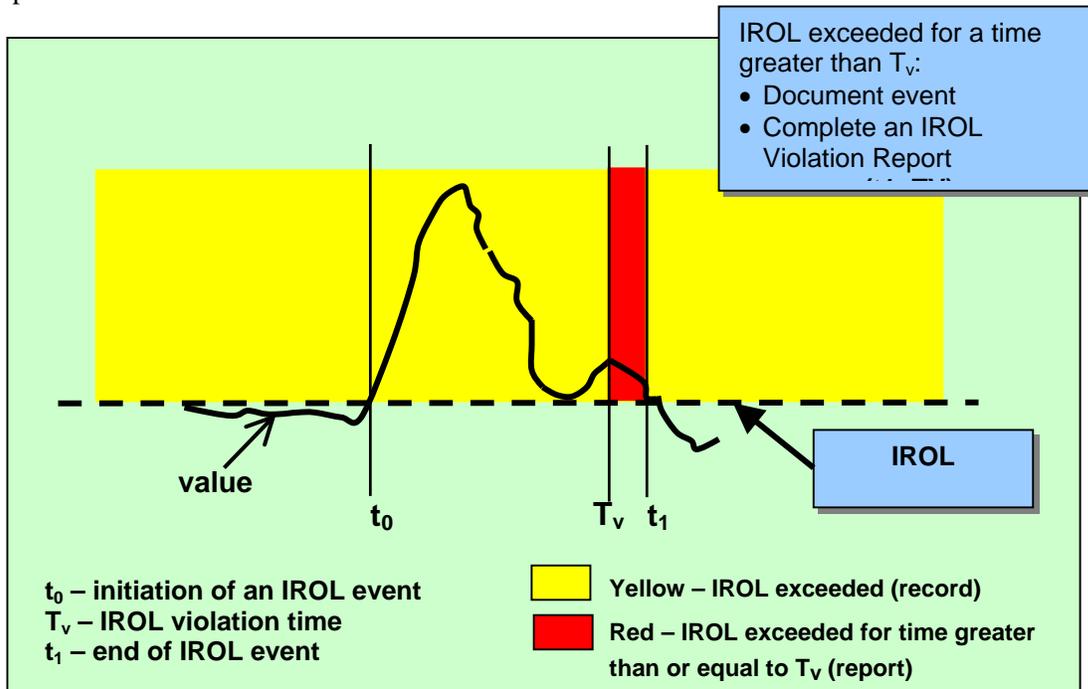


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
X Yes  No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
X Yes  No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
X Yes  No
4. Do you agree with the measures?  
X Yes  No
5. Do you agree with the compliance monitoring process?  
X Yes  No
6. Do you agree with the levels of non-compliance?  
X Yes  No

Comments about Requirement 201: We agree with the current list but wonder if their should be a category for an "incomplete list".

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
X Yes  No
8. Do you agree with the measures?  
X Yes  No
9. Do you agree with the compliance monitoring process?  
X Yes  No
10. Do you agree with the levels of non-compliance?  
X Yes  No

Comments about Requirement 202:

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**Requirement 203 - Analyses and Assessments**

- 11. Do you agree with the requirement?  
X Yes             No
  
- 12. Do you agree with the measures?  
X Yes             No
  
- 13. Do you agree with the compliance monitoring process?  
X Yes             No
  
- 14. Do you agree with the levels of non-compliance?  
X Yes             No

Comments about Requirement 203: We agree with this but think there should possibly be some room for "extenuating circumstances" (i.e., computer problems, in middle of restoration, etc.).

**Requirement 204 - Actions**

- 15. Do you agree with the requirement?  
X Yes             No
  
- 16. Do you agree with the measures?  
X Yes             No
  
- 17. Do you agree with the compliance monitoring process?  
X Yes             No
  
- 18. Do you agree with the levels of non-compliance?  
X Yes             No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

- 19. Do you agree with the requirement?  
X Yes             No
  
- 20. Do you agree with the measures?  
X Yes             No
  
- 21. Do you agree with the compliance monitoring process?  
X Yes             No
  
- 22. Do you agree with the levels of non-compliance?  
X Yes             No

Comments about Requirement 205:

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
X Yes             No
24. Do you agree with the measures?  
X Yes             No
25. Do you agree with the compliance monitoring process?  
X Yes             No
26. Do you agree with the levels of non-compliance?  
X Yes             No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
X Yes             No
28. Do you agree with the measures?  
X Yes             No
29. Do you agree with the compliance monitoring process?  
X Yes             No
30. Do you agree with the levels of non-compliance?  
X Yes             No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
X Yes             No
32. Do you agree with the measures?  
X Yes             No
33. Do you agree with the compliance monitoring process?  
X Yes             No
34. Do you agree with the levels of non-compliance?  
X Yes             No

Comments about Requirement 208: This does not allow for a directive to be challenged. It is either comply with the directive or don't and suffer the results. It would seem that you should have the right to request additional or further discussion surrounding the directive.

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

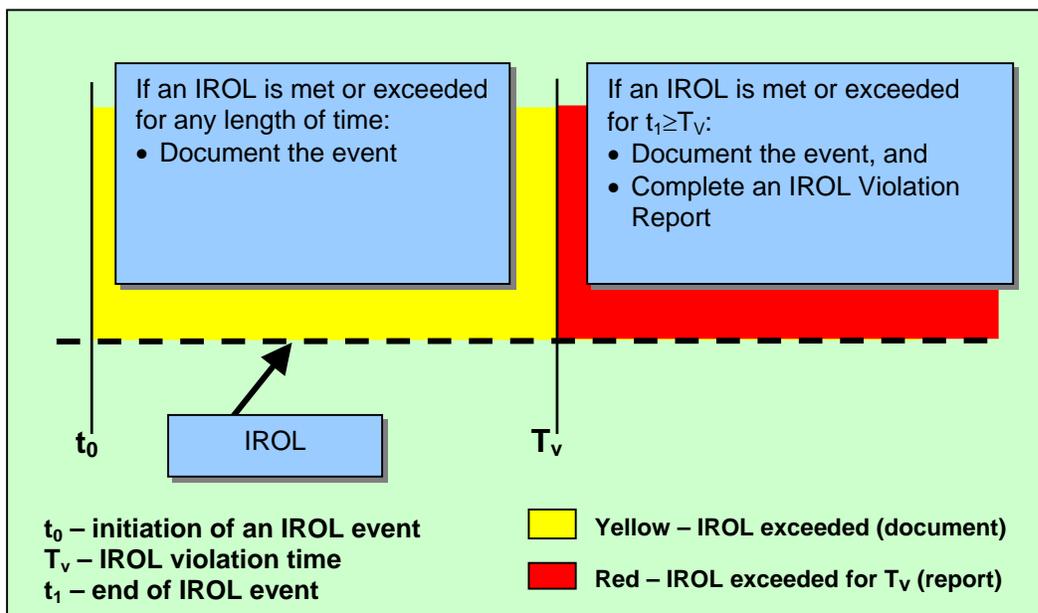
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

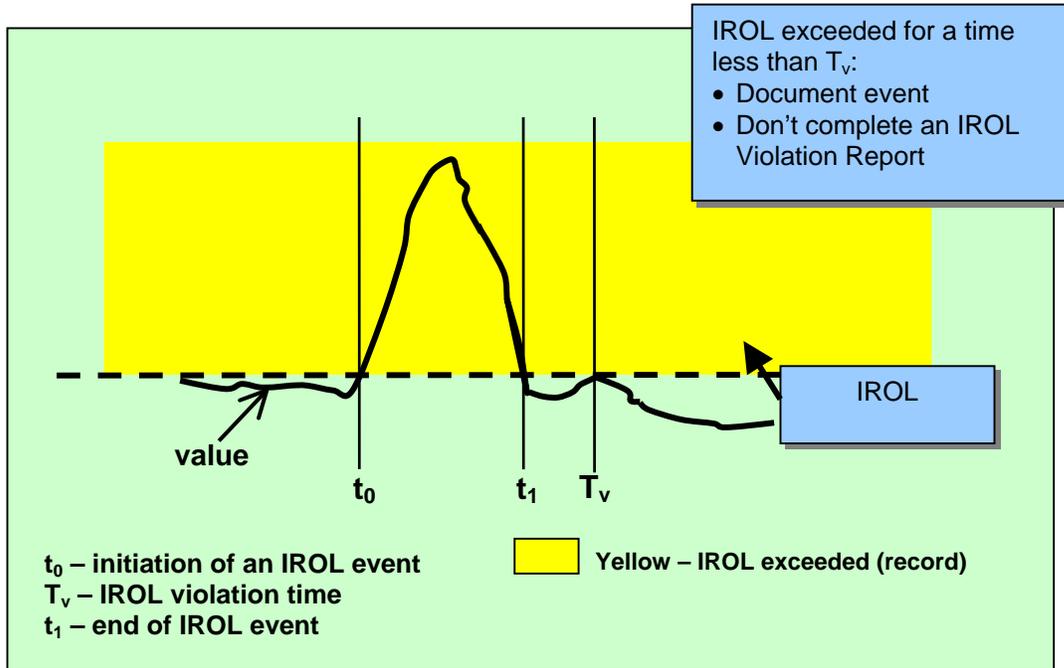
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

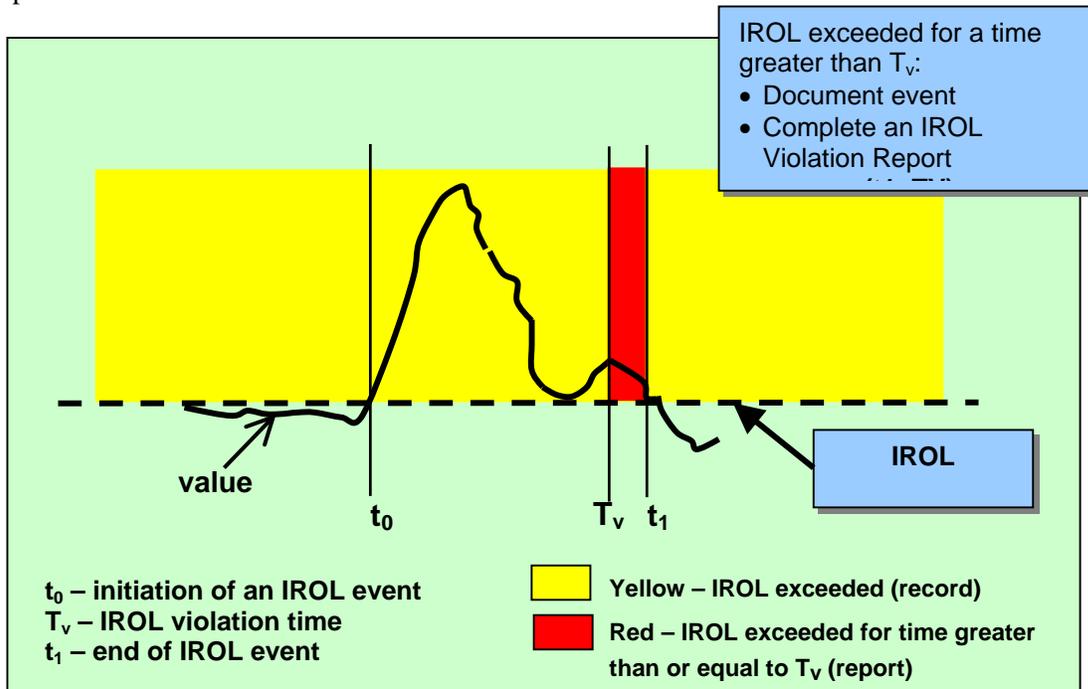


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	<p>Defines for each measure:</p> <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	<p>Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.</p>
Sanctions	<p>Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.</p>

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

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- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

- Operational Planning analyses are conducted for time periods up to 13-months into the future. Please revise the definition as follows:

Operational Planning Analysis: “ .... An operational planning analysis is done for the next day’s operation and up to 13-months ahead of the expected conditions.”

- The Transmission Owner has fiduciary responsibility for his owned facilities. Therefore he has ultimate responsibility and liability for owning, maintaining and operating his facilities to protect his stockholders’ and lending institutions’ investments. The Transmission Owner then is ultimately responsible for establishing system operating limits, including Tv, for his facilities. Therefore, the definition of Tv should be revised to:

“Tv: The violation time associated with a limit that is determined by the Transmission Owner for equipment-based limits, and by the Reliability Authority and Planning Authority for system-based limits.”

- The responsibilities of the RA are to “monitor” the system, not “control” the system. Therefore, we suggest the following change:

Reliability Authority Area: A defined electrical system bounded by interconnection (tie-line) metering and telemetry monitored by a single reliability authority.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments: Given the significant changes to this draft standard, the RA is now monitoring the facilities with identified and documented IROLs. We do not agree with this blanket statement until we are able to review all the requirements of all the functional entities. For instance, this draft standard does not recognize that the TO has fiduciary responsibility to his stockholders’ and lending institutions’ investments and that neither NERC standards, nor the Functional Model, can take that responsibility and liability away. This fiduciary responsibility requires the TO establish thermal ratings, and associated Tv, for its equipment and then monitor that equipment. If those thermal ratings are the lesser of the thermal, stability or voltage limits, then the TO has established the IROL limit. Therefore, we suggest the requirements identified in this standard are not redundant requirements but are requirements met by several entities (functions), not met by one entity (function).

Also, the requirements should be changed to the TO, from the TOP. The TO may delegate some parts of that function to another entity, at the TO’s option. However, for the purposes of this standard, the Transmission Owner must be added to all parts of this standard.

In addition, what functional entity is monitoring all the transmission facilities with system operating limits not included in the IROLs? What functional entity is monitoring all the other transmission

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facilities? The answer is that the TO, and maybe the TOP, must be added to the list of entities (functions) monitoring the real-time system to ensure all the transmission facilities are being operated within limits.

If the TO is not added to this standard, then there is a major piece missing to the monitoring of the power system and the reliability of the system. That missing piece is the monitoring of the system operating limits.

Therefore, another standard needs to be written with a title something like – “Operate Within Limits – All Transmission and System Operating Limits Other Than Interconnection Reliability Operating Limits”.

### **Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO, RA, PA, TSP, and TOP, and recommend all functional entities be identified in Standard 201 part 1.1 and 1.2.

Standard 201 part 1.2.1 should have the “RA or PA” replaced with the “Transmission Owner or Transmission Operator” as the functional entities responsible for establishing the maximum response time (Tv) for any IROL that does not already have one.

In the measures sections 2.1 and 2.2, replace the “entity responsible” with the “TO, RA, PA, TSP, and TOP” as the entities establishing a list of IROLs.

Measures section 2.1.1 should have the “entity responsible” replaced with the “TO” being responsible for establishing the maximum value of Tv.

In the Compliance Monitoring Process section, the “entity responsible” should be replaced with the “Transmission Owner” in each occurrence of that term.

### **Requirement 202 - Monitoring**

7. Do you agree with the requirement?

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Yes                       No

8. Do you agree with the measures?

Yes                       No

9. Do you agree with the compliance monitoring process?

Yes                       No

10. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 202:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 202 be replaced with "reliability authority and transmission owner".

In addition, it appears from the wording of this draft standard Section 202 Monitoring, 1. Requirements, Item 1.1 that the RA is operating the power system. This requirement must be reworded:

1.1. The reliability authority shall monitor real-time system operating parameters to determine if the reliability area is operating within its interconnection reliability operating limits.

**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?

Yes                       No

12. Do you agree with the measures?

Yes                       No

13. Do you agree with the compliance monitoring process?

Yes                       No

14. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 203:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO and RA. Therefore, we suggest that every

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occurrence of the term “reliability authority” in all of this section 203 be replaced with “reliability authority and transmission owner”.

In addition, it appears from the wording of this draft standard Section 203 Analysis and Assessments, 1. Requirements, Item 1.1 that the RA is operating the power system. This requirement must be reworded:

- 1.1. The reliability authority shall perform operational planning analyses to verify that the planned bulk electric system operations will not exceed any of its interconnection reliability operating limits.

The wording of Item 1.2 should also be revised to make it clear the RA and TO verify the power system operation is not exceeding IROL limits:

- 1.2. The reliability authority shall perform real-time assessments to verify that the power system is not exceeding any interconnection reliability operating limits. The transmission owner shall perform real-time assessments to verify its equipment is not exceeding any interconnection reliability operating limits.

**Requirement 204 - Actions**

- 15. Do you agree with the requirement?  
 Yes                       No
- 16. Do you agree with the measures?  
 Yes                       No
- 17. Do you agree with the compliance monitoring process?  
 Yes                       No
- 18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

- 19. Do you agree with the requirement?  
 Yes                       No
- 20. Do you agree with the measures?  
 Yes                       No
- 21. Do you agree with the compliance monitoring process?  
 Yes                       No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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22. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 205:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 205 be replaced with "reliability authority and transmission owner".

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 206 be replaced with "reliability authority and transmission owner".

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 207 be replaced with "reliability authority and transmission owner".

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

We believe the wording of this draft standard Section 208 Reliability Authority Directives, 1. Requirements, Item 1.1 is restricted to too few entities, needs to be expanded to encompass all functions and users of the power system, should recognize the RA is required to issue directives consistent with applicable tariffs and contract, and the RA is required to use Good Utility Practices. This requirement must be reworded:

- 1.1. The reliability authority shall use applicable tariffs, contracts, and Good Utility Practice when directing use of the power system, and all users of the power system shall follow the reliability authority's directives to:
- 1.1.1.1. Prevent instances where interconnection reliability operating limits may be exceeded
  - 1.1.1.2. Mitigate the magnitude and duration of instances where interconnection reliability operating limits have been exceeded

**35. List any Regional or Interconnection Differences for this standard:**

None

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

- Two definitions should be changed based on our comments:

**Reliability Authority Area:** A defined electrical system bounded by interconnection (tie -line) metering and telemetry monitored by a single reliability authority.

**T<sub>v</sub>:** The violation time associated with a limit that is determined by the Transmission Owner for equipment-based limits and by the Reliability Authority and the Planning Authority for system-based limits.

- We are becoming increasingly concerned about this standard development process. This and other standards are being developed based on certain definitions and assumptions contained in the Function Model. These “standards” will become fixed such that the industry will be held accountable to and measured by these standards. However, the Functional Model and the definitions contained in that revised model are changing and will not necessarily be the same as those used to develop the standards, like this Operate Within Limits. What is the process for reviewing, revising and implementing changes to the Functional Model, and the impact of those changes on all these standards that have been developed based on the old Functional Model? Are the changes to the Functional Model being vetted by all industry participants before implementation? What is the process to revise these standards prior to implementing changes to the Functional Model?



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

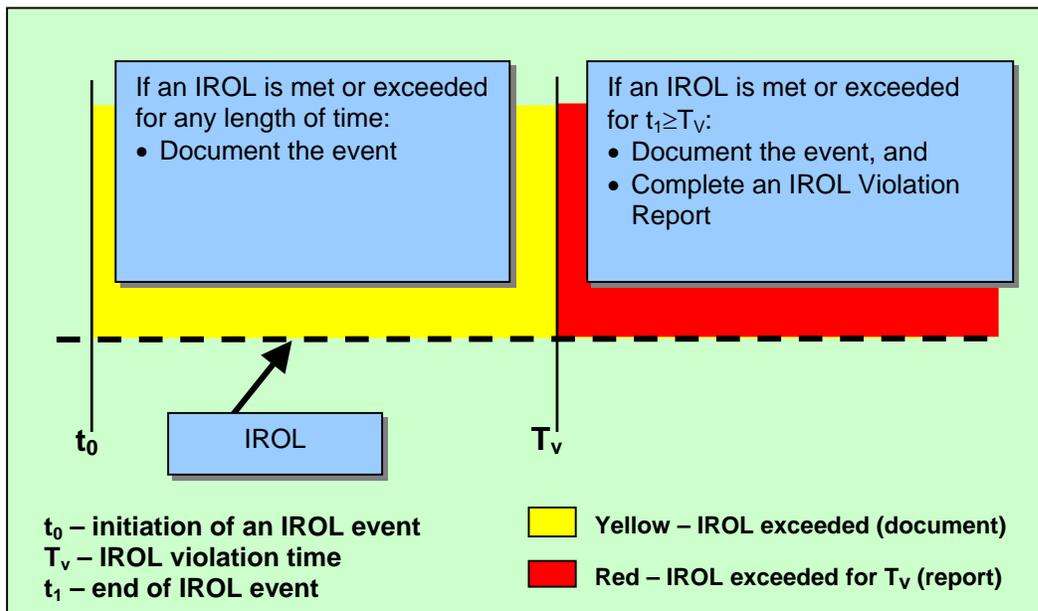
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

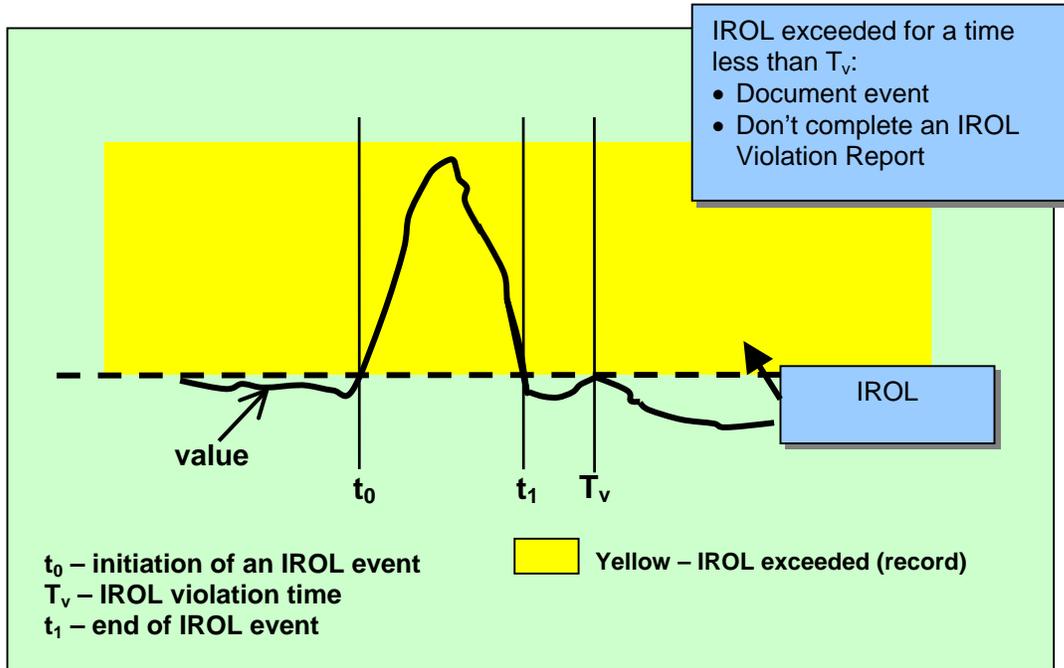
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

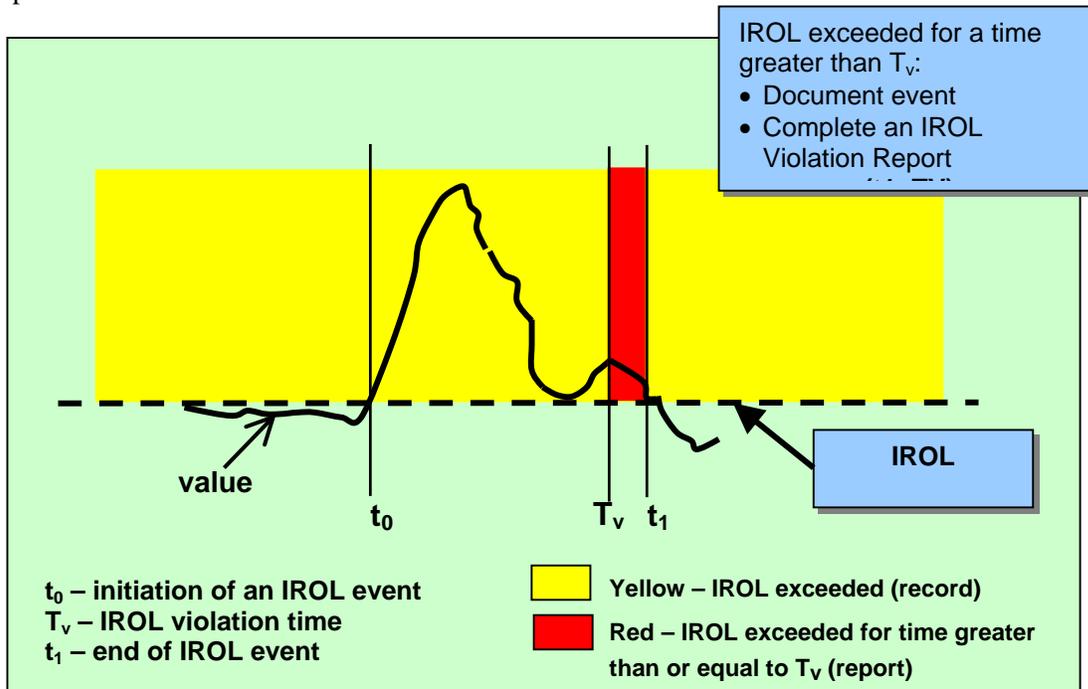


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	<p>Defines for each measure:</p> <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	<p>Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.</p>
Sanctions	<p>Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.</p>

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

<b>STD Commenter Information (For Individual Commenters)</b>	<b>Key to Industry Segment #'s:</b> 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
<b>Name</b>	
<b>Organization</b>	
<b>Industry Segment #</b>	
<b>Telephone</b>	
<b>E-mail</b>	

<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> <i>MAPP Regional Reliability Council, assisted by its Operations Subcommittee (members listed below).</i>	<b>Group Chair:</b> <i>Lloyd Linke</i>	
	<b>Chair Phone:</b> <i>605-882-7500</i>	
	<b>Chair Email:</b> <i>lloyd@wapa.gov</i>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>Allan Silk</i>	<i>Manitoba Hydro</i>	<i>2</i>
<i>Paul Brune</i>	<i>Nebraska Public Power District</i>	<i>2</i>
<i>Todd Gosnell</i>	<i>Omaha Public power District</i>	<i>2</i>
<i>Paul Koskela</i>	<i>Minnesota Power</i>	<i>2</i>
<i>Larry Larson</i>	<i>Otter Tail Power</i>	<i>2</i>
<i>Darrick Moe</i>	<i>WAPA</i>	<i>2</i>
<i>Dick Pursley</i>	<i>Great River Energy</i>	<i>2</i>
<i>Martin Trence</i>	<i>Xcel Energy</i>	<i>2</i>
<i>Joseph Knight</i>	<i>MAPPCOR</i>	<i>2</i>

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

Operational Planning Analysis – Omit the word “peak” in the first sentence as a qualifier for load. There may be instances where reliability is compromised during non-peak load conditions. The analysis should be done over a range of loads based on forecasts.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments This issue is addressed well in this version.

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201: The requirement to produce a list of IROLs must include the notion that if the failure to identify an existing IROL results in the system experiencing cascading outages, instability, or uncontrolled separation - a consequence occurs. The requirement, as written, provides no monitoring or non-compliance provisions for the failure to properly identify an IROL – an entity is compliant if they have a list of one IROL – even if in the last year they caused multiple bulk reliability catastrophes due to not identifying other IROLs on their system.

The order of 2.1 and 2.2 should be swapped to agree with 1.1 and 1.2 order.

### Requirement 202 - Monitoring

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Yes                       No

Comments about Requirement 202:

**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?

Yes                       No

12. Do you agree with the measures?

Yes                       No

13. Do you agree with the compliance monitoring process?

Yes                       No

14. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?

Yes                       No

16. Do you agree with the measures?

Yes                       No

17. Do you agree with the compliance monitoring process?

Yes                       No

18. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 204:

The Measure 2.1.1 should include the explicit provision that this log is a publicly available document. The actions so logged by the RA should be independent and consistent, and the log is one way of enhancing visibility to assure this is the case.

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes                       No

20. Do you agree with the measures?

Yes                       No

21. Do you agree with the compliance monitoring process?

Yes                       No

22. Do you agree with the levels of non-compliance?

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Yes                       No

Comments about Requirement 205:

**Requirement 206 - Data Provision**

23. Do you agree with the requirement?

Yes                       No

24. Do you agree with the measures?

Yes                       No

25. Do you agree with the compliance monitoring process?

Yes                       No

26. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 206: Provisions should be made to excuse the temporary loss of real-time data due to technical difficulties, such as telecommunications interruptions.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?

Yes                       No

28. Do you agree with the measures?

Yes                       No

29. Do you agree with the compliance monitoring process?

Yes                       No

30. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?

Yes                       No

32. Do you agree with the measures?

Yes                       No

33. Do you agree with the compliance monitoring process?

Yes                       No

34. Do you agree with the levels of non-compliance?

Yes                       No

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Comments about Requirement 208: Please clarify if the intention here is for entities to comply with the RAs directives in cases that those directives are proscribed by an existing operating guide – or in **all** cases? If a Reliability Authority is issuing an order that conflicts with a standing operating guide, then the RA must first explicitly/formally invalidate the guide prior to issuing the directive. Please provide information regarding how liability will be assigned for actions that are found to be improper that result in harm.

### 35. List any Regional or Interconnection Differences for this standard:

### 36. Notifying the Compliance Monitor

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

#### Comments

**Relaying on a centralized compliance document would result in a compliance document that could never be stabilized due to too many changes being required.**

### 37. Any other comments on this standard?

The Sanctions Subsection (number 6) for each heading should define the MW value to be used when determining monetary penalties if an entity is found to be non-compliant, or clarify that the fixed level sanctions should be used and not the per-MW sanctions.

Is there a reason why NERC defined terms are not capitalized throughout the standard?

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

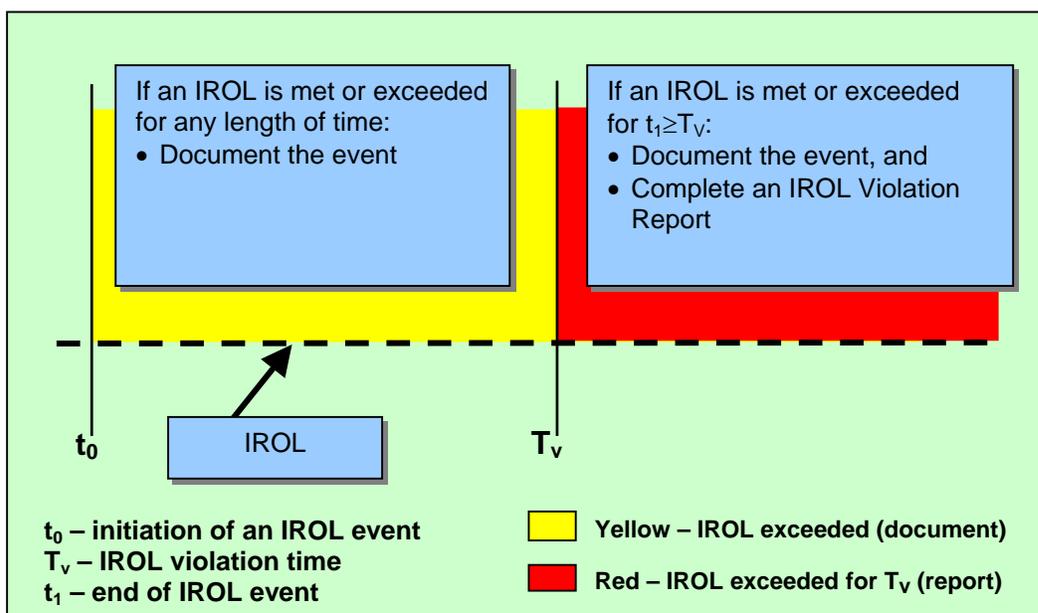
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

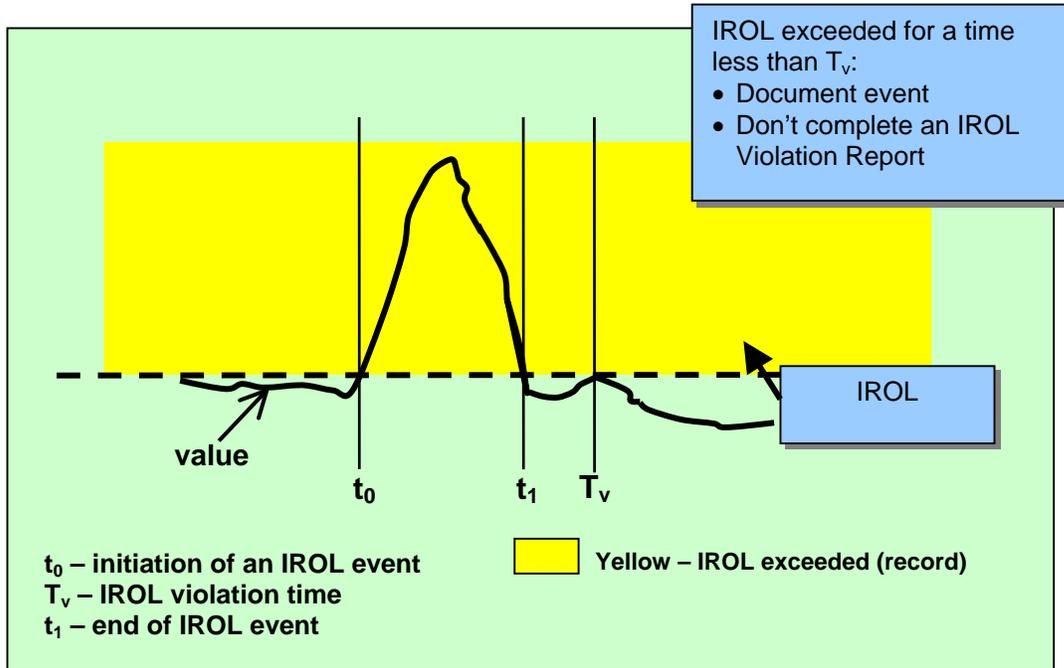
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

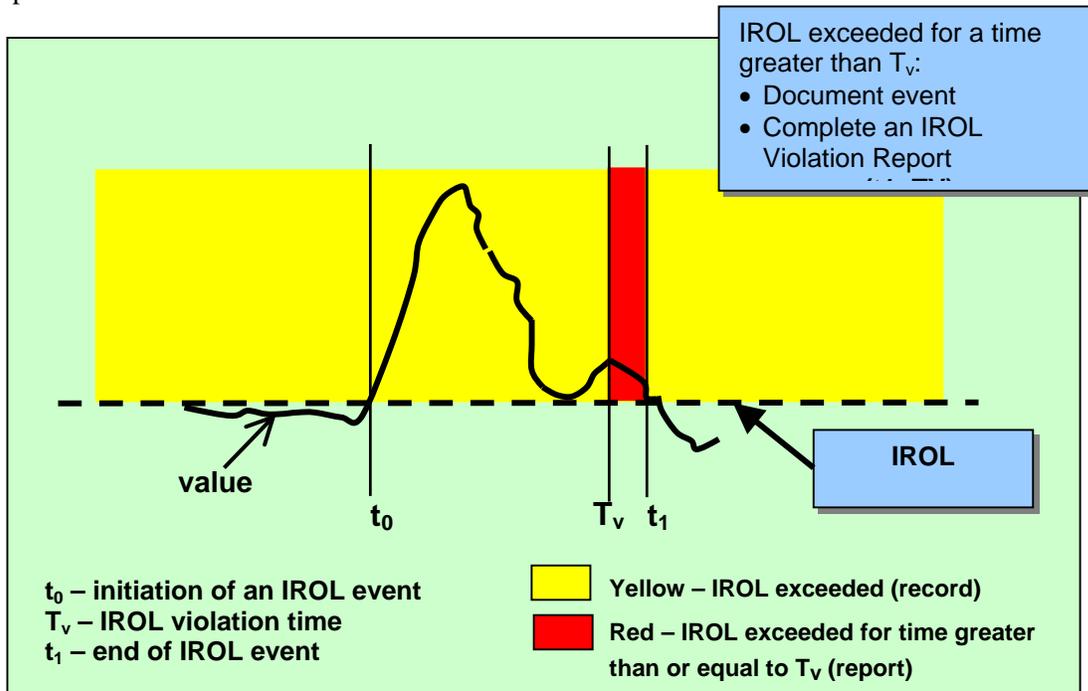


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The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



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**Background**

1. Do you agree with the definitions provided in the front of this standard?

Yes                      X  No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

1. "Documentable Interconnection Reliability Operating Limit Violation" and "Interconnection Reliability Operating Limit Event" have identical definitions. Two terms having the same definition leads to confusion. Eliminate one of the terms and modify Standard accordingly.
2. "Interconnection Reliability Operating Limit" definition
  - a. Second sentence contains a reporting requirement for the Reliability Authority. A definition should simply define the term. Required actions are to be contained in the standard itself. Delete sentence two.
  - b. First sentence is confusing it that it appears to imply that there just may be certain situations where "instability, uncontrolled separation, or cascading outages" may NOT "adversely impact the reliability of the bulk transmission system". Assuming this is not the intent, consider rewording as:
    - i. Interconnection Reliability Operating Limit: A System Operating Limit on the Bulk Electric System that if exceeded, could lead to instability, uncontrolled separation, or cascading outages.
3. Real-time Monitoring: Standard 202 implies that "Real-time Monitoring" is an activity to be performed as opposed to equipment in place that simply facilitates that function. Consider rewording as:
  - i. Real-time Monitoring: Draw conclusions from various Real-time Data sources.
4. Operational Planning Analysis: The last sentence specifies that such an analysis is performed up to seven days ahead of expected conditions. Sentence is unnecessary and confusing. Neither 203.1 or 203.2 does not specify a time horizon for the Operational Planning Analysis beyond the 'next day'.
5. Real-time: definition not necessary, consider deleting.
6. Real-time Data: Consider rewording as " Readily available measured values of existing system parameters, state estimator values....."
7. Tv: Definition confusion. Consider: Minimum time of a system parameter that exceeds an Interconnection Reliability Operating Limit that requires a report to the Compliance Monitor.
8. Real-time Assessment: The second sentence is not needed. Required actions are to be contained in the standard itself. Additionally, real-time assessments can be performed others, not just the RA.
9. "Interconnection Reliability Operating Limit Violation" and "Reportable Interconnection Reliability Operating Limit Violation" have the same definition. Two terms having the same definition leads to confusion. Eliminate one of the terms and modify Standard accordingly.
10. Self-certification: Remove the second and third sentences. They are editorial comments that do not belong in a definition. If the comments are relevant to a particular standard, then they belong in the Compliance Monitoring Process section of the Standard.
11. Transmission Operator: The definition given sounds more like the definition of a Transmission Service Provider. The Functional Model Review Task Force in their January 1, 2003 Group Report defined Transmission Operator as: "The entity that operates the transmission facilities and executes switching orders."

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

- 3. Do you agree with the requirement?  
 Yes                      X  No
- 4. Do you agree with the measures?  
X  Yes                       No
- 5. Do you agree with the compliance monitoring process?  
 Yes                      X  No
- 6. Do you agree with the levels of non-compliance?  
 Yes                      X  No

Comments about Requirement 201:

- 1. In 201.1.2.1 Consider: The Reliability Authority or Planning Authority shall establish a maximum response time (Tv) for all Interconnected Reliability Operating Limits.
- 2. In 201.5.4 "States NO list of Interconnected Reliability Operating Limits or NO list of facilities ....." Should it be "Incomplete" lists?
- 3. Defined terms should be capitalized, such as "Reliability Authority", "Interconnected Reliability Operating Limits", etc.
- 4. Who is the ultimate arbiter of what is the "complete list" of facilities and limits? Should the RA and PA be required to have studies available that support their IROLs or is just having a list of facilities with associated limits enough? If having studies is to be required, then what is the penalty if studies show other facilities should have had an IROL but the RA or PA did not specify a limit for that facility? Is the real concern identifying what facilities have an IROL or is it that we want to ensure that the RA does not operate in violation of identified IROLs? This version of the Standard has requirements for both, but leaves a lot of unanswered questions.
- 5. 201.1.1: How will the Reliability Authority and Planning Authority identify and document the facilities subject to operating limits jointly? What is the course of action if there is disagreement? Which functional entity has the final say? We believe the Standard should specify only one entity to be ultimately responsible. For this requirement we suggest it should be the RA. Suggested rewording: "The Reliability Authority in coordination with the Planning Authority shall identify and document . . ."
- 6. 201.1.2: Suggested rewording: "The Reliability Authority in coordination with the Planning Authority shall identify . . ."
- 7. 201.1.2.1: Suggested rewording: "The Reliability Authority in coordination with the Planning Authority shall identify a maximum . . ."
- 8. 201.4.2: We believe the performance-reset period should be 12 months from the date of the infraction not one calendar year.
- 9. 201.5 Levels of Non-compliance: We disagree with the SDT's perspective that there is no gray area were partial credit is appropriate. Requirement 201 is a documentation and communication requirement, The RA needs to have documented IROLs and have such documentation of limits available to the RA system operators. As such this requirement is similar to the communication requirements 602, 604, and 606 in the "Determine Facility Ratings, System Operating Limits, and Transfer Capabilities Standard." In those requirements, it is proposed that there be multiple levels of non-compliance. We believe that is prudent and should be the case with this requirement too. As presently stated, if an RA has an incomplete list of IROLs or incomplete list of facilities requiring IROLs, he is still compliant. The RA is only non-compliant if they have "no list." We believe this is too lenient. We suggest that the levels of non-compliance should address both completeness (all identified facilities have associated IROL and Tv value) and quality (all appropriate facilities have been identified and the limits and Tv values are reasonable).

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**Requirement 202 - Monitoring**

- 7. Do you agree with the requirement?  
X  Yes                       No
- 8. Do you agree with the measures?  
X  Yes                       No
- 9. Do you agree with the compliance monitoring process?  
 Yes                              X  No
- 10. Do you agree with the levels of non-compliance?  
X  Yes                             No

Comments about Requirement 202:

- 1. For clarity consider rewording 202.1.1 as “The Reliability Authority shall perform Real-time Monitoring of applicable operating parameters to determine if.....”
- 2. Defined terms should be capitalized, such as “Reliability Authority”, “Interconnected Reliability Operating Limits”, etc.
- 3. 202.4.2: The performance reset period should be 12 months from the time of the infraction not one calendar year.
- 4. Suggest combining 202.4.3 and 202.4.3.1 and rewording as: “The Reliability Authority shall have display(s) with real time data associated with interconnection reliability operating limits.

**Requirement 203 - Analyses and Assessments**

- 11. Do you agree with the requirement?  
 Yes                                X  No
- 12. Do you agree with the measures?  
 Yes                                X  No
- 13. Do you agree with the compliance monitoring process?  
X  Yes                             No
- 14. Do you agree with the levels of non-compliance?  
X  Yes                             No

Comments about Requirement 203:

- 1. Wording of 203.1 implies that a specific favorable outcome of Operational Planning Analyses and Real-time Assessments is required. Consider reword as:
  - a. 203.1.1 The Reliability Authority shall perform Operational Planning Analyses to assess if the planned Bulk Electric System operations will result in any of its Interconnection Reliability Operating Limits being exceeded. The Reliability Authority will modify planned operations if analyses indicate such a violation.
  - b. 203.1.2 The Reliability Authority shall perform Real-time assessments to assess if any Interconnection Reliability Operating Limits are being exceeded. Any identified violated will be addressed immediately.
- 2. Defined terms should be capitalized, such as “Reliability Authority”, “Operational Planning Analyses”, “Interconnected Reliability Operating Limits”, etc
- 3. 203.4 Compliance Monitoring Process: Today we require the Reliability Coordinators to have available for review and investigation study case results and related documentation for a rolling three month period (refer to compliance template P9 T1). Maintaining this compliance

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requirement may prove beneficial during investigations due to complaints and would not add any additional reporting burden beyond today's process.

### **Requirement 204 - Actions**

15. Do you agree with the requirement?  
X  Yes                       No
16. Do you agree with the measures?  
X  Yes                       No
17. Do you agree with the compliance monitoring process?  
X  Yes                       No
18. Do you agree with the levels of non-compliance?  
X  Yes                       No

Comments about Requirement 204:

1. Defined terms should be capitalized, such as "Reliability Authority", "Operational Planning Analyses", "Interconnected Reliability Operating Limits", etc

### **Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                      X  No
20. Do you agree with the measures?  
 Yes                      X  No
21. Do you agree with the compliance monitoring process?  
X  Yes                       No
22. Do you agree with the levels of non-compliance?  
X  Yes                       No

Comments about Requirement 205:

1. Defined terms should be capitalized, such as "Reliability Authority", "Operational Planning Analyses", "Interconnected Reliability Operating Limits", etc
2. This section should only deal with the data specification. The data collection portion should either be its own section or be combined with section 206 at a minimum. Items 1.3 and 2.3 of this section should be a part of that new section or merged into section 206.
3. The standard as it is written assumes that 100 percent of the data that is required for real-time monitoring, operational planning analyses and real-time assessments can be collected 100 percent of the time. The availability of real-time data is subject to many controllable and uncontrollable factors of both the Reliability Authority and the entity providing the data.
4. The Reliability Authority and the entity providing the data should have documented protocols for the acceptable level of data quality and availability specific to the data type, need, and other factors. This information is outside the scope of this standard, but this standard should ensure that the documentation does exist and the requirements established in the protocols are enforced. This will enable the requirement of the entity to provide the data sufficient for the

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Reliability Authority to perform its functions and require the Reliability Authority to report any non-compliance without the ambiguity of what is an acceptable failure or not.

5. What is the dispute resolution process for disagreements with requirements established by the Reliability Authority? Can the entity say they cannot provide the data requested and justify why not to some group or entity? We suggest that there should be a provision that the data requested by the RA is reasonable and needed and that the NERC Regional Reliability Councils will be the arbiter for disputes.
6. We continue to maintain that there needs to be an industry minimum specification for the type of data required, similar to Appendix 4B "Electric System Security Data."
7. There should be a requirement that the data specification, including scan rates, data transmission rates, and data quality, is mutually agreed upon between the RA and their data supplier.

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
X  Yes                       No
24. Do you agree with the measures?  
X  Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                              X  No
26. Do you agree with the levels of non-compliance?  
 Yes                              X  No

Comments about Requirement 206:

1. Defined terms should be capitalized, such as "Reliability Authority", "Operational Planning Analyses", "Interconnected Reliability Operating Limits", etc
2. The compliance sections of Requirements 205 and 206 are not complimentary. If the RA doesn't have a data specification for an entities data, even if the RA really needs and should have that data, the maximum level of non-compliance for the RA is a level two. However, if an entity does not provide the data as specified, that entity is level 4 non-compliant, even if the data requested is not critical. Depending on how the RA writes his specification, an entity could be in violation of Requirement 206 if only a few pieces of individual data are missing, regardless of the criticality of that data.
3. Need to refer to non-compliance of meeting the data quality and availability protocols (see comments for section 205) established by the Reliability Authority.
4. Additionally, Section 205 1.3 and 2.3 should either be placed in a new section regarding data collection by the Reliability Authority or they should be contained within this section.
5. 206.4.3.1: "Copies of transmittal cover letters indicating data was sent to the reliability authority." This is too vague. A lot of the data covered by this requirement is real-time or near real-time data that is sent via an ICCP connection. Is the required transmittal letter the letter that initially set up the link between the two parties? As worded one could even take the position that the entity responsible is required to send a transmittal cover letter every time they send data via the ICCP link. The SDT should rewrite this requirement to better reflect their desired intent.
6. An example to consider: A RA has in his data specification the requirement that a certain piece or pieces of data be provided to the RA every 5 seconds. However, the entity with the data has systems in place that only report/refresh the desired data on an exception basis, such as breaker status is provided only when the breaker changes states. Per requirement 206, the data providing entity would be level 4 non-compliant. However, the RA would have the data they need in order to perform their required assessments and monitor the system. So why would the data providing entity still be able to be found non-compliant? This also goes to the heart of the issue of the RA having to justify the reasonableness of his data specification before a data providing entity would be required to spend significant dollars in order to meet the RA's arbitrary specification.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
X  Yes                       No
28. Do you agree with the measures?  
X  Yes                       No
29. Do you agree with the compliance monitoring process?  
X  Yes                       No

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30. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 207:

1. Defined terms should be capitalized, such as "Reliability Authority", "Operational Planning Analyses", "Interconnected Reliability Operating Limits", etc

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?

Yes

No

32. Do you agree with the measures?

Yes

No

33. Do you agree with the compliance monitoring process?

Yes

No

34. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 208:

1. Defined terms should be capitalized, such as "Reliability Authority", "Operational Planning Analyses", "Interconnected Reliability Operating Limits", etc
2. 208.1.1: Add generator operator.
3. 208.2.1: The requirement for the entity responsible to follow the Reliability Authority's directives is already stated in the requirements section and does not need to be restated in the measures section. Suggest rewording as follows: "The entity responsible shall document the directives of the Reliability Authority and the actions taken to meet those directives."

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments** We would encourage the Reliability Authority to work with the entities not providing the specified data and try to resolve the dispute prior to reporting the issue to the Compliance Monitor. Additionally, we believe the requirement for the Reliability Authority to notify the Compliance Monitor does not need to be contained within this standard.

**37. Any other comments on this standard?**

1. In each of these Standards the ‘tie-in’ to the Sanctions Matrix is insufficient and unclear. For example if an entity is first occurrence, level 4 non compliant to Standard 206. The penalty is a Letter (B) and \$2000 OR \$2 per MW. Which penalty is being applied the fix or variable? If it is variable, what MW is the penalty based on? The RA’s load, generator rating, something else?
2. We request the SDT review the levels of non-compliance and take into account the timeliness of actions or data submitted, the completeness of actions or data submitted and the quality of actions or data submitted. We believe that some of the requirements, when properly measured will lend themselves to having additional levels of non-compliance, for the ramifications of non-compliance for some of the requirements is not so severe to actually have an adverse impact on the bulk transmission system.

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Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

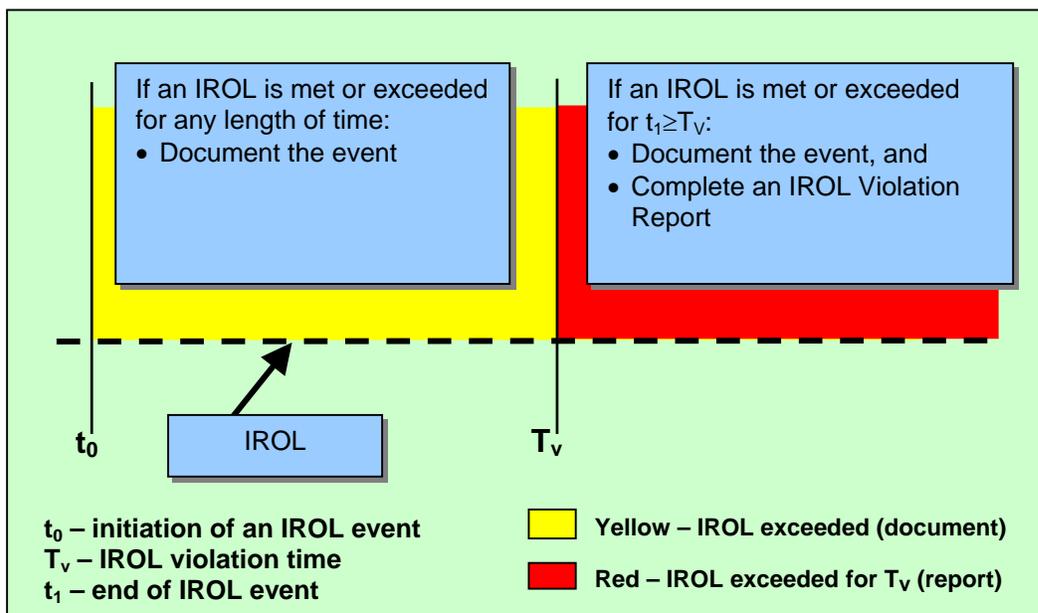
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

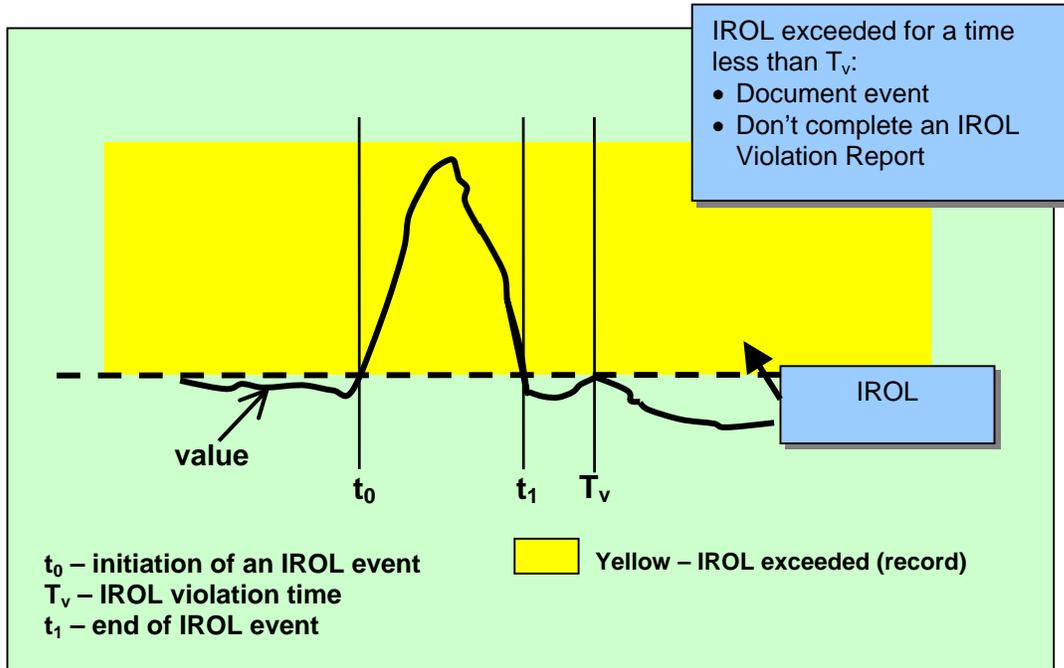
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

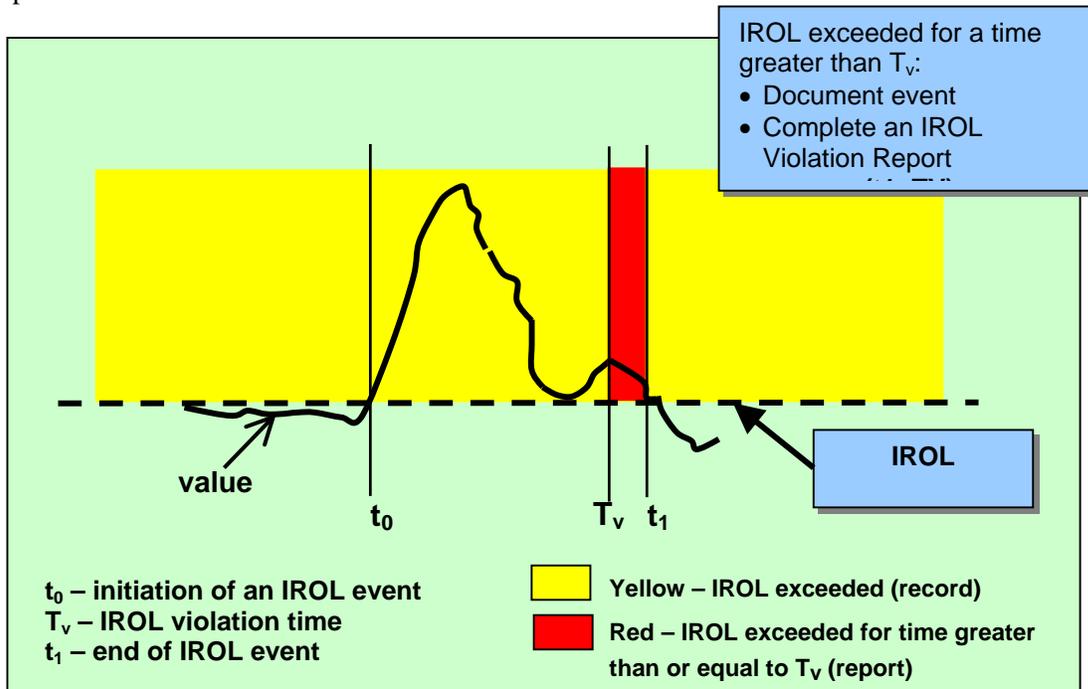


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

<b>STD Commenter Information (For Individual Commenters)</b>	<b>Key to Industry Segment #'s:</b>
<b>Name</b>	1 – Trans. Owners
<b>Organization</b>	2 – RTO's, ISO's, RRC's
<b>Industry Segment #</b>	3 – LSE's
<b>Telephone</b>	4 – TDU's
<b>E-mail</b>	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

Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> Operating Reliability Working Group Southwest Power Pool	<b>Group Chair: Scott Moore</b> <b>Chair Phone: 614-716-6600</b> <b>Chair Email: spmoore@aep.com</b>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>Gerry Burrows</i>	<i>KCP&amp;L</i>	<i>1</i>
<i>Bob Cochran</i>	<i>SPS</i>	<i>1</i>
<i>Peter Kuebeck</i>	<i>OG&amp;E</i>	<i>1</i>
<i>Scott Moore</i>	<i>AEP</i>	<i>1</i>
<i>Tom Stuchlik</i>	<i>Westar</i>	<i>1</i>
<i>Dan Boezio</i>	<i>AEP</i>	<i>1</i>
<i>Matt Bordelon</i>	<i>CLECO</i>	<i>1</i>
<i>Mike Crouch</i>	<i>WFEC</i>	<i>1</i>
<i>Mike Gammon</i>	<i>KCP&amp;L</i>	<i>1</i>
<i>Kevin Goolsby</i>	<i>SPP</i>	<i>2</i>
<i>Bo Jones</i>	<i>Westar</i>	<i>1</i>
<i>Allen Klassen</i>	<i>Westar</i>	<i>1</i>
<i>Thad Ness</i>	<i>AEP</i>	<i>1</i>
<i>Harold Wyble</i>	<i>KCP&amp;L</i>	<i>1</i>
<i>Robert Rhodes</i>	<i>SPP</i>	<i>2</i>

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

The SDT should utilize the NERC functional model and thoroughly review and correct all definitions associated with this standard. Some definitions included in this standard are not needed and others don't appear to belong in the standard. Others are simply the wrong definition. Noting the comment box on page 3 of the standard, we wonder why a definitions section was even included in the standard.

Here are some specific problem definitions:

Real-time Monitoring and the use of vision and hearing to define this term.

Real-time – Shouldn't historical time also be included?

Self-certification – Why is this term included in this standard? It probably belongs in the Compliance Enforcement Document. The second sentence doesn't appear to be a part of the definition.

Transmission Operator has the wrong definition. The definition given is the definition for Transmission Service Provider.

Documentable Interconnection Reliability Operating Limit Violation and Interconnection Reliability Operating Limit Event have the exact same definition.

Reportable Interconnection Reliability Operating Limit Violation and Interconnection Reliability Operating Limit Violation are basically the same definition.

Tv should be listed as T<sub>v</sub>.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

It is very cumbersome and can often times be very confusing when two entities are given responsibility for the same task. The requirements outlined in 1.1, 1.2 and 1.1.2 call for both the reliability authority and the planning authority to identify the facilities that have IROLs and also to identify the IROL. We suggest that the reliability authority should be ultimately responsible for identifying and quantifying the IROLs since these are operating limits. However, the reliability

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authority should thoroughly coordinate this effort with the planning authority. Wording such as “The reliability authority shall coordinate with the planning authority to identify...” would be better.

Following this line of thought with the measures in 2.1, 2.1.1 and 2.2, wording should be changed to reflect the reliability authority’s ultimate responsibility. “The reliability authority entity shall establish...” makes a better fit.

The performance reset period should be changed to 12 months rather than one calendar year.

The SDT needs to revisit the levels of non-compliance associated with this standard. If compliance is truly a black/white issue with no shades of gray as the proposed levels indicate, why not have just a level one with no financial penalty? The proposed non-compliance level implies that it may be more important to have a list of IROLs rather than a correct list of IROLs. Also, if no IROLs exist, there will be no list which would cause the reliability authority to be in non-compliant. There needs to be consistency throughout all the standards on documentation-type non-compliance.

### **Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

Combine 4.3 and 4.3.1 into a revised 4.3 as follows:

“The reliability authority shall have displays with real-time data associated with interconnection reliability operating limits.”

The performance reset period should be changed to 12 months rather than one calendar year.

Again the issue of degrees of non-compliance surfaces. Are there shades of gray with non-compliance for this standard or is it strictly a black and white issue? Why jump directly to level four non-compliance? Is progressive non-compliance not an option? For example, if a reliability authority had identified 25 IROLs, he is level four non-compliant if only one of the IROLs is not available for real-time use. Shouldn’t there be allowances for such situations? Also, perhaps a letter that lists critical displays and identifies discrepancies would be more beneficial to maintaining interconnection reliability than a monetary penalty.

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

The proposed measures may be too weak. For example, it appears that a reliability authority could satisfy the operational planning analysis by evaluating an invalid case for a given day. While it meets the letter of the measure, it doesn't meet the intent of the measure. Also, does 2.1.2 apply to IROLs that are associated with stability limits? If so, this measure would require a reliability authority to run real-time stability analyses every 30 minutes.

Again the issue of degrees of non-compliance surfaces. Are there shades of gray with non-compliance for this standard or is it strictly a black and white issue? Why jump directly to level four non-compliance? Is progressive non-compliance not an option? Is missing an operational planning assessment one day in a month as detrimental as missing it 10-15 days per month? Similarly, is missing one real-time assessment as bad for reliability as missing these assessments for hours, on a regular basis?

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

The performance reset period should be changed to 12 months rather than one calendar year.

Non-compliance items should match the standard's definitions. Section 5.1 should be referred to as a Documentable Interconnection Reliability Operating Limit Violation. Section 5.2 should be referred to as an Interconnection Reliability Operating Limit Violation or a Reportable Interconnection Operating Limit Violation, whichever is correct (see response to Question 1).

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**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes  No

20. Do you agree with the measures?

Yes  No

21. Do you agree with the compliance monitoring process?

Yes  No

22. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 205:

Requirements 1.1, 1.2 and 1.3 are too open-ended on the part of the reliability authority. Justification should be required for all requested data to prevent unreasonable and burdensome requests on the part of the reliability authority. The data requested and the timing of the delivery of the data should be mutually agreeable to the reliability authority and the responding entity.

The SDT should define a minimum, default set of data, such as that spelled out in Appendix 4B, and provide that as a guide for what type of data may be requested.

Requirement 1.3 appears to be repeated again as a measure in Measure 2.3. Shouldn't Requirement 1.3 be moved to Standard 206 since it deals with provision of the data? In fact, there is a great deal of material in 205 that is related data provision. Shouldn't all of this be moved to 206? Perhaps additional clarification between 205 and 206 is all that is needed.

The performance reset period should be changed to 12 months rather than one calendar year.

**Requirement 206 - Data Provision**

23. Do you agree with the requirement?

Yes  No

24. Do you agree with the measures?

Yes  No

25. Do you agree with the compliance monitoring process?

Yes  No

26. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 206:

The cover letter requirement in 4.3.1 is confusing and needs clarification. While such a letter can provide evidence that data has been sent, such a requirement could also prove to be excessive and impractical. Infrequent data transmittals such as impedance changes, ratings, etc, could easily be transmitted under cover letter. However, does this requirement also apply to each bit of real-time data transmitted via ICCP?

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Only one data point out of potentially thousands of points could cause non-compliance as specified in Section 5. This implies that nothing less than 100% of the data, 100% of the time is sufficient. Is this the intent of the SDT? Is a transducer failure in a remote substation as damaging to reliability of the interconnection as the loss of an entire ICCP link between a responding entity and its reliability authority? Is a failure for one scan cycle as critical as that point not being available for days or weeks? It would appear that non-compliance associated with this standard needs revisiting.

There appears to be inconsistency between non-compliance in 205 and 206. If a reliability authority makes an unreasonable data request in 205 and doesn't get the requested data within the specified timeframe, then the reliability authority is only penalized at a level one. But if a responding entity loses one data point for one four-second data scan, that responding entity is blasted with a level four penalty. There does not appear to be equity here.

### **Requirement 207 - Action Plan**

27. Do you agree with the requirement?

Yes                       No

28. Do you agree with the measures?

Yes                       No

29. Do you agree with the compliance monitoring process?

Yes                       No

30. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 207:

### **Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?

Yes                       No

32. Do you agree with the measures?

Yes                       No

33. Do you agree with the compliance monitoring process?

Yes                       No

34. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 208:

Generator operators need to be added to the entities listed in Requirement 1.1.

Requirement 1.2 is repeated again in Measure 2.1.

The levels of non-compliance need to be reviewed to ensure that they accurately reflect how well the directives were followed. Timing of actions taken with regards to when the directives were issued should also be considered.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**35. List any Regional or Interconnection Differences for this standard:**

None

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

This standard does not require the reliability authority to notify those entities not providing data to remind those entities that they should be providing data. The reliability authority should be trying to obtain the missing data and working to resolve differences that prevent delivery of the data. If the reliability authority and the responding entity cannot reach agreement on data delivery, then the reliability authority should notify the compliance monitor.

**37. Any other comments on this standard?**

The performance reset period of one calendar year in 201, 202, 204 and 205 should be changed to 12 months. 206, 270 and 208 should remain 12 months.

Areas where non-compliance is the result of a lack of proper documentation should be consistent throughout each individual standard and across all standards, especially between this standard and Standard 600, Determine Facility Ratings, System Operating Limits and Transfer Capabilities.

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

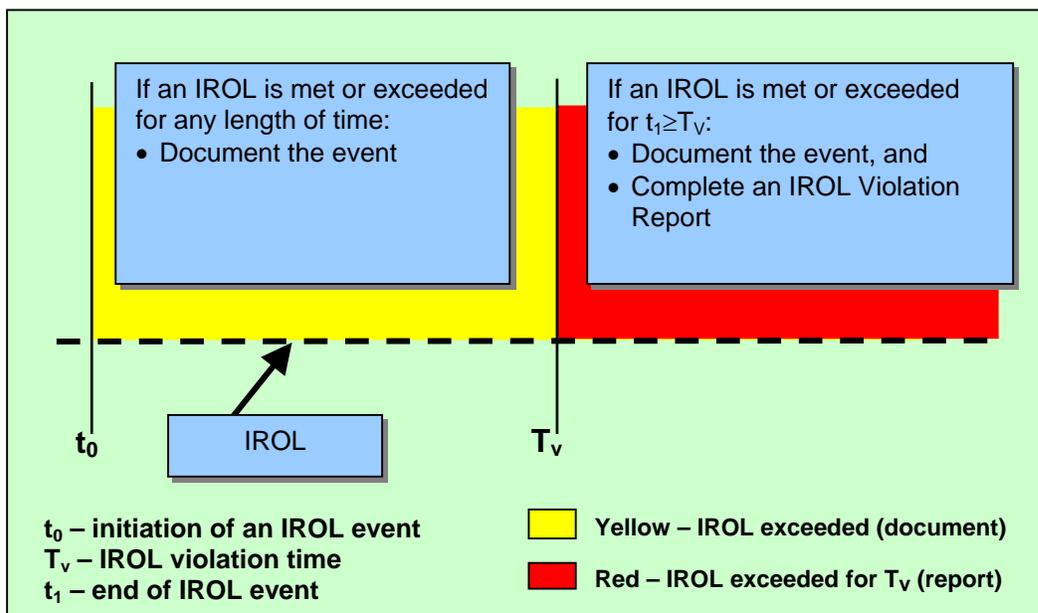
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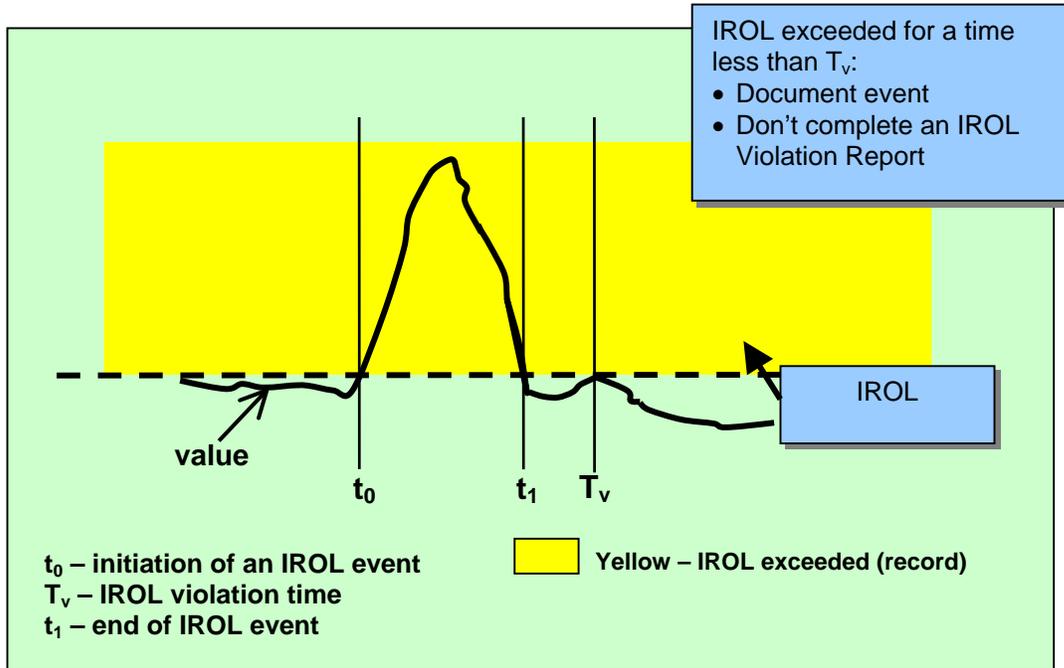
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

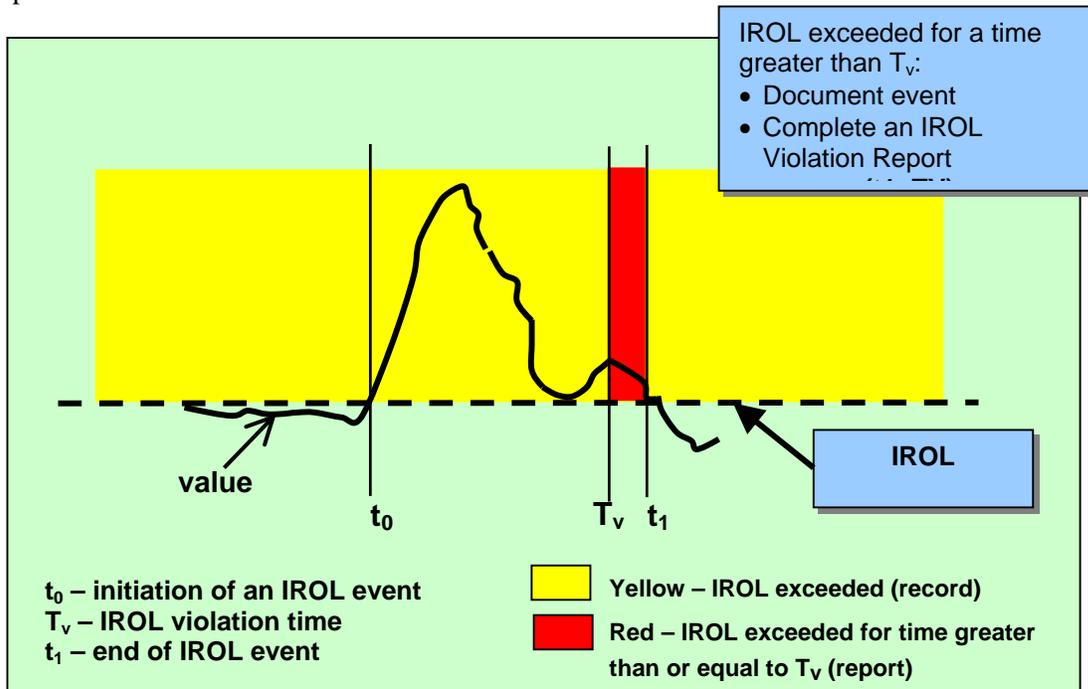


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The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
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**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Exelon recommends the following definition changes to eliminate terminology from the definitions that is vague and therefore can lead to different interpretations and uncertainty as to whether there is a violation of the standard.

**Cascading Outages:** The uncontrolled successive loss of system elements triggered by an incident at any location. Cascading results in widespread service interruption, which cannot be restrained from sequentially spreading. ~~beyond an area predetermined by appropriate studies.~~

**Interconnection Reliability Operating Limit:** A system operating limit that, if exceeded, could lead to instability, uncontrolled separation, or cascading outages. ~~that adversely impact the reliability of the bulk transmission system.~~ The reliability authority must log each case of exceeding an interconnection reliability operating limit, and must report (to its compliance monitor) each case of exceeding an interconnection reliability operating limit for a time greater than or equal to  $T_v$ . Note that  $T_v$  may be zero.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No

Comments                      Based on recent events of August 14, 2003 Exelon Corporation is not as confident as the SAR authors in stating, "Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages". We ask that this Standard be put on "hold" until investigations are completed and root cause has been established.

Exelon Corporation feels that ultimately the reliability of the interconnection lies with the Reliability Authority, but Transmission Operators should not be eliminated from contributing/participating in actions that enhance reliability.

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

### Requirement 202 - Monitoring

7. Do you agree with the requirement?

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Yes                       No

8. Do you agree with the measures?

Yes                       No

9. Do you agree with the compliance monitoring process?

Yes                       No

10. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

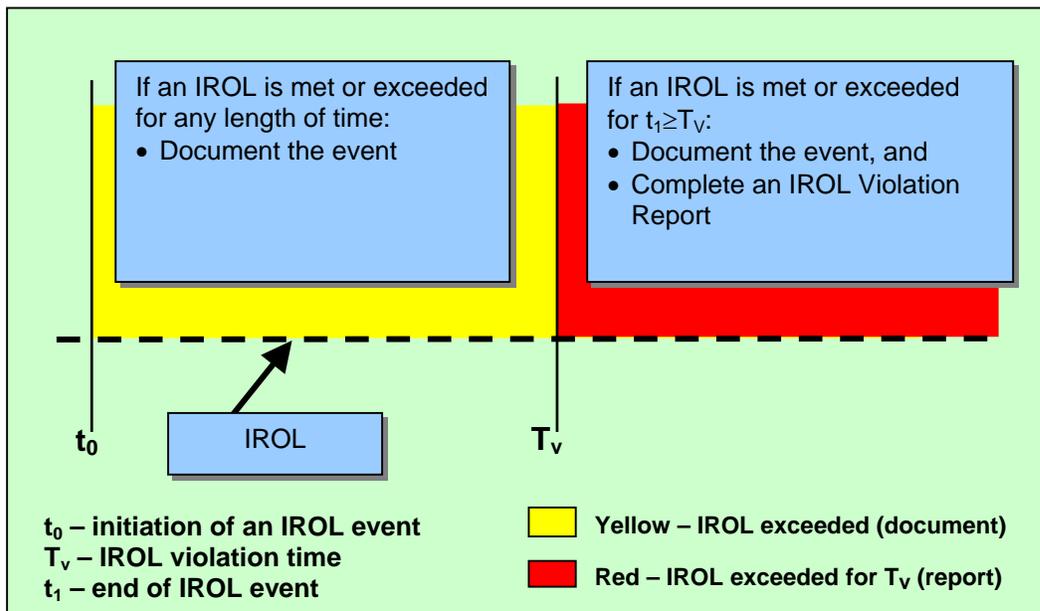
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

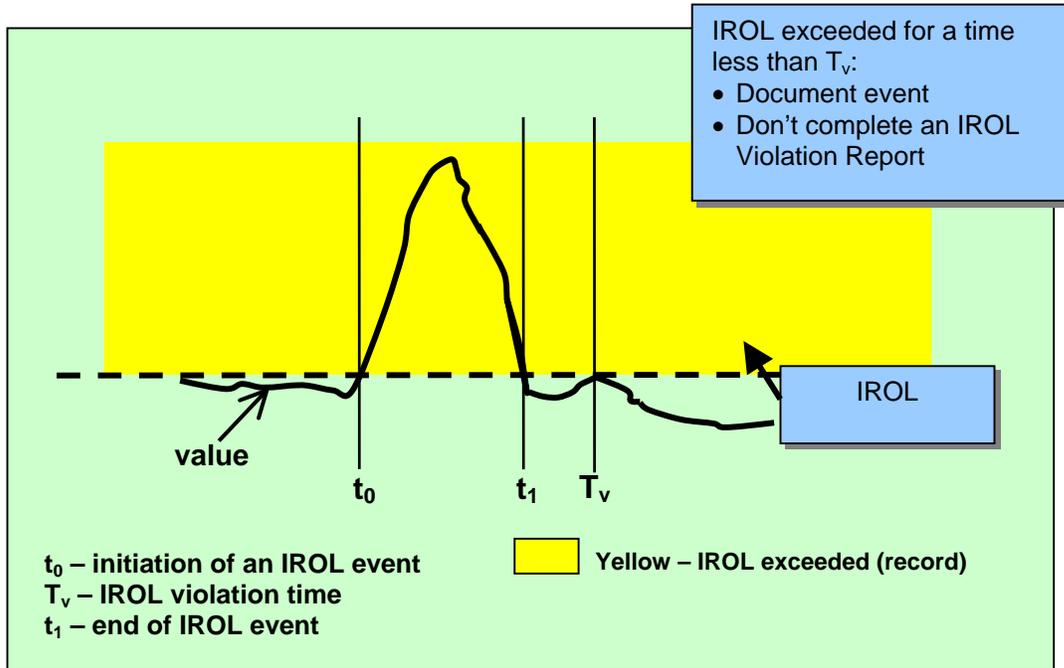
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

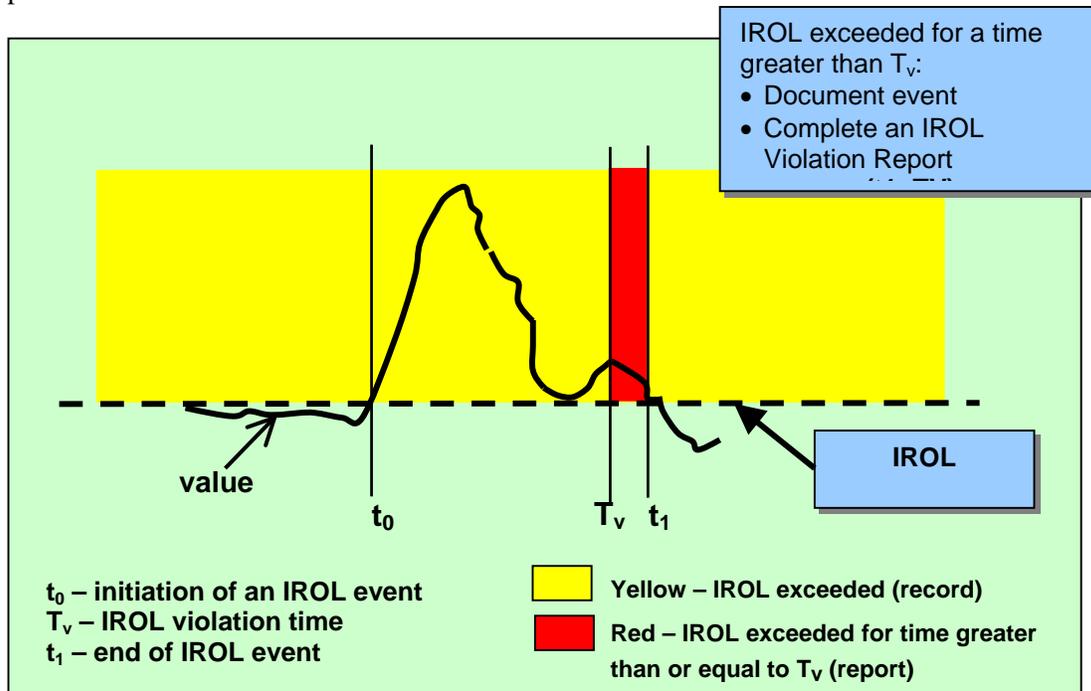


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The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

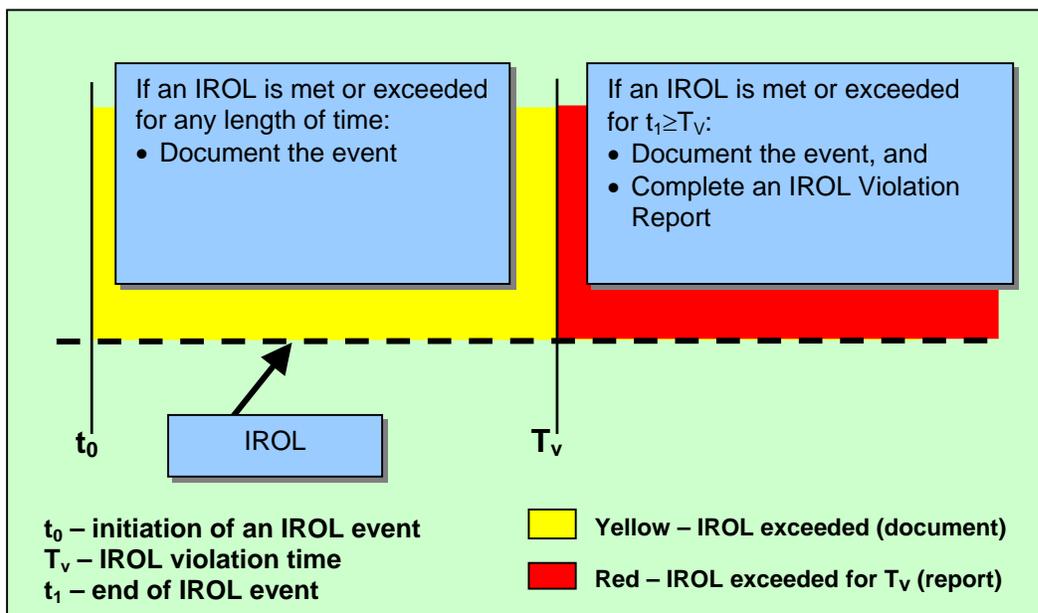
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

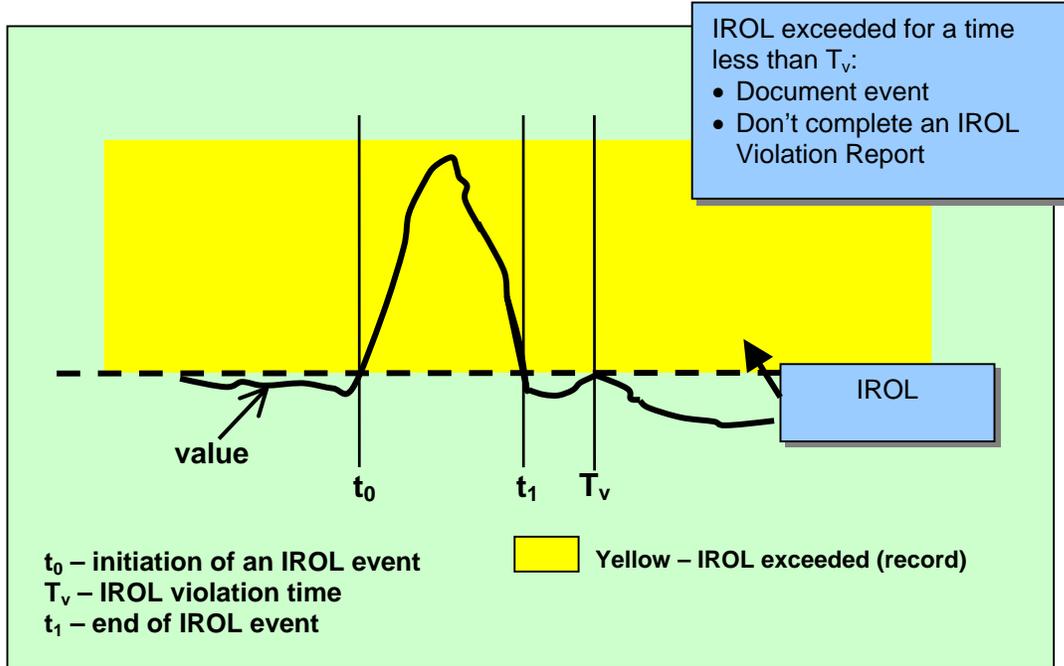
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

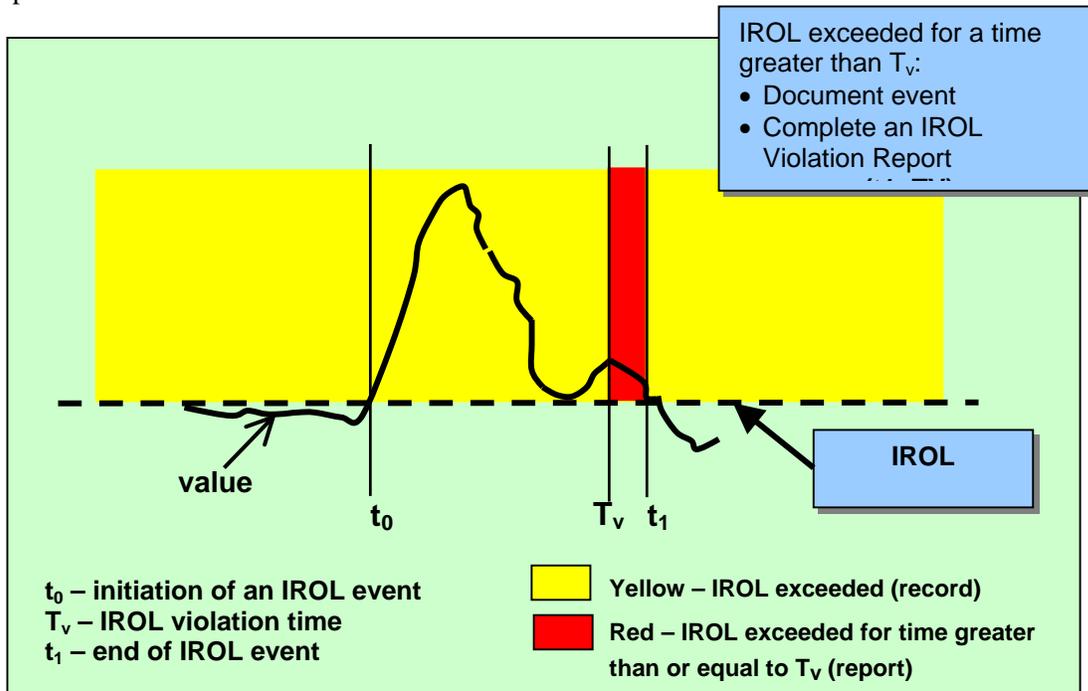


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

Based on the following definitions, we do not believe that the definition of “*Documentable Interconnection Reliability Operating Limit Violation*” is necessary (is it truly a violation?). It appears that it is identical to the definition of “*Interconnection Reliability Operating Limit Event*” and the fact that an “*event*” must be documented is contained in the definition of “*Interconnection Reliability Operating Limit*”.

- **Documentable Interconnection Reliability Operating Limit Violation:** An instance of exceeding an interconnection reliability operating limit for any length of time.
- **Interconnection Reliability Operating Limit Event:** An instance of exceeding an interconnection reliability operating limit for any length of time.
- **Interconnection Reliability Operating Limit Violation:** An instance of exceeding an interconnection reliability operating limit for time greater than or equal to  $T_v$ .
- **Interconnection Reliability Operating Limit:** A system operating limit that, if exceeded, could lead to instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk transmission system. The reliability authority must log each case of exceeding an interconnection reliability operating limit, and must report (to its compliance monitor) each case of exceeding an interconnection reliability operating limit for a time greater than or equal to  $T_v$ . Note that  $T_v$  may be zero.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. This Standard could be improved by formatting (where possible)

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Measurement 2.1 to relate to Requirement 1.1 and Measurement 2.2 to relate to Requirement 1.2, etc. rather than listing the measures and requirements arbitrarily and independently.

In order to tie the OEC's to the Measures, Section 4 should be clarified to read:

4.3. The entity responsible shall have the following Objective Evidence for Compliance available upon the request of its compliance monitor:

- 4.3.1. List of interconnection reliability operating limits for the reliability authority's reliability area **as described in Measure 2.1 above**
- 4.3.2. List of facilities (or groups of facilities) in the reliability authority's reliability area that are subject to interconnection reliability operating limits **as described in Measure 2.2 above**

### **Requirement 202 - Monitoring**

- 7. Do you agree with the requirement?  
 Yes                       No
- 8. Do you agree with the measures?  
 Yes                       No
- 9. Do you agree with the compliance monitoring process?  
 Yes                       No
- 10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3.1 is too specific for the measures it supports. It may be a practical solution that the real-time data and interconnection reliability operating limits be made available to operators in the form of a "display", however this solution is not prescribed in the measures and should not be listed exclusively.

We suggest that section 4.3.1 be rewritten to read:

- 4.3.1. Process used for monitoring and comparing real time data associated with interconnection reliability operating limits in accordance with Measure 2.3 above. This may be accomplished through the use of an operator display and should demonstrate compliance with Measures 2.1 and 2.2.**

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be rewritten to read:

**4.3. The reliability authority shall demonstrate in accordance with Measure 2.1, the following upon the request of the compliance monitor:**

**4.3.1. Ability to perform an operational planning analysis**

**4.3.2. Ability to perform a real time assessment**

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

Has the Interconnection Reliability Operating Limit Violation Report been developed yet? Is this the existing NERC Operating Policy 5, Appendix 5F as modified with the results of the Reliability Coordinator IRLV Field Test?

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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- 4.3. The reliability authority shall have the following available upon the request of its compliance monitor:
  - 4.3.1. Operations logs or other documentation **in accordance with Measure 2.1** indicating the magnitude and duration of each instance of exceeding an interconnection reliability operating limit and the actions or directives issued for each of these instances
  - 4.3.2. Interconnection Reliability Operating Limit Violation Reports **completed in accordance with Measure 2.2**

Level four: non-compliance is not supported by either the Measures or the Compliance Monitoring Process. We understand there is a desire by some in the industry to hold the Reliability Authority accountable for Interconnection Reliability Operating Limit Violations, however, as written, this standard does not support it. Section 5.4 should be rewritten to read:

- 5.4. Level four: Interconnection reliability operating limit exceeded for time greater than or equal to T<sub>v</sub> minutes and either:
  - 5.4.1 no documentation to indicate actions taken or directives issued to mitigate the instance, or
  - 5.4.2 no Interconnection Reliability Operating Limit Violation Report completed and filed with its compliance monitor

**Requirement 205 - Data Specification**

- 19. Do you agree with the requirement?  
 Yes                       No
- 20. Do you agree with the measures?  
 Yes                               No
- 21. Do you agree with the compliance monitoring process?  
 Yes                               No
- 22. Do you agree with the levels of non-compliance?  
 Yes                               No

Comments about Requirement 205:

The requirement for data collection should be tied to its impact on reliability. Requirement 1.3 should be modified to read:

- 1.3. The reliability authority shall notify its compliance monitor when an entity that has facilities monitored by the reliability authority does not provide data as specified **and this lack of data has an impact on reliability.**

Measurement 2.3.1 should be rewritten to read:

- 2.3.1. The notification shall take place within five business days of discovering that the data **having an impact on reliability** is missing.

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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In order to prevent a shotgun approach to data collection we propose Section 2.1.1 be modified to read:

- 2.1.1. Specification shall include a list of **minimum** required data, a mutually agreeable format, and timeframe and periodicity for providing data.

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be rewritten to read:

- 4.3. The reliability authority shall have the following available upon the request of the compliance monitor:
  - 4.3.1. Data specification(s) **in accordance with Measure 2.1**
  - 4.3.2. Proof of distribution of the data specification(s) **in accordance with Measure 2.2**

### **Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3.1 is too specific for the measure it supports. A possible solution might be:

- 4.3.1. **Documentation** indicating data was sent to the reliability authority **in accordance with Measure 2.1**

Non-compliance in data submission could take several forms and levels of impact to reliability. Section 5 should be modified as follows:

5. Levels of Non-compliance:
  - 5.1. Level one: **Data was provided, but not in the mutually agreed format**
  - 5.2. Level two: **Data was provided, but not within the time-frame specified**
  - 5.3. Level three: **Incomplete data was provided**
  - 5.4. Level four: Data not provided to the reliability authority as specified.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 207 - Action Plan**

27. Do you agree with the requirement?

Yes  No

28. Do you agree with the measures?

Yes  No

29. Do you agree with the compliance monitoring process?

Yes  No

30. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 207:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. The Levels of non-compliance should be objectively determined based on the evidence.

Measure 2.1 should be modified to include:

- 2.1. The reliability authority shall have a documented action plan that addresses preventing and mitigating instances of exceeding interconnection reliability operating limits. The plan shall **identify and** be coordinated with those entities responsible for acting and with those entities impacted by such actions.

Section 4.3 should be modified to include:

- 4.3. The reliability authority shall make the following available for inspection by the compliance monitor upon request:

- 4.3.1 Action plan **developed in accordance with Measure 2.1**

Section 5 should be modified to include:

5. Levels of Non-compliance

- 5.1. Level one: Action plan exists but wasn't coordinated with all involved and impacted entities
- 5.2. Level two: Action plan exists but wasn't coordinated with any involved or any impacted entities
- 5.3. Level three: **Action plan is incomplete**
- 5.4. Level four: No action plan

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**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. Non-compliance could take several forms and levels of impact to reliability. The Levels of non-compliance should be objectively determined based on the evidence.

Section 4.3.1 should be modified to read:

- 4.3.1. Operations log or other data source(s) to show the following for each instance of being issued a reliability authority directive relative to an interconnection reliability operating limit:
- 4.3.1.1. Date and time of each of directive received
  - 4.3.1.2. Directive issued
  - 4.3.1.3. Actions taken in response to directive **in accordance with Measure 2.1**

Section 5 should be modified as follows:

5. Levels of Non-compliance
- 5.1 Level one: **Operations log or other data source(s) do not show one of the following:**
    - 5.1.1 **Date and time of each of directive received**
    - 5.1.2 **Directive issued**
    - 5.1.3 **Actions taken in response to directive**
  - 5.2 Level two: **Operations log or other data source(s) do not show any of the following:**
    - 5.1.4 **Date and time of each of directive received**
    - 5.1.5 **Directive issued**
    - 5.1.6 **Actions taken in response to directive**
  - 5.3 Level three: Not applicable.
  - 5.4 Level four: Did not follow directives.

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**35. List any Regional or Interconnection Differences for this standard:**

None

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

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Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments** We believe that it is appropriate to include this in the standard with the comments noted in Section 205.

**37. Any other comments on this standard?**

None

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
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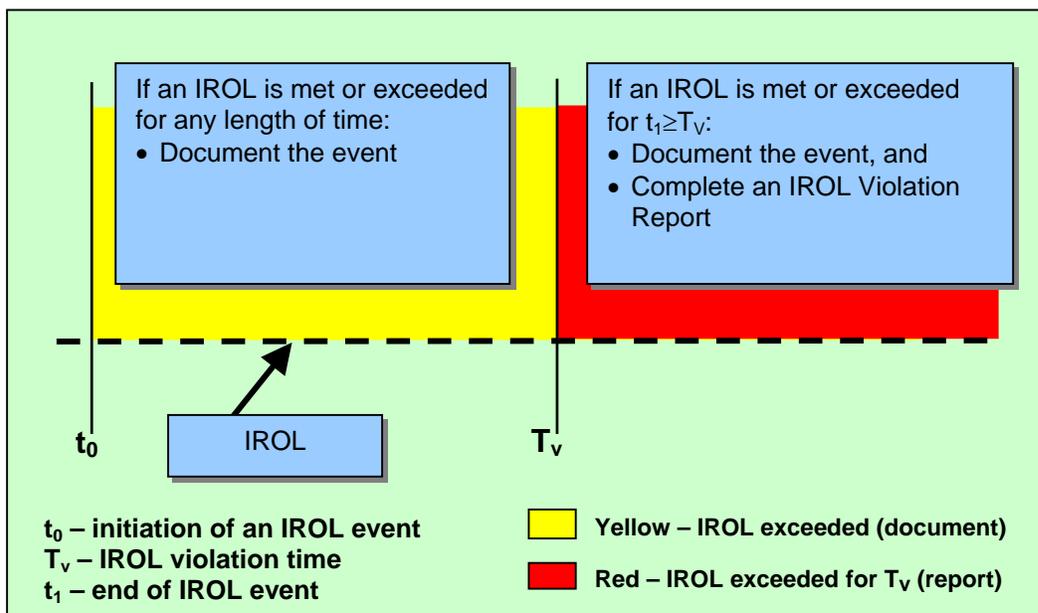
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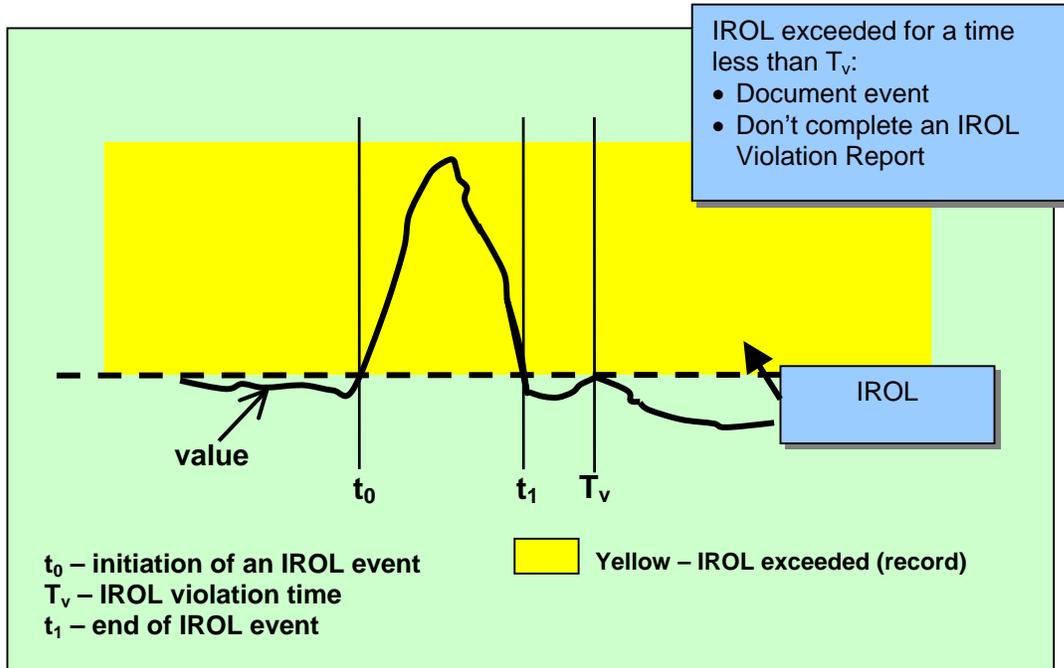
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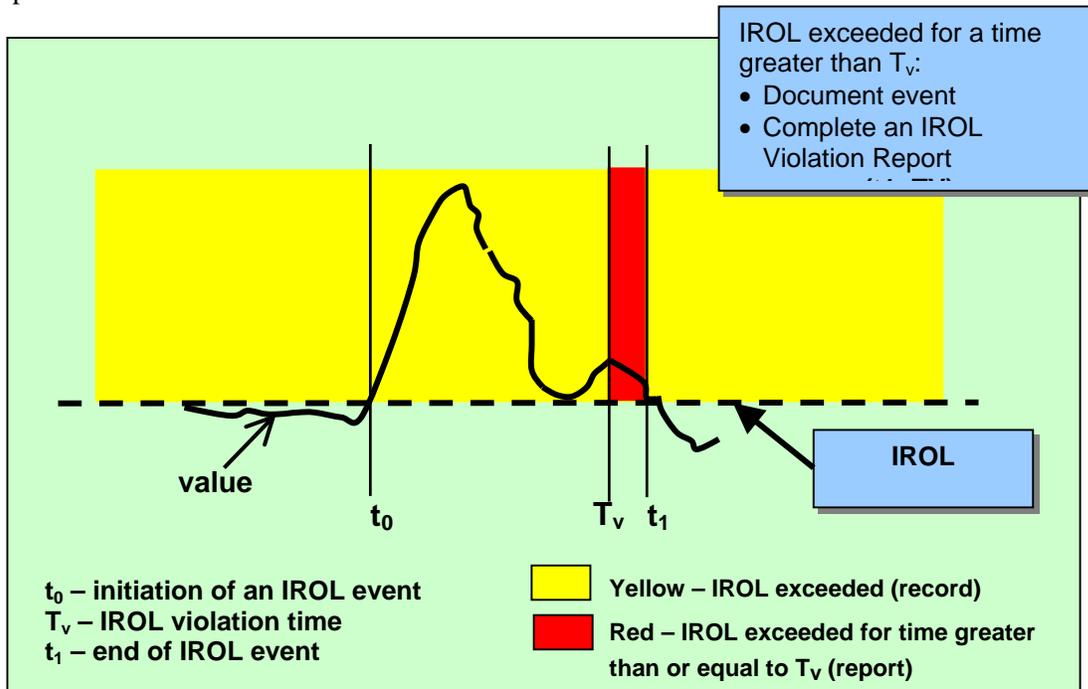


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.  
A definition for Minimum Return Time should be included (the minimum period in seconds that a value must remain below an IROL limit after an excursion has occurred. If the value again exceeds IROL before this time limit, the event continues.).

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201: Reword measures to state what is measured and to refer to the associated requirements. Section 201.5.3 should read "List exists, but is not complete or lacks technical merit (is not good utility practice)."

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203: Modify section 203.1.1 to read "The reliability authority shall perform, **or direct performance of**, operational planning analyses . . . ". Modify 203.4.2 to read "The performance-reset period shall be one **year**. The . . ."

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206: For consistency with previous sections, replace the first sentence in section 206.4.2 with "The performance-reset period shall be one calendar year."

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207: For consistency with previous sections, replace the first sentence in section 207.4.2 with "The performance-reset period shall be one calendar year."

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208: Modify section 208.5.1 to read "Level one: Did not properly document an issued directive and/or the subsequent action taken."

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

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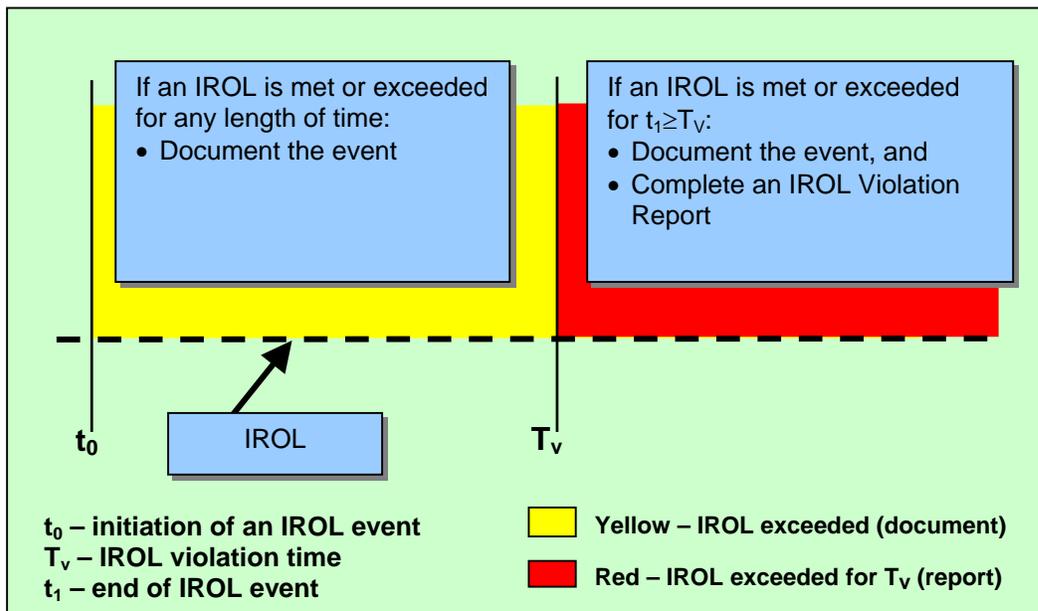
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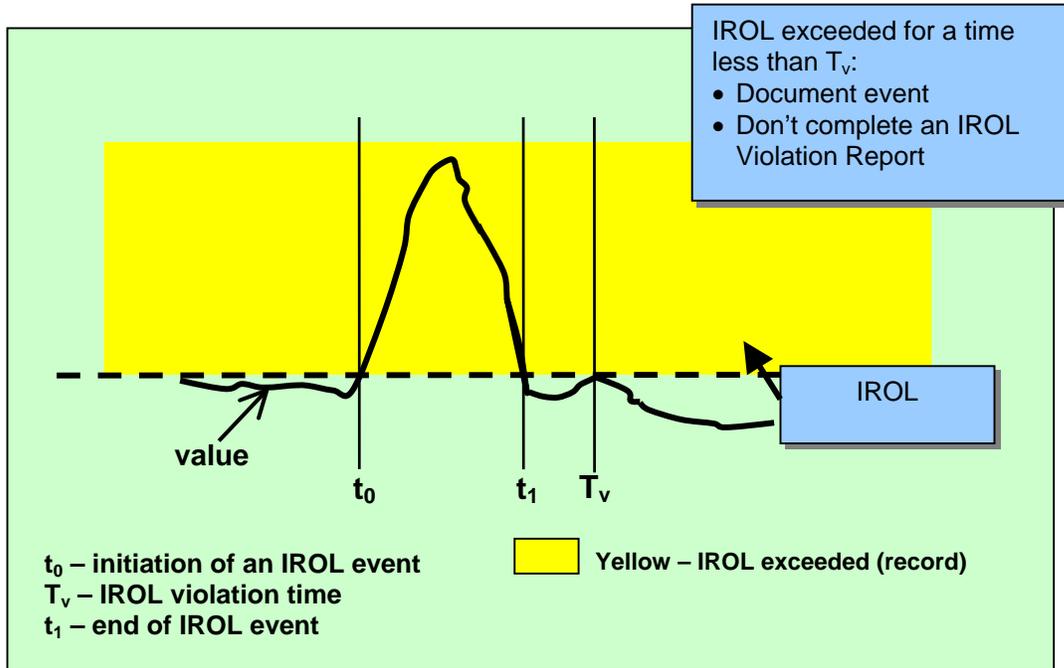
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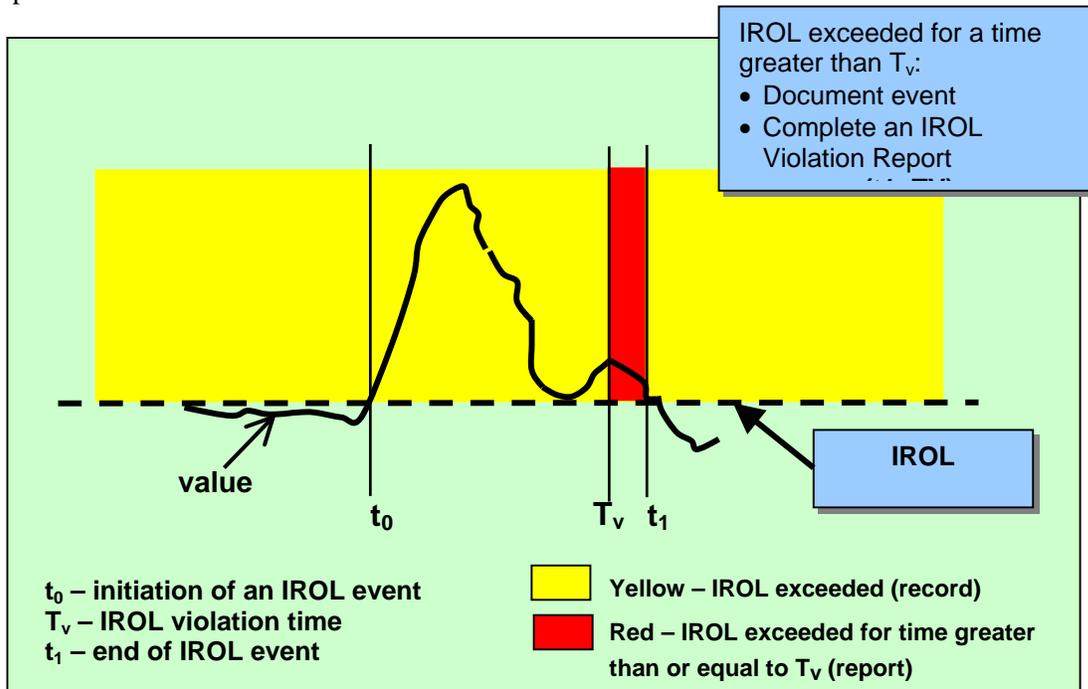


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**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.  
The definition for Transmission Operator is incorrect. The definition is word for word the definition of the Transmission Service Provider in the Functional Model. It appears the wrong definition was used. The right definition is in the functional model.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202: Step 4.3.1 appears to assume that the RA will use computer displays for real time data. What if some other method that works equally as well is used. As written this is a "how" statement. I would suggest that the statement be "Provide evidence of tools used to monitor real time data".

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203: Why was 30 minutes used for a real time assessment? Is one day a good target to be performing planning Analysis? If a generator or transmission operator is planning an outage will the RA tell the generator or transmission operator the day before the outage that is OK to proceed with the outage? Is that process covered in some other standard?

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204: The level four non-compliance does not match the measure. The measure only requires a report and does not hold the RA responsible for exceeding the operating limit.

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

- Step 4.3.1 is not necessarily going to be required. Real time data will not have a cover letter. I would suggest that it should be re-worded to say: "Provide evidence that data was sent to the reliability authority."
- The measure and level of non-compliance does not address failure to provide data because of broken equipment. If an entity temporarily fails to provide real time data because of a failure of a RTU would it be considered a level four non-compliance?

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Comments about Requirement 208:

- 31. Documentation is not a reliability issue
- 32. Documentation is not a reliability issue
- 33. The entity should only document the actions taken. The RA should document the directive.
- 34. The level of non-compliance only deals with following the directives. Why are there measurements (documentation) that are not compliance issues? Either they should not be measurements (my choice because failure to document is not a reliability issue), or the should have a compliance measure.

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

Not all System operating limits are being addressed in this standard. System operating limits in one area can be caused by the failure of another BA to balance generation and load. The RA will be getting the ACE values and should be responsible for assuring that imbalance situation does not cause a problem on the system. This situation is not addressed in the Balance Resource and Demand Standard because it allows unlimited imbalance if it is the opposite direction of frequency error. This situation needs to be addressed in a standard.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

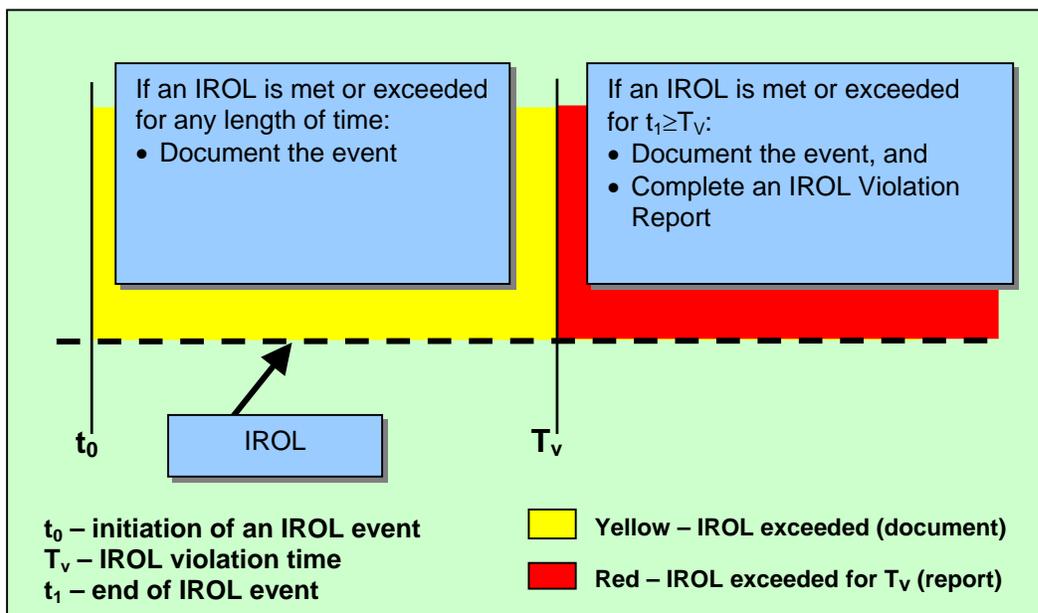
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

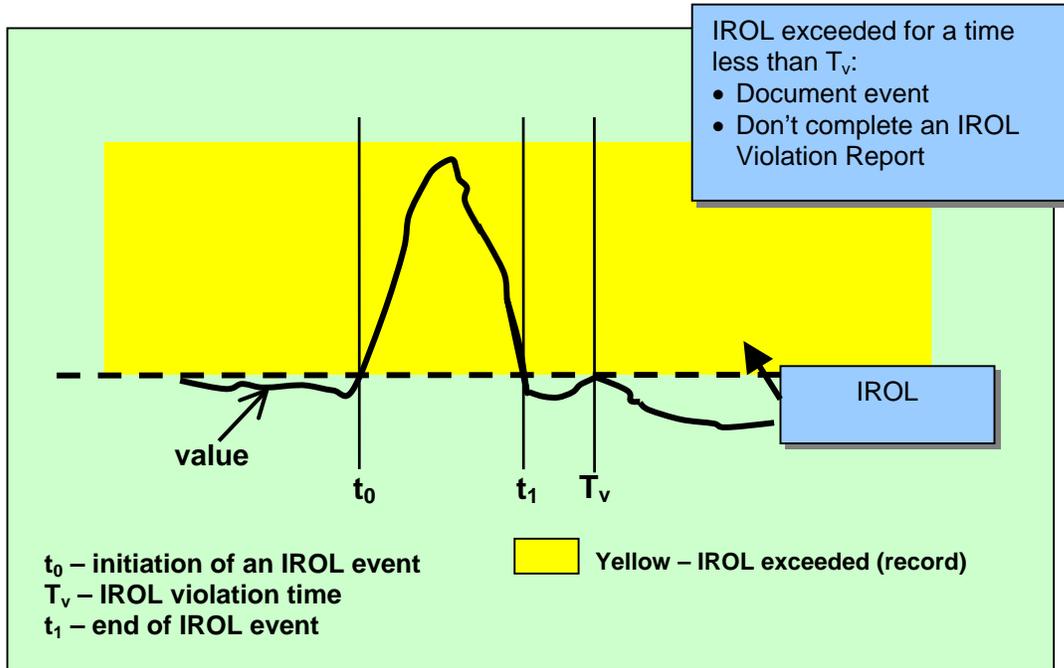
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

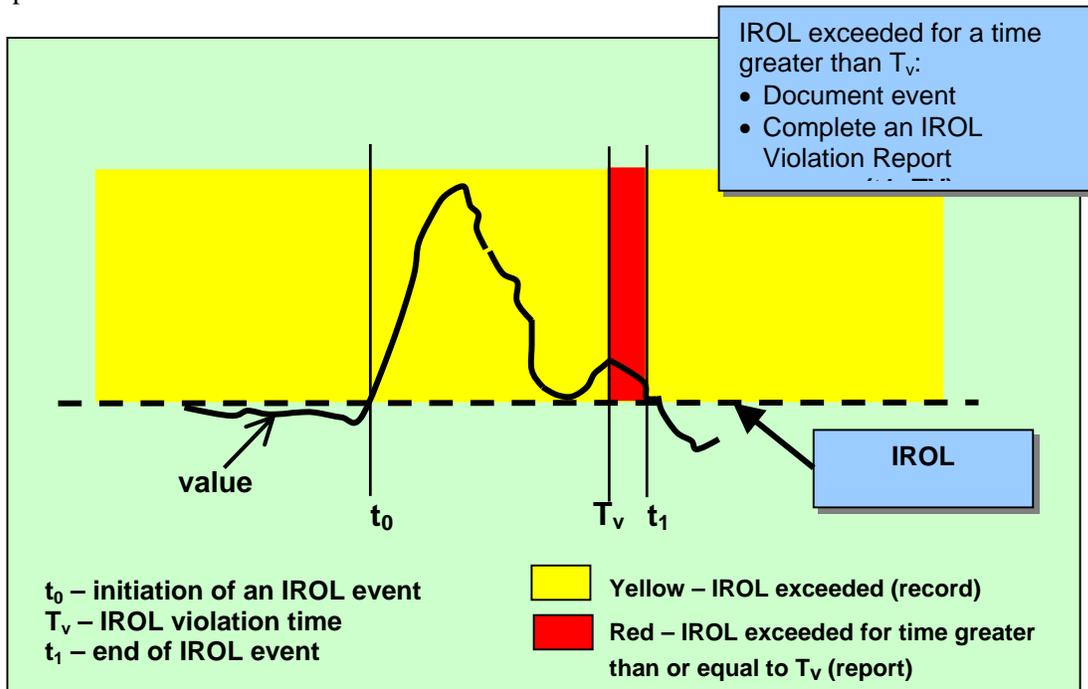


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
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- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?

- Yes                       No    Real time monitoring: Vision and hearing does not comply with the Americans with Disabilities Act. "To use human or automated means"  
Reliability Authority Area: "interconnection (tie-line) metering". This provision is for a Balancing Authority and Energy Management, not the RA. The Reliability Authority area consists of all assets under the control and responsibility of the RA.

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.  
See Standard document

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

- Yes                       No  
Comments: The Transmission Operator should have operating performance requirements developed in another Standard.

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?

- Yes                       No    Standard and requirements shall apply to only one function!  
There should be only one responsible function.

4. Do you agree with the measures?

- Yes                       No    Where does the Buck stop?

5. Do you agree with the compliance monitoring process?

- Yes                       No    Only the RA should be listed.

6. Do you agree with the levels of non-compliance?

- Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?

- Yes                       No

8. Do you agree with the measures?

- Yes                       No    2.3 Add in Real Time

9. Do you agree with the compliance monitoring process?

- Yes                       No

10. Do you agree with the levels of non-compliance?

- Yes                       No

Comments about Requirement 202:



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No    1.2 Only for identified IROL applicable to the RA or could this assessment create a new one?
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No    4.2 Not sure how the matrix resets daily?
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?

Yes  No

24. Do you agree with the measures?

Yes  No

25. Do you agree with the compliance monitoring process?

Yes  No 4.2 Should not be a rolling time frame.

26. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?

Yes  No

28. Do you agree with the measures?

Yes  No

29. Do you agree with the compliance monitoring process?

Yes  No

30. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?

Yes  No

32. Do you agree with the measures?

Yes  No

33. Do you agree with the compliance monitoring process?

Yes  No

34. Do you agree with the levels of non-compliance?

Yes  No Should have a documentation level of noncompliance similar to sec. 204, 5.1

Comments about Requirement 208:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**35. List any Regional or Interconnection Differences for this standard:**

None

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

Please provide assessment of how this Standard will work with abnormal operations and emergency restoration. How is the line drawn. Use the August 14, 2003 event as an example for determining compliance and sanctions.

Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
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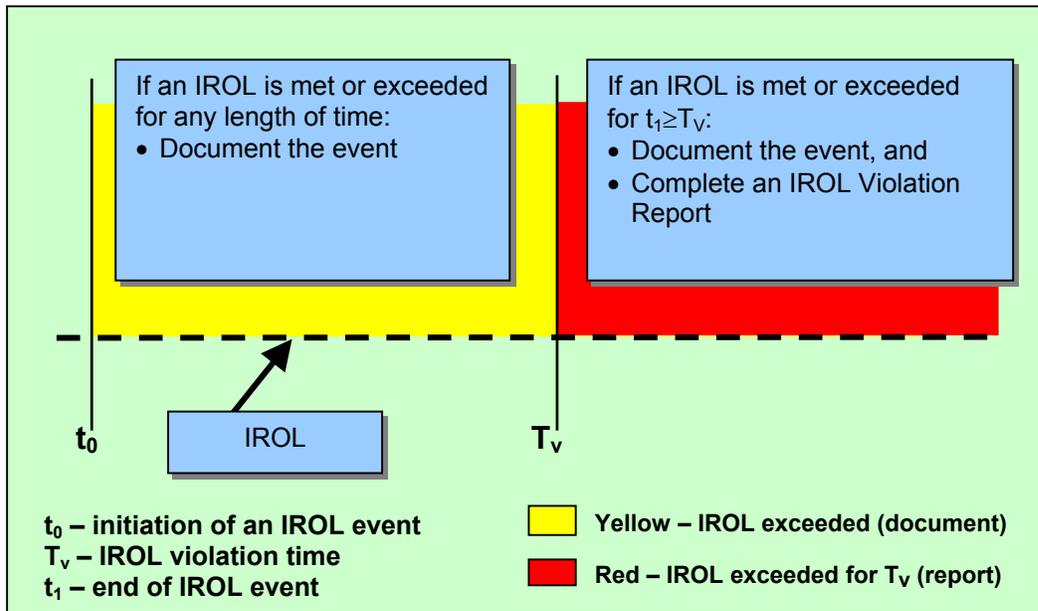
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**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

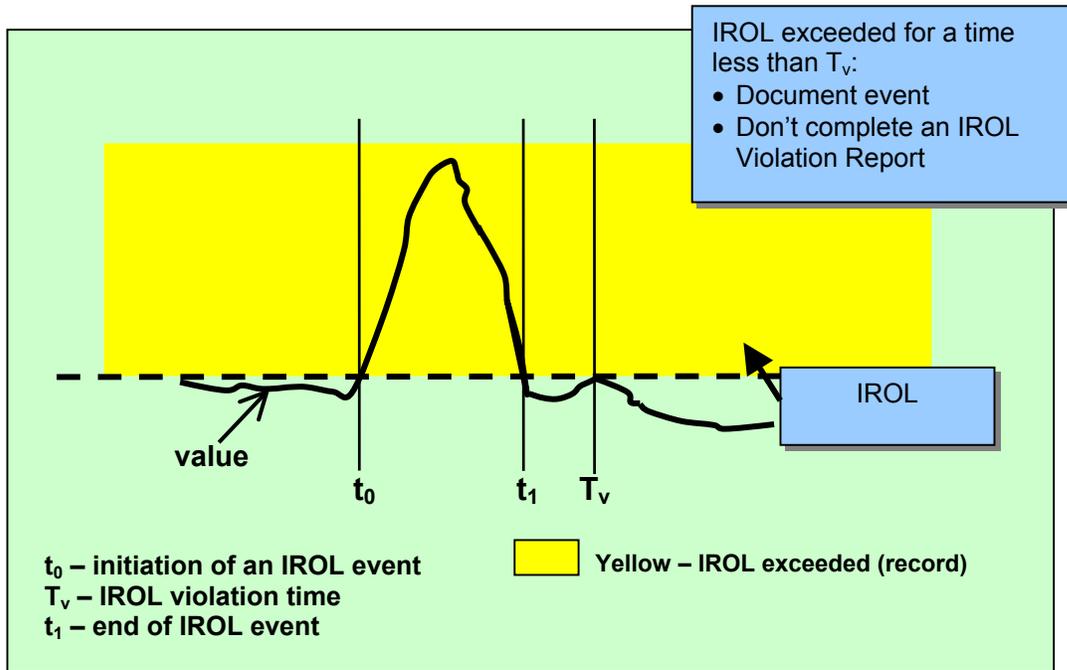
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

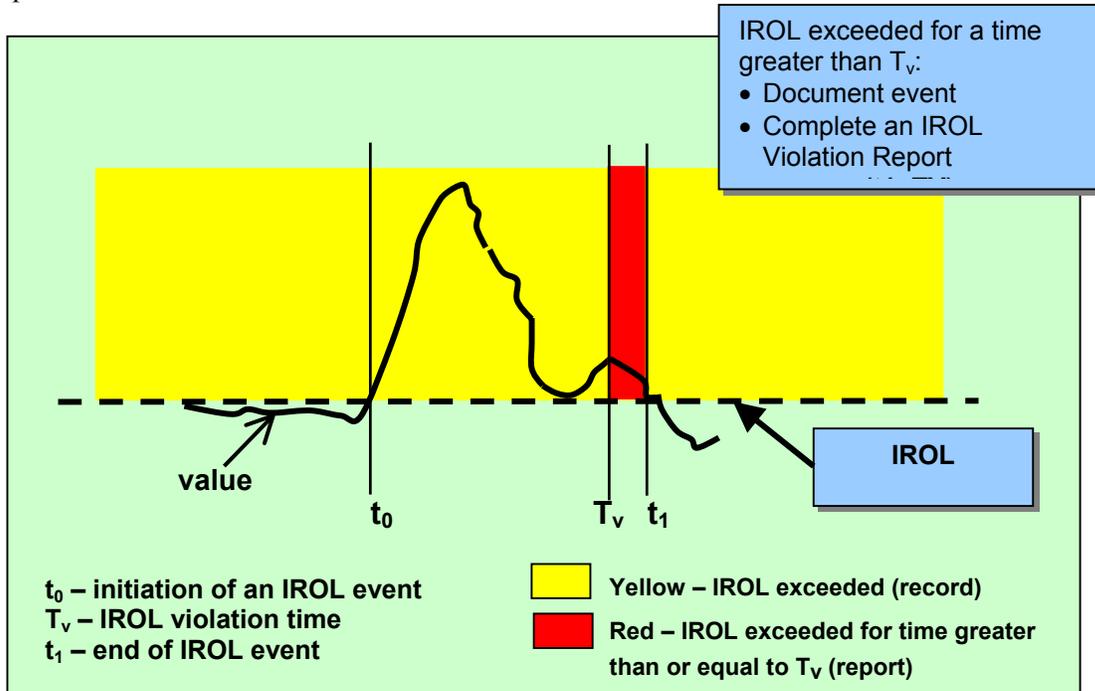


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The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the 'yellow' area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the 'yellow area') and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the 'red area'), and the event must be documented and reported to the Compliance Monitor.



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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

**Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

**STD Commenter Information (For Individual Commenters)**

**Name** Linda Campbell on behalf of the  
FRCC OC,EC, MIC

**Organization** FRCC

**Industry Segment #** 2

**Telephone** 813-289-5644

**E-mail** lcampbell@frcc.com

**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

**FRCC COMMENT 8/29/03**

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<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> <i>FRCC Operating, Engineering &amp; Market Interface Committee members</i>	<b>Group Chair:</b> <b>Chair Phone:</b> <b>Chair Email:</b>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>Linda Campbell</i>	<i>FRCC</i>	<i>2</i>
<i>Paul Elwing</i>	<i>Lakeland Electric</i>	<i>3</i>
<i>John Shaffer</i>	<i>Florida Power &amp; Light Company</i>	<i>1</i>
<i>Bob Remley</i>	<i>Clay Electric Cooperative</i>	<i>4</i>
<i>Patti Metro</i>	<i>FRCC</i>	<i>2</i>
<i>Eric Grant</i>	<i>Progress Energy – Florida</i>	<i>1</i>
<i>Joe Roos</i>	<i>Ocala Electric Utility</i>	<i>3</i>
<i>Joe Krupar</i>	<i>Florida Municipal Power Agency</i>	<i>3</i>
<i>Richard Gilbert</i>	<i>Lakeland Electric</i>	<i>3</i>
<i>Bill Slater</i>	<i>Progress Energy – Florida</i>	<i>1</i>
<i>Amy Long</i>	<i>Lakeland Electric</i>	<i>1</i>
<i>Roger Westphal</i>	<i>Gainesville Regional Utilities</i>	<i>5</i>
<i>Bob Goss</i>	<i>Southeastern Power Administration</i>	<i>5</i>
<i>Steve Wallace</i>	<i>Seminole Electric Cooperative</i>	<i>4</i>
<i>Ted Hobson</i>	<i>JEA</i>	<i>1</i>

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**Background**

1. Do you agree with the definitions provided in the front of this standard?

- Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision. Most of the definitions are very helpful. However, we do have some questions on a few of them.

- There is a definition for Real-time Monitoring and one for Real-time Assessment. The monitoring definition states "To use vision and hearing.." while the assessment definition states to collect and review immediately available data. It seems to us that the monitoring definition is really unnecessary, as we believe the intent is really covered in the assessment definition.
- The definition for Operational Planning Analysis states, "The analysis should ensure that no IROLs will be exceeded." Is that really true for the analysis? Doesn't the analysis identify potential problems that need to be acted upon, so that it is really the actions of entities, not the analysis itself, that ensures no limit will be exceeded?
- The definition of transmission operator in this document does not agree with the definition of transmission operator in the Functional Model. This definition actually is the same as the transmission service provider function. It appears there is still confusion over the functions defined in the functional model which is alarming since we are developing the reliability standards based on those functions.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

- Yes                       No

Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?

- Yes                       No

4. Do you agree with the measures?

- Yes                       No

5. Do you agree with the compliance monitoring process?

- Yes                       No

6. Do you agree with the levels of non-compliance?

- Yes                       No

Comments about Requirement 201: In 1.2.1 of the requirement, Tv is called a "response time", but on the definition page it is called a "violation time". Consistency is needed. We did not agree with the measures because the measures state "the entity responsible" which is not specific enough. Who is the entity responsible? We do not have any problems with the steps of the compliance monitoring process, but again, the phrase "the entity responsible" is used throughout and this should be more specific. We do agree with the intent of the non-compliance level listed in 5.4; however do have a concern that it presumes that all transmission systems will have an IROL. This may not be true for radial systems. Perhaps 5.4 could be reworded as follows, "No documented analysis of possible IROLs or list of facilities subject to IROLs for the RA's reliability area was provided. Finally, Section 6, Sanctions should be removed completely. The compliance monitoring process and non-compliance levels are appropriate parts of the reliability standard. However, the sanctions and penalties are part of the compliance program and are separate. The enforcement matrix should not be attached to this document, even for information only, as that gives the appearance of being part of the standard. The

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sanctions and penalties, along with the enforcement matrix are the responsibility of the new Compliance and Certification Committee (CCC). If the matrix is attached to the standard, every time the CCC changes it, the standard will need to be revised which is not something we should set ourselves up to do.

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
  
8. Do you agree with the measures?  
 Yes                       No
  
9. Do you agree with the compliance monitoring process?  
 Yes                       No
  
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202: Measure 2.3 needs to be clarified to state "The RA shall monitor real-time system operating parameters.." rather than just system operating parameters. We have the same concern that we identified in the comments to Requirement 201 regarding 5.4, the level of non-compliance. Section 6, Sanctions should be removed completely. The compliance monitoring process and non-compliance levels are appropriate parts of the reliability standard. However, the sanctions and penalties are part of the compliance program and are separate. The enforcement matrix should not be attached to this document, even for information only, as that gives the appearance of being part of the standard. The sanctions and penalties, along with the enforcement matrix are the responsibility of the new Compliance and Certification Committee (CCC). If the matrix is attached to the standard, every time the CCC changes it, the standard will need to be revised which is not something we should set ourselves up to do.

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**Requirement 203 - Analyses and Assessments**

- 11. Do you agree with the requirement?  
 Yes                       No
  
- 12. Do you agree with the measures?  
 Yes                       No
  
- 13. Do you agree with the compliance monitoring process?  
 Yes                       No
  
- 14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203: In 1.1 it states that the RA is performing operational planning analyses to "verify that its planned bulk electric system operations will not exceed.." Is that really what they are doing? It would seem to us that this operation planning is being done to determine if there is a potential problem so that actions can be directed to alleviate or mitigate the problem so that IROL violations will not occur. The SDT may want to consider rewording this for clarification. Also, 1.2 states that real time assessments are to verify that it is not exceeding IROLs. Again, verify does not seem to be the correct word. The reason we have stated that we do not agree with the compliance monitoring process is that the performance reset period of one day seems much too frequent. Even though the measures are to be done daily, the performance monitoring period should not be more often than monthly. If one day is kept, it would be a great burden on both the RA and the compliance monitor and we are not sure that would really improve reliability. Since we believe the reset period should be monthly, the non-compliance levels should be adjusted to reflect level one for a small number of days, and level 4 being every day of the month. We also have a question about 5.4 level of non-compliance for operational planning. Does the SDT assume these analyses are load flow studies? If so, we agree with the daily measure. However; if the intent was to also include daily stability studies, we do not agree. Stability studies should only be required to be performed annual and prior to scheduled maintenance outages that create potential for IROLs. Please see our earlier comments about section 6 - Sanctions.

**Requirement 204 - Actions**

- 15. Do you agree with the requirement?  
 Yes                       No
  
- 16. Do you agree with the measures?  
 Yes                       No
  
- 17. Do you agree with the compliance monitoring process?  
 Yes                       No
  
- 18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204: Both requirement 1.2 and measure 2.2 are about reporting IROL violations when the time is greater than or equal to Tv. We do not agree with the equal to portion of this. To us, Tv is analogous to a speed limit. You would not report if you were equal, but only if in excess. We do not understand the reasoning for equal to being included. We do not agree with the levels of non-compliance because level 4 is based on an IROL being exceeded for a time greater or

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equal to Tv. This does not agree with the measures listed. The measures are to document actions taken or report violations that occurred. The levels of non-compliance should be based on what we are measuring. Please see our earlier comments on Section 6 - sanctions.

This requirement in particular brought a question to mind about what the RA really is. Does this requirement assume the RA is the Reliability Coordinator of today who looks at "the big picture", or does it mean today's control area operator? It is still unclear to us what the RA really is. Is there a hole in the functional model that needs to be filled? We do not think we are the only participants in the industry still confused, so work needs to be done to clarify exactly who or what the RA is.

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes                       No

20. Do you agree with the measures?

Yes                       No

21. Do you agree with the compliance monitoring process?

Yes                       No

22. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 205: Is requirement 1.1.3 really meant to be RA's other than themselves? Again, confusion about who/what the RA really is. Depending on who/what is the RA, we may have concern over what data is being requested. There needs to be a reliability justification for the data requested. What happens if there is a disagreement over what data should be supplied? In regards to the levels of non-compliance, why only levels 1 and 2 in this requirement and level 4 in all the others? Does this imply that this standard is not as important?

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207: We are not convinced that this requirement is needed. The requirements in 204 (Actions) seem to already cover this area. There could be many actions to take to prevent or mitigate instances of exceeding IROLs, so it could be extremely burdensome to document every conceivable action. Truly the proof is in the 204 requirement so we would suggest deleting this one.

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

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Comments about Requirement 208: Clarification of who is the entity responsible needs to be made throughout this requirement 208. Step 4.1 of the compliance monitoring process is not complete. It would seem that this 208 is a complement to 204. In 204 the RA is already documenting the actions directed, along with information if a violation occurred. This states that a level 4 is obtained if they did not follow directives. It would seem to make sense to only have this if they did not follow directives and a violation occurred. Perhaps consideration needs to be given to a lower non-compliance level for not documenting their actions, or lack of actions taken when given a directive.

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**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments** We agree with including it in the standard because there needs to be some place for recognition of not getting the data that is needed. We are not entirely sure what steps the compliance monitor would then take, but are assuming the compliance monitor would follow up with the entity not supplying the needed information. In FRCC, if our Security Coordinator does not get the requested information, our Operating Reliability Subcommittee is informed so that follow up can take place. Ultimately, our Security Process (Reliability Plan) requires the operating entities to supply required reliability data and our ORS and OC are the back stop to ensure it is supplied.

**37. Any other comments on this standard?**

On the first page, the SDT has identified an "Effective Period". By using the term period, it implies that there will be an end time when the standard will no longer apply. Would it be more appropriate to just state an effective date?

In the applicability paragraph, the SDT has referenced the functional model approved by the BOT in June 2001. This reference causes concern. We understand that including this reference and date identifies the version of the functional model so that the understanding of the functions are based on this particular document. But, what happens when the BOT approves a change to the model at a later date? Do we now have standards based on one set of functions or understanding of functions that are different than what is in the latest functional model? This will certainly cause confusion in the industry. But, on the other hand, if you remove the date reference, then anytime the BOT changes the model, they are effectively changing the standard without going through the SAR process. We do not want the BOT to be able to change who the standards apply to without going through due process either. How do we deal with this situation?

In the comment box on this first page, the SDT has stated that the terms BA, RA etc really apply to the entities performing the functions identified in the functional model. We understand and

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appreciate why the team did this, however, there is still a lot of confusion about functions vs entities in the functional model. We would suggest that the standard include the extra words to make this distinction. For example, in 1.1 of standard 201, it should read "The entities performing the reliability authority and planning authority functions shall.." This seems trivial, but we believe it is very important in helping the industry understand the functional model and how the standards apply to the entities performing the functions.

Just a note for future comment forms, please provide a comment box after every question, not just at the end of the section on a particular standard. That way the comments and yes/no answers could be kept together.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

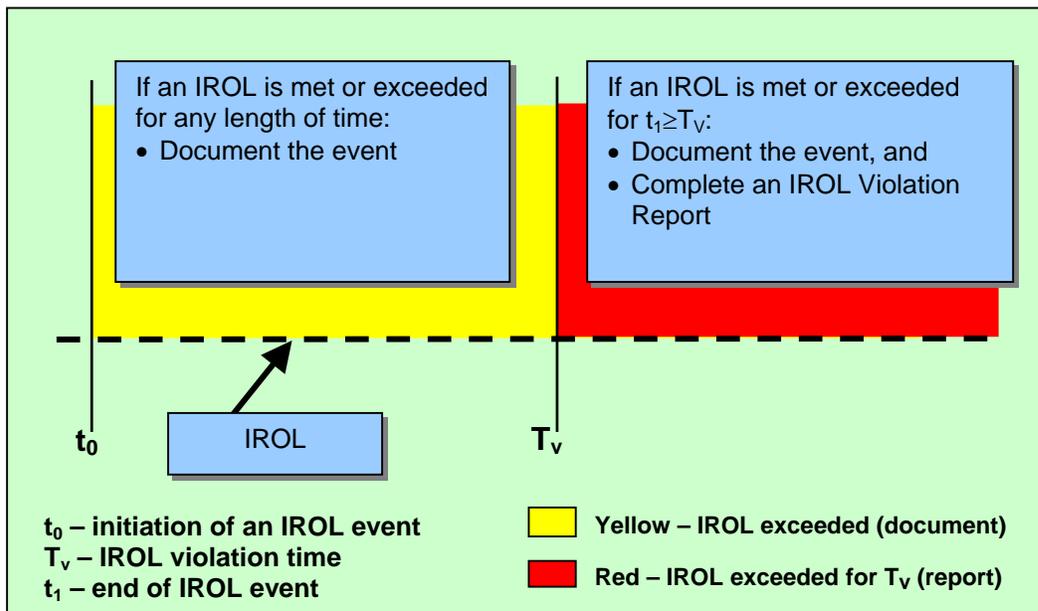
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

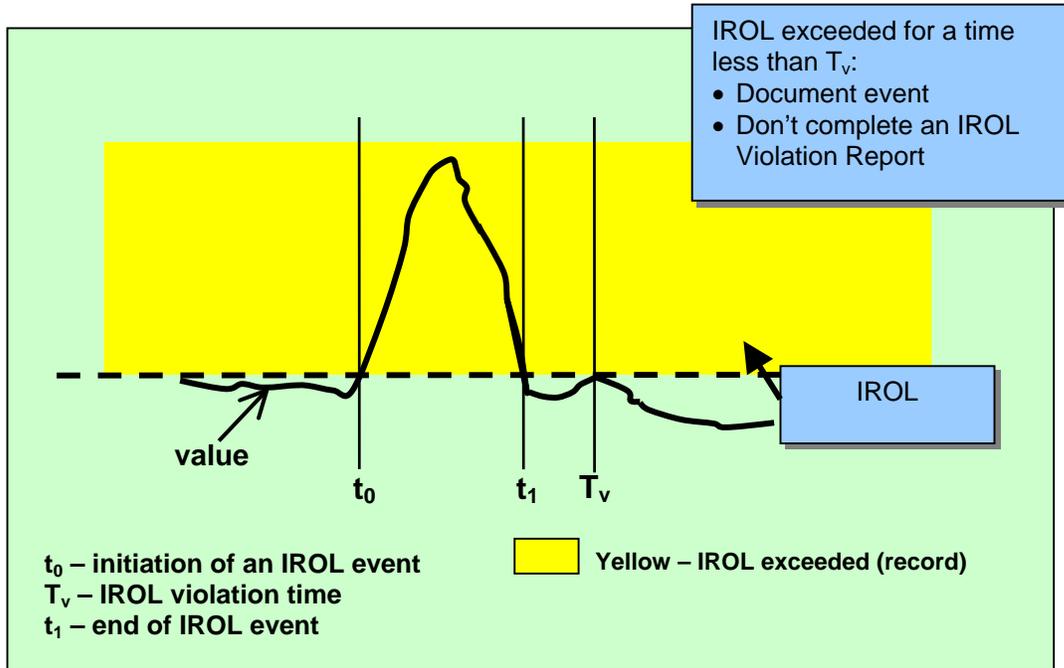
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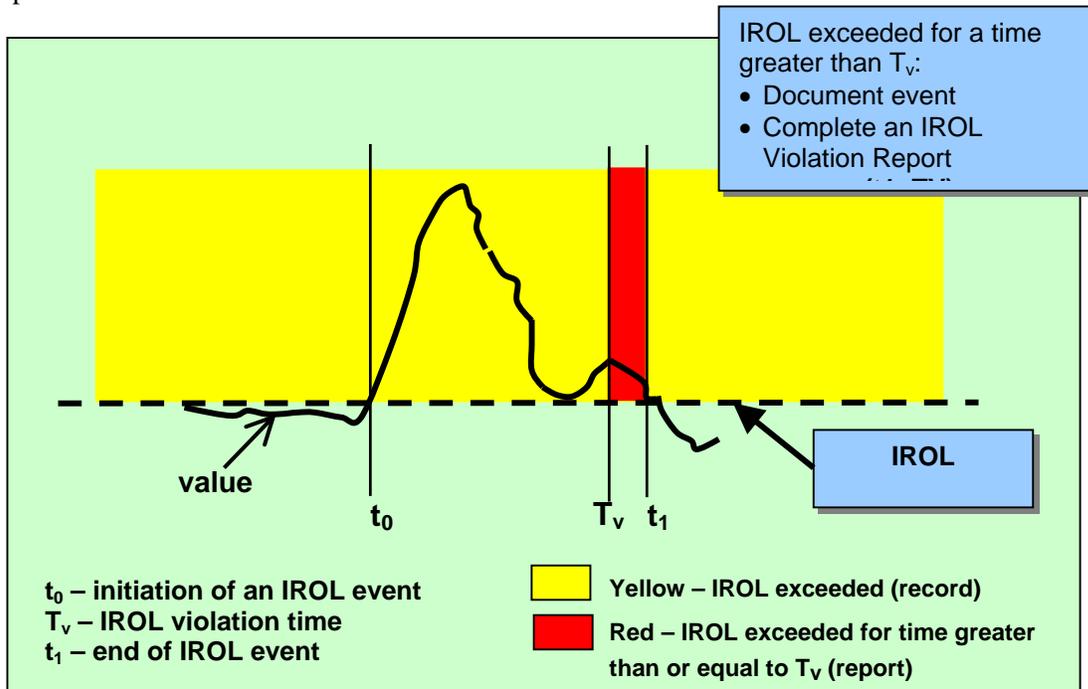


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

The definitions which need modifications are the following:

- Interconnection Reliability Operating Limit The first sentence is the complete definition. The rest is a description of activities related to this definition and should not be included here.

- Real-time Monitoring. This should be modified to "The act of using human vision and hearing or computer software to scan various real-time data sources and draw conclusions about what the data indicates.

- Real-time The word present time should be used instead of immediate.

The words present or presently should be used instead of immediate or immediately in context to real-time in any definition contained in this Standard.

- Self-certification should be changed to " A process by which an entity does a self evaluation to determine if it is compliant with the specific requirements for a reliability standard". The rest can remain the same.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments The responsibility for monitoring IROLs, addressed in this Standard, rests with the Reliability Authority as defined in the Functional Model. However Manitoba Hydro believes there is also a reliability requirement to monitor real-time operations for all other system operating limits (SOL) which are not identified as IROLs. If it is not appropriate to include these monitoring requirements in this Standard, then another Standard should be created to address this requirement.

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?

Yes                       No

4. Do you agree with the measures?

Yes                       No

5. Do you agree with the compliance monitoring process?

Yes                       No

6. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 201: Manitoba Hydro believes that it will be very difficult to identify the IROL subset from the SOLs determined for operation of the transmission facilities in the geographical footprint for which the RA has operational responsibility. .

Any SOL provides protection for the worst contingency, so if the limit is respected, events such as system collapse, cascading loss of lines and other major events are extremely unlikely, unless there are multiple near-simultaneous contingencies. However, most system operating limits (SOL) could lead to significant system disturbances if they are exceeded by a large amount or exceeded for a significant period of time, or both. While any SOL will have been established such that the next contingency should not have any impacts if operation is within the SOL, operation outside of the SOL, accompanied by even one contingency, could lead to cascading loss of lines (thermal limits) or system instability (voltage or angular stability limits). It is Manitoba Hydro's

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belief that it is very difficult to identify such situations without exhaustive studies on very detailed models.

The normal approach for developing system operating limits will likely incorporate some reliability margins for dealing with some of the lack of detail (for example, overcurrent protection is often not modelled, phase shifter action is assumed to occur without being studied at all possible positions) but, if system operation is to be investigated beyond such limits, small details become very important.

It is important that NERC instil a culture of respect for limits of all types and values. There is a risk that a focus on the nebulous concept of an IROL will diffuse the respect for all other limits and the frustration of identifying such IROL's will further reduce the number classified as IROL's. NERC should clearly state how IROL's are to be identified and how NERC or the regions can address the other limits which may be important (among other things, the regional standards must either be developed through a separate standards process or flow from a NERC standard – the current proposal does not let the other limits flow from this standard).

In item 201.2.1.1 the words at the end of this sentence (that does not already have a T<sub>v</sub>) should be removed.

### **Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202: In 202.4.3.1, what is meant by a display ? How does one make a display available.

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**Requirement 203 - Analyses and Assessments**

- 11. Do you agree with the requirement?  
 Yes                       No
  
- 12. Do you agree with the measures?  
 Yes                       No
  
- 13. Do you agree with the compliance monitoring process?  
 Yes                       No
  
- 14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203: In item 203.1.1 the words “will not exceed” are used. The correct phrase should be “should not exceed” since the ability to predict is only valid for events studied, not for unanticipated system conditions.

In item 203.2.1.1, there should be a statement indicating the range of studies required. Should the contingencies applicable to SOL’s be used or should the range of studies be broader?

**Requirement 204 - Actions**

- 15. Do you agree with the requirement?  
 Yes                       No
  
- 16. Do you agree with the measures?  
 Yes                       No
  
- 17. Do you agree with the compliance monitoring process?  
 Yes                       No
  
- 18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

- 19. Do you agree with the requirement?  
 Yes                       No
  
- 20. Do you agree with the measures?  
 Yes                       No
  
- 21. Do you agree with the compliance monitoring process?  
 Yes                       No
  
- 22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:



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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208: the documentation in 4.1 is incomplete. For purpose of determining the acceptability of this item it was assumed that the intent was for the documentation to be similar to the wording for 207 item 4.1

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### 35. List any Regional or Interconnection Differences for this standard:

There should be no Regional or Interconnection Differences

### 36. Notifying the Compliance Monitor

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

### 37. Any other comments on this standard?

A NERC standard is a form of legal document – it spells out the standards, the measurements, the levels of compliance and the penalties for non-compliance. As such, there should be no ambiguity, so any term defined by NERC should be clearly identified in the standard (capitalized, bold, etc.) where it is used as a defined term, or NERC must certify that all uses of a defined word are a reference to the defined term.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

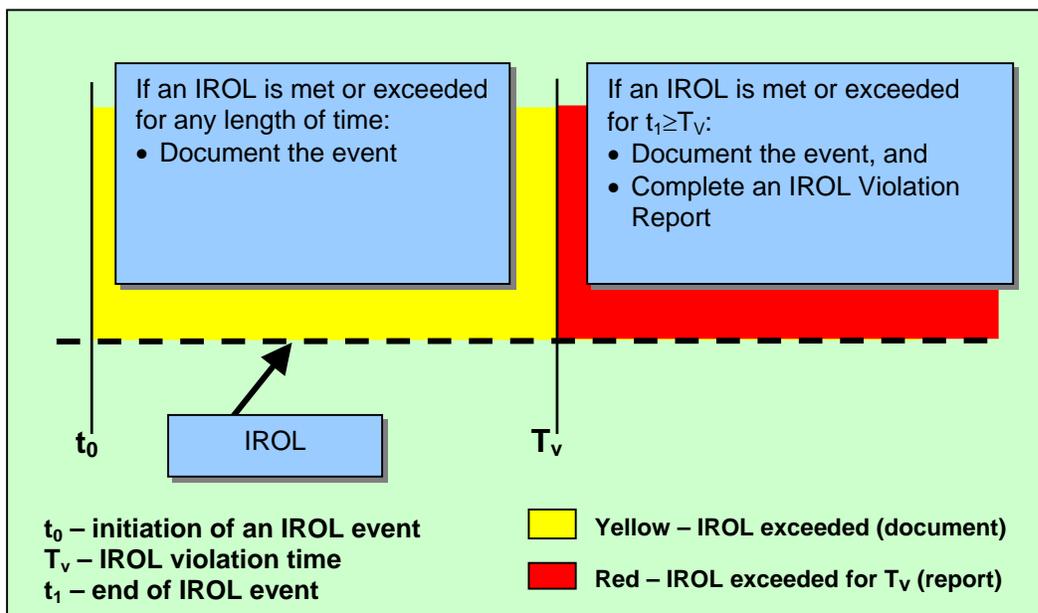
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

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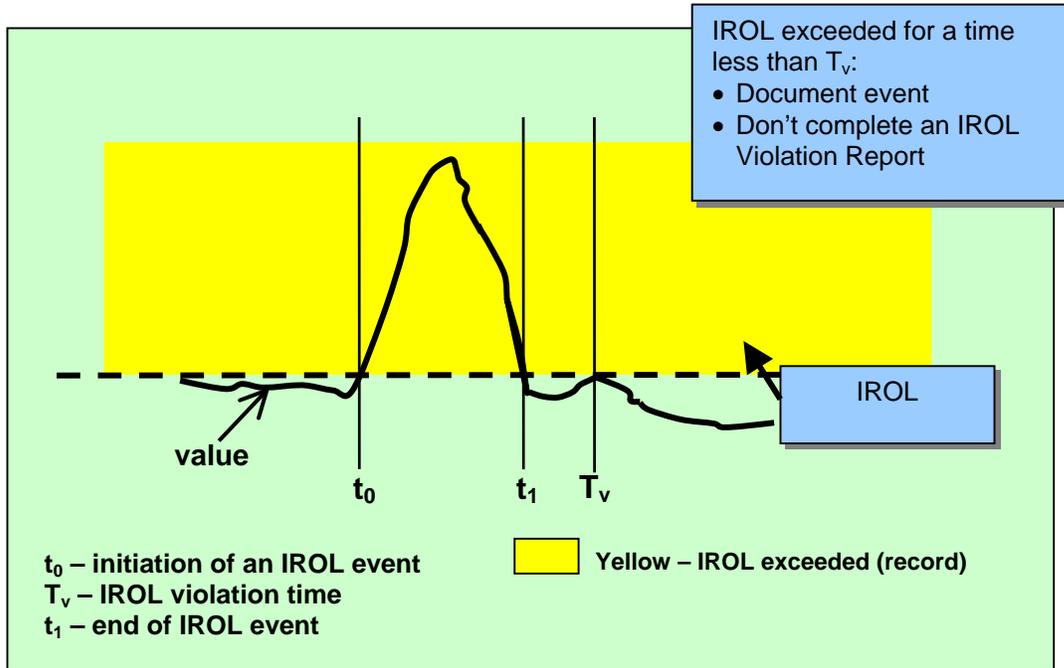
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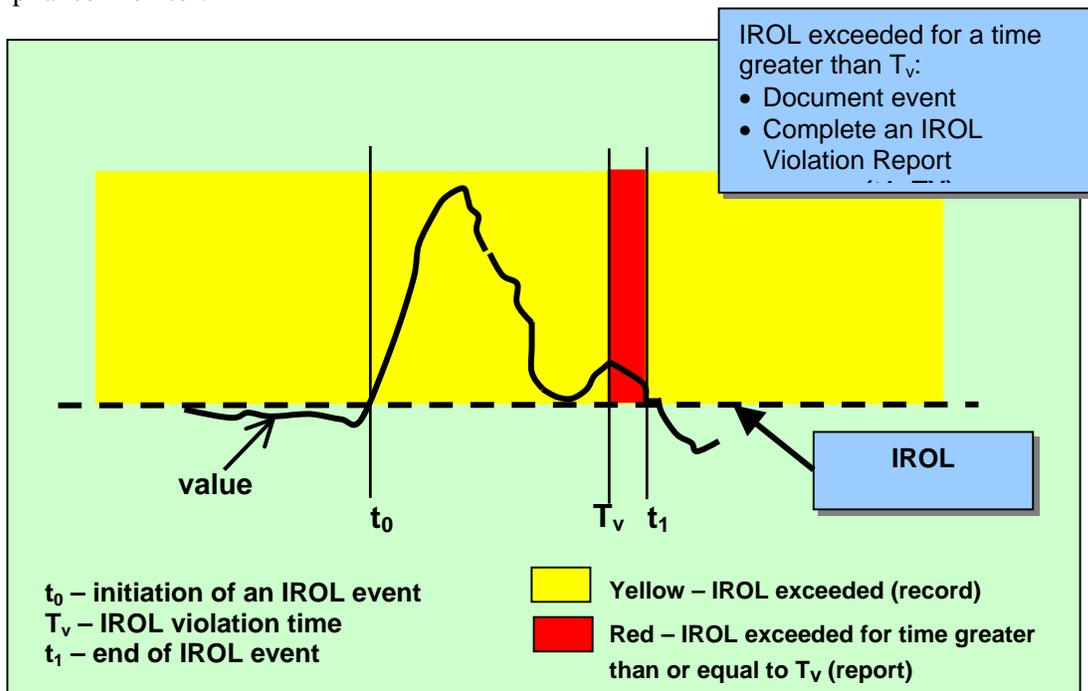


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**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

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<b>STD Commenter Information (For Individual Commenters)</b>	
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<p><b>Key to Industry Segment #'s:</b></p> <p>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</p>
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<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b>	<b>Group Chair:</b>	
	<b>Chair Phone:</b>	
	<b>Chair Email:</b>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>Bill Reinke</i>	<i>SERC</i>	<i>2</i>
<i>Sam Stryker</i>	<i>Fayetteville PWC</i>	<i>3, 4, &amp; 5</i>
<i>Carter Edge</i>	<i>SEPA</i>	<i>4 &amp; 5</i>
<i>Bill Thompson</i>	<i>Dominion Transmission</i>	<i>1</i>

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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

- **Operational Planning analyses are conducted for time periods up to 13-months into the future. Please revise the definition as follows:**

Operational Planning Analysis: “ .... An operational planning analysis is done for the next day’s operation and up to 13-months ahead of the expected conditions.”

- **The Transmission Owner has fiduciary responsibility for its owned facilities. Therefore he has ultimate responsibility and liability for owning, maintaining and operating his facilities. The Transmission Owner then is ultimately responsible for establishing system operating limits, including Tv, for his facilities. Therefore, the definition of Tv should be revised to:**

“Tv: The violation time associated with a limit that is determined by the Transmission Owner(s) for equipment-based limits, and by the Reliability Authority and Planning Authority(ies) for system-based limits.”

- **The responsibilities of the RA are to “monitor” the system, not “control” the system. Therefore, we suggest the following change:**

Reliability Authority Area: A defined electrical system bounded by interconnection (tie-line) metering and telemetry monitored by a single reliability authority.

- **Based on the following definitions, we do not believe that the definition of “Documentable Interconnection Reliability Operating Limit Violation” is necessary (is it truly a violation?). It appears that it is identical to the definition of “Interconnection Reliability Operating Limit Event” and the fact that an “event” must be documented is contained in the definition of “Interconnection Reliability Operating Limit”.**

- **Documentable Interconnection Reliability Operating Limit Violation:** An instance of exceeding an interconnection reliability operating limit for any length of time.
- **Interconnection Reliability Operating Limit Event:** An instance of exceeding an interconnection reliability operating limit for any length of time.
- **Interconnection Reliability Operating Limit Violation:** An instance of exceeding an interconnection reliability operating limit for time greater than or equal to Tv.
- **Interconnection Reliability Operating Limit:** A system operating limit that, if exceeded, could lead to instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk transmission system. The reliability authority must log each case of exceeding an interconnection reliability operating limit, and must report (to its compliance monitor) each case of exceeding an interconnection reliability operating limit for a time greater than or equal to Tv. Note that Tv may be zero.

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2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments:

This should not preclude the Transmission Operator(s) from conducting independent analysis.

This draft standard does not recognize that the TO has fiduciary responsibility for its owned facilities and neither NERC standards, nor the Functional Model, can take that responsibility and liability away. This fiduciary responsibility requires the TO to establish thermal ratings, and associated  $T_v$ , for its equipment and then monitor that equipment. If those thermal ratings are the lesser of the thermal, stability or voltage limits, then the TO has established the IROL limit. Therefore, we suggest the requirements identified in this standard are not redundant requirements but are requirements met by several entities (functions), not met by one entity (function).

It should also be acknowledged that entities such as the RA and the TO(s) may delegate their respective monitoring responsibilities to the TOP.

The following is an excerpt from page three of this document: *“This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority.”* For TOs/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. Any defined operating limit, which has been identified as potentially threatening bulk reliability and thereby requiring consistent monitoring and adherence, should be covered by a standard.

### **Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?

Yes                       No

4. Do you agree with the measures?

Yes                       No

5. Do you agree with the compliance monitoring process?

Yes                       No

6. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 201:

The statements in sections 1.1.1 and 1.1.2 imply that the Planning Authority Area is the same size as the Reliability Authority Area. Entities that currently perform planning authority functions do not cover the same geographical area as their respective reliability authorities. The statements should be changed as follows: “The reliability authority and planning authority(ies) shall...”

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity

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as a shared activity between the TO(s), RA, PA(s), TSP, and TOP(s), and recommend all functional entities be identified in Standard 201 part 1.1 and 1.2.

What happens if you identify another (unexpected) limit during real-time that is not on the list? Are you not responsible for this case as well? We all know that planning studies cannot predict all the challenges that are faced in real-time.

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. This Standard could be improved by formatting (where possible) Measurement 2.1 to relate to Requirement 1.1 and Measurement 2.2 to relate to Requirement 1.2, etc. rather than listing the measures and requirements arbitrarily and independently.

In order to tie the OEC's to the Measures, Section 4 should be clarified to read:

4.3. The entity responsible shall have the following Objective Evidence for Compliance available upon the request of its compliance monitor:

- 4.3.1. List of interconnection reliability operating limits for the reliability authority's reliability area **as described in Measure 2.1 above**
- 4.3.2. List of facilities (or groups of facilities) in the reliability authority's reliability area that are subject to interconnection reliability operating limits **as described in Measure 2.2 above**

### **Requirement 202 - Monitoring**

- 7. Do you agree with the requirement?  
 Yes                       No
- 8. Do you agree with the measures?  
 Yes                       No
- 9. Do you agree with the compliance monitoring process?  
 Yes                       No
- 10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO(s) and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 202 be replaced with "reliability authority and transmission owner(s)".

It should also be acknowledged that entities such as the RA and the TO(s) may delegate their respective monitoring responsibilities to the TOP(s).

In addition, it appears from the wording of this draft standard Section 202 Monitoring, 1. Requirements, Item 1.1 that the RA is operating the power system. This requirement must be reworded:

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- 1.1. The reliability authority shall monitor real-time system operating parameters to determine if the reliability area is operating within its interconnection reliability operating limits.

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3.1 is too specific for the measures it supports. It may be a practical solution that the real-time data and interconnection reliability operating limits be made available to operators in the form of a “display”, however this solution is not prescribed in the measures and should not be listed exclusively.

We suggest that section 4.3.1 be rewritten to read:

- 4.3.1. Process used for monitoring and comparing real time data associated with interconnection reliability operating limits in accordance with Measure 2.3 above. This may be accomplished through the use of an operator display and should demonstrate compliance with Measures 2.1 and 2.2.

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### Requirement 203 - Analyses and Assessments

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO(s) and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 203 be replaced with "reliability authority and transmission owner(s)".

In addition, it appears from the wording of this draft standard Section 203 Analysis and Assessments, 1. Requirements, Item 1.1 that the RA is operating the power system. This requirement must be reworded:

- 1.1. The reliability authority shall perform operational planning analyses to verify that the planned bulk electric system operations will not exceed any of its interconnection reliability operating limits.

The wording of Item 1.2 should also be revised to make it clear the RA and TO(s) verify the power system operation is not exceeding IROL limits:

- 1.2. The reliability authority shall perform real-time assessments to verify that **the power system** it is not exceeding any interconnection reliability operating limits. **The transmission owner(s) shall perform real-time assessments to verify its equipment is not exceeding any interconnection reliability operating limits.**

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be rewritten to read:

- 4.3. **The reliability authority shall demonstrate in accordance with Measure 2.1, the following upon the request of the compliance monitor:**
- 4.3.1. **Ability to perform an operational planning analysis**  
4.3.2. **Ability to perform a real time assessment**

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### Requirement 204 - Actions

15. Do you agree with the requirement?

Yes                       No

16. Do you agree with the measures?

Yes                       No

17. Do you agree with the compliance monitoring process?

Yes                       No

18. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 204:

We have a general concern that the Reliability Authority is the only function held responsible for instances where the IROL is exceeded. Currently, not all RAs have operating responsibility over their systems. Some functions are delegated. With this in mind, the levels of non-compliance would pertain only to RAs, while they may not have direct control. For instance, the operating entities could choose not to follow the RA's direction. It seems that there should be a complementary standard that would penalize operating entities for not adhering to the direction of the RA. The penalties should be ranked according to the severity of the situation. In other words, the entities that actually have the operating responsibility must be held accountable.

Has the Interconnection Reliability Operating Limit Violation Report been developed yet? Is this the existing NERC Operating Policy 5, Appendix 5F as modified with the results of the Reliability Coordinator IRLV Field Test? Will this report become part of this standard?

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

In section 2, the measures do not capture the requirement to PREVENT instances where IROLs may be exceeded. The following re-wording is suggested. Section 4, below is also slightly modified to align with change in the measurement.

**2.1. The reliability authority shall document each instance where actions are taken to prevent exceeding or to mitigate the magnitude and duration of interconnection reliability operating limit:**

2.1.1. The reliability authority shall document, via an operations log or other data source, the actions taken or directives issued, the magnitude of the event, and the duration of the event. (This data may be from an operating log, may be from the entity's energy management system, or may be from some other source.)

2.2. The reliability authority shall report each instance of exceeding an interconnection reliability operating limit for time greater than or equal to  $T_v$ :

2.2.1. The reliability authority shall complete an Interconnection Reliability Operating Limit Violation Report and shall file the report with its compliance monitor within five business days of the initiation of the event. (The report includes the date and time of the event, identification of which interconnection reliability operating limit was violated and the  $T_v$  for that limit, magnitude

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and duration of exceeding the interconnection reliability operating limit, actions taken or directives issued, and explanation of results of actions or directives.)

4.3. The reliability authority shall have the following available upon the request of its compliance monitor:

4.3.1. Operations logs or other documentation **in accordance with Measure 2.1 indicating the magnitude and duration of each interconnection reliability operating limit event** and the actions or directives issued for each of these instances

4.3.2. Interconnection Reliability Operating Limit Violation Reports **completed in accordance with Measure 2.2**

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes  No

20. Do you agree with the measures?

Yes  No

21. Do you agree with the compliance monitoring process?

Yes  No

22. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 205:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO(s) and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 205 be replaced with "reliability authority and transmission owner(s)".

The requirement for data collection should be tied to its impact on reliability. Requirement 1.3 should be modified to read:

1.3. The reliability authority shall notify its compliance monitor when an entity that has facilities monitored by the reliability authority does not provide data as specified **and this lack of data has an impact on reliability.**

Measurement 2.3.1 should be rewritten to read:

2.3.1. The notification shall take place within five business days of discovering that the data **having an impact on reliability** is missing.

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In order to prevent a shotgun approach to data collection we propose Section 2.1.1 be modified to read:

- 2.1.1. Specification shall include a list of **minimum** required data, a mutually agreeable format, and timeframe and periodicity for providing data.

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be rewritten to read:

- 4.3. The reliability authority shall have the following available upon the request of the compliance monitor:
- 4.3.1. Data specification(s) **in accordance with Measure 2.1**
- 4.3.2. Proof of distribution of the data specification(s) **in accordance with Measure 2.2**

### **Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO(s) and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 206 be replaced with "reliability authority and transmission owner(s)".

Add planning authority(ies) to the list of functions in section 1.1.1 that have a reliability relationship and shall provide data (particularly results of dynamic analysis) to the reliability authority and transmission owner(s).

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3.1 is too specific for the measure it supports. A possible solution might be:

- 4.3.1. **Documentation** indicating data was sent to the reliability authority **in accordance with Measure 2.1**

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Non-compliance in data submission could take several forms and levels of impact to reliability. Section 5 should be modified as follows:

5. Levels of Non-compliance:

- 5.1. Level one: **Data was provided, but not in the mutually agreed format**
- 5.2. Level two: **Data was provided, but not within the time-frame specified**
- 5.3. Level three: **Incomplete data was provided**
- 5.4. Level four: Data **was** not provided to the reliability authority as specified.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?

- Yes                       No

28. Do you agree with the measures?

- Yes                       No

29. Do you agree with the compliance monitoring process?

- Yes                       No

30. Do you agree with the levels of non-compliance?

- Yes                       No

Comments about Requirement 207:

Please see the comment to question (2), above, concerning the TOs responsibility and role with respect to this standard. If the developers of the standard insist on only one functional entity being responsible for this activity, then that functional entity should be the Transmission Owner. However, we view this activity as a shared activity between the TO(s) and RA. Therefore, we suggest that every occurrence of the term "reliability authority" in all of this section 207 be replaced with "reliability authority and transmission owner(s)".

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. The Levels of non-compliance should be objectively determined based on the evidence.

Measure 2.1 should be modified to include:

- 2.1. The reliability authority shall have a documented action plan that addresses preventing and mitigating instances of exceeding interconnection reliability operating limits. The plan shall **identify and** be coordinated with those entities responsible for acting and with those entities impacted by such actions.

Section 4.3 should be modified to include:

- 4.3. The reliability authority shall make the following available for inspection by the compliance monitor upon request:
  - 4.3.1 Action plan **developed in accordance with Measure 2.1**

Section 5 should be modified to include:

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5. Levels of Non-compliance

- 5.1. Level one: Action plan exists but wasn't coordinated with all involved and impacted entities
- 5.2. Level two: Action plan exists but wasn't coordinated with any involved or any impacted entities
- 5.3. Level three: **Action plan is incomplete**
- 5.4. Level four: No action plan

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?

- Yes                       No

32. Do you agree with the measures?

- Yes                       No

33. Do you agree with the compliance monitoring process?

- Yes                       No

34. Do you agree with the levels of non-compliance?

- Yes                       No

Comments about Requirement 208:

We believe the wording of this draft standard Section 208 Reliability Authority Directives, 1. Requirements, Item 1.1 is restricted to too few entities, needs to be expanded to encompass all functions and users of the power system, should recognize the RA is required to issue directives consistent with applicable tariffs and contract, and the RA is required to use Good Utility Practices. This requirement must be reworded:

**1.1. The reliability authority shall use applicable tariffs, contracts, and Good Utility Practice when directing use of the power system and all users of the power system shall follow the reliability authority's directives to:**

1.1.1.1. Prevent instances where interconnection reliability operating limits may be exceeded

1.1.1.2. Mitigate the magnitude and duration of instances where interconnection reliability operating limits have been exceeded

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. Non-compliance could take several forms and levels of impact to reliability. The Levels of non-compliance should be objectively determined based on the evidence.

Section 4.3.1 should be modified to read:

4.3.1. Operations log or other data source(s) to show the following for each instance of being issued a reliability authority directive relative to an interconnection reliability operating limit:

4.3.1.1. Date and time of each of directive received

4.3.1.2. Directive issued

4.3.1.3. Actions taken in response to directive **in accordance with Measure 2.1**

Section 5 should be modified as follows:

5. Levels of Non-compliance

5.1 Level one: **Operations log or other data source(s) do not show one of the following:**

5.1.1 **Date and time of each of directive received**

5.1.2 **Directive issued**

5.1.3 **Actions taken in response to directive**

5.2 Level two: **Operations log or other data source(s) do not show any of the following:**

5.1.4 **Date and time of each of directive received**

5.1.5 **Directive issued**

5.1.6 **Actions taken in response to directive**

5.3 Level three: Not applicable.

5.4 Level four: Did not follow directives.

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### 35. List any Regional or Interconnection Differences for this standard:

None

### 36. Notifying the Compliance Monitor

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments:** We believe that it is appropriate to include this in the standard with the comments noted in Section 205.

### 37. Any other comments on this standard?

- Please note that throughout the standard the Tv term is used but is not formatted the same (Tv vs. T<sub>v</sub>). This is a minor, formatting issue, but should be consistent throughout to reduce confusion.
- Two definitions should be changed based on our comments:

**Reliability Authority Area:** A defined electrical system bounded by interconnection (tie -line) metering and telemetry **monitored by** a single reliability authority.

**Tv:** The violation time associated with a limit **that is determined by the Transmission Owner(s) for equipment-based limits and by the Reliability Authority and the Planning Authority(ies) for system-based limits.**

- We are becoming increasingly concerned about this standard development process. This and other standards are being developed based on certain definitions and assumptions contained in the Functional Model. These “standards” will become fixed such that the industry will be held accountable to and measured by these standards. However, the Functional Model and the definitions contained in that revised model are changing and will not necessarily be the same as those used to develop the standards. What is the process for reviewing, revising and implementing changes to the Functional Model, and the impact of those changes on all these standards that have been developed based on the old Functional Model? Are the changes to the Functional Model being vetted by all industry

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participants before implementation? What is the process to revise these standards prior to implementing changes to the Functional Model?

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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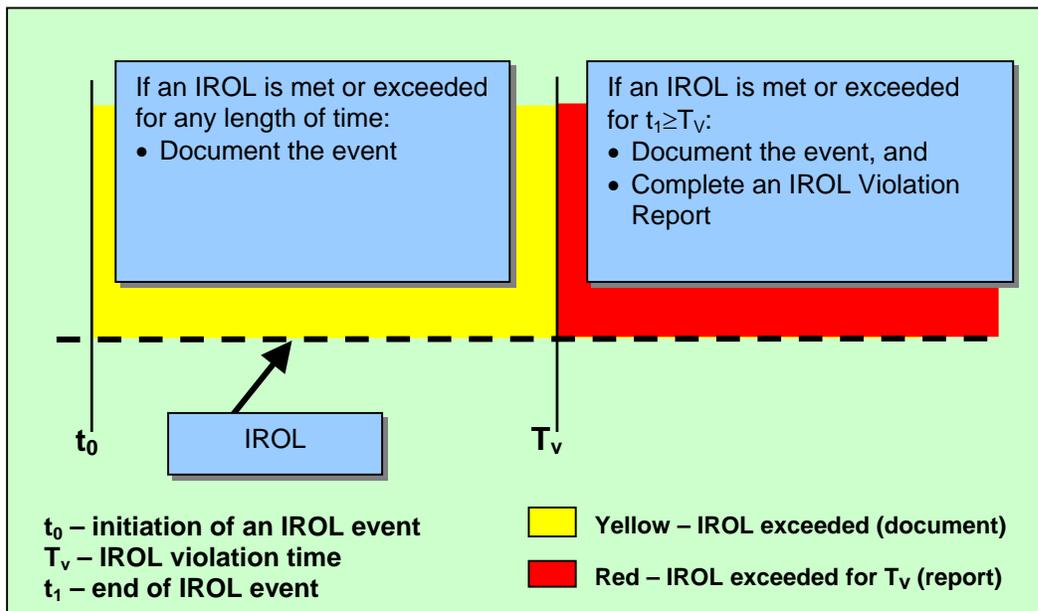
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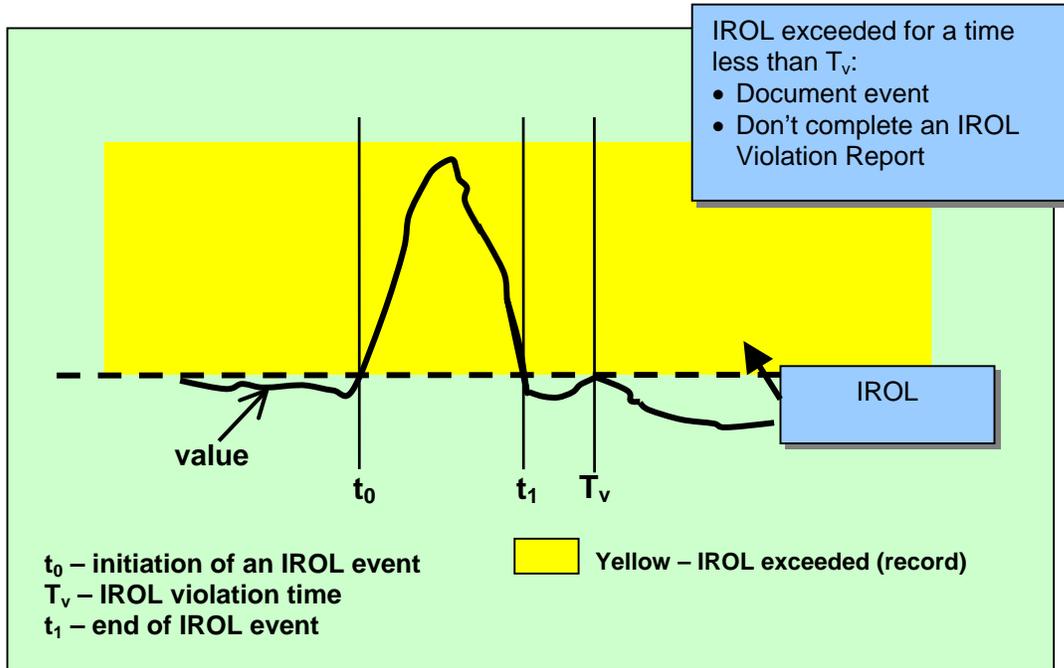
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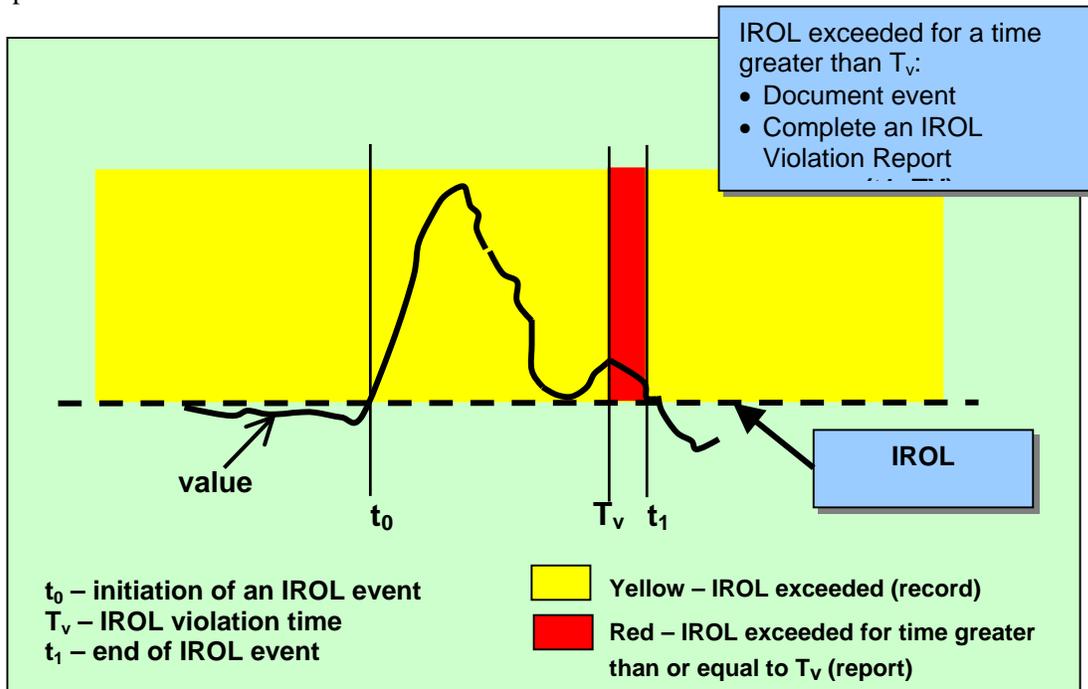


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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
X Yes                     No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                     No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
X Yes                     No
4. Do you agree with the measures?  
 Yes                    X No
5. Do you agree with the compliance monitoring process?  
 Yes                    X No
6. Do you agree with the levels of non-compliance?  
 Yes                    No

Comments about Requirement 201: It is unclear what a “responsible entity” is. Why are the functional model “functions” not specifically referenced in the “Measures” and “Compliance Monitoring Process” sections? Specific functions should be identified to eliminate conflict and dispute.

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
X Yes                     No
8. Do you agree with the measures?  
X Yes                     No
9. Do you agree with the compliance monitoring process?  
X Yes                     No
10. Do you agree with the levels of non-compliance?  
 Yes                    X No

Comments about Requirement 202: Please consider having compliance levels 1 thru 3 for this Requirement. It may be beneficial for reliability to progressively measure adherence to the Requirements for situations where a RA is implementing a phased in start up of operations or transition from existing systems to new systems.

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
X Yes             No
12. Do you agree with the measures?  
X Yes             No
13. Do you agree with the compliance monitoring process?  
X Yes             No
14. Do you agree with the levels of non-compliance?  
X Yes             No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
X Yes            No
16. Do you agree with the measures?  
X Yes            No
17. Do you agree with the compliance monitoring process?  
X Yes            No
18. Do you agree with the levels of non-compliance?  
X Yes            No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes            X No
20. Do you agree with the measures?  
 Yes            X No
21. Do you agree with the compliance monitoring process?  
 Yes            X No
22. Do you agree with the levels of non-compliance?  
 Yes            X No

Comments about Requirement 205: The data obtained through this reliability requirement have significant commercial significance. NERC must ensure that the entities who receive such information have their employees maintain confidentiality of the data from market participants including their affiliated generators, transmission providers, load serving entities, marketers or other relevant market participants. Although a confidentiality agreement or confidentiality requirement is

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not a specific reliability need, NERC must be cognizant of and sympathetic to these commercial concerns in its reliability requirements. The confidentiality agreement itself may be developed and administered through some other standard setting organization.

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207: The requirement is silent on whether the Action Plan must comply with any tariff or market requirements. As written, it is allowable for an RA to submit a "command and control" schedule reduction or load-shedding procedure as its Action Plan to meet this Requirement. Reliant understands that NERC believes such Action Plans have significant commercial consequences and should be developed by other standard setting organizations. However, without the RA and control area operators' agreement that such Action Plans are effective, the industry effort to develop such plans will be slow and cumbersome. Reliant recommends that this SDT coordinate with the appropriate standards setting organization(s) to ensure the Action Plans are effective. Further, this Requirement should include a requirement that these Action Plans are the primary means of mitigating Reliability Operating Limit violations and not a "command and control" or "Emergency" procedure.

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                      X No
32. Do you agree with the measures?  
 Yes                      X No
33. Do you agree with the compliance monitoring process?

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Yes                      X No

34. Do you agree with the levels of non-compliance?

Yes                      X No

Comments about Requirement 208: The RA should have contractual arrangements in place with generators, transmission providers, control area operators and any entity that is required to respond to the "Actions" and "Action Plan" that expressly provides the RA the authority to execute this Requirement.

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

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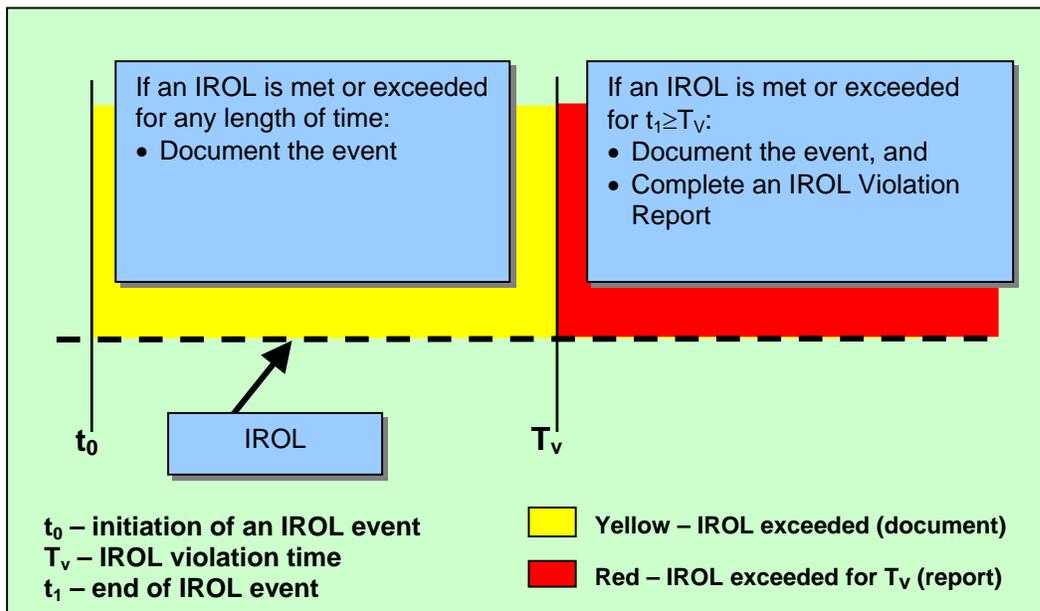
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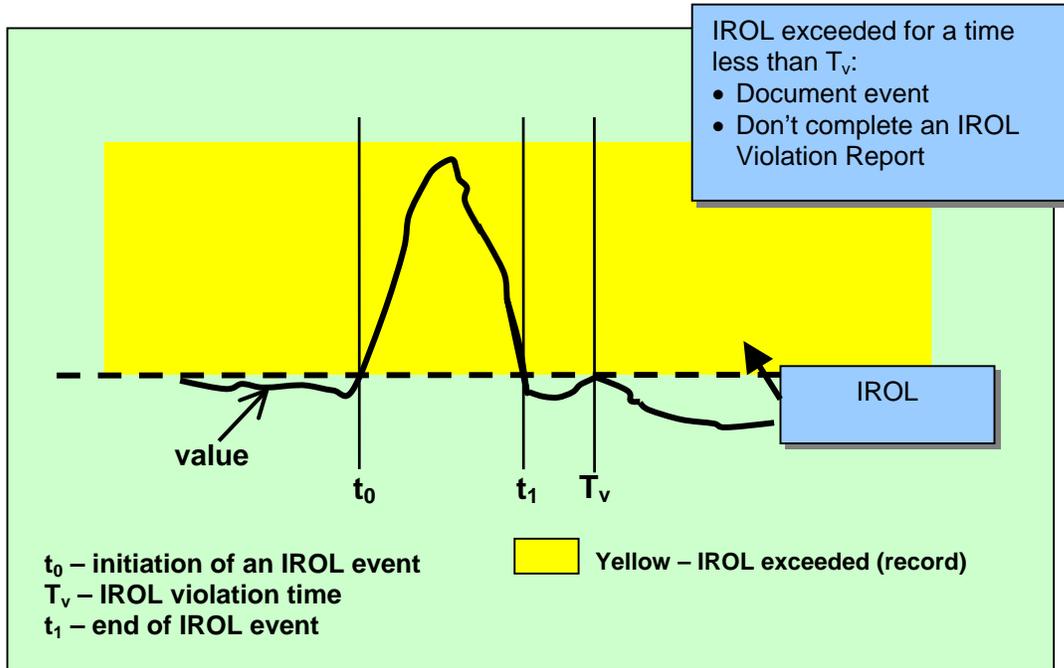
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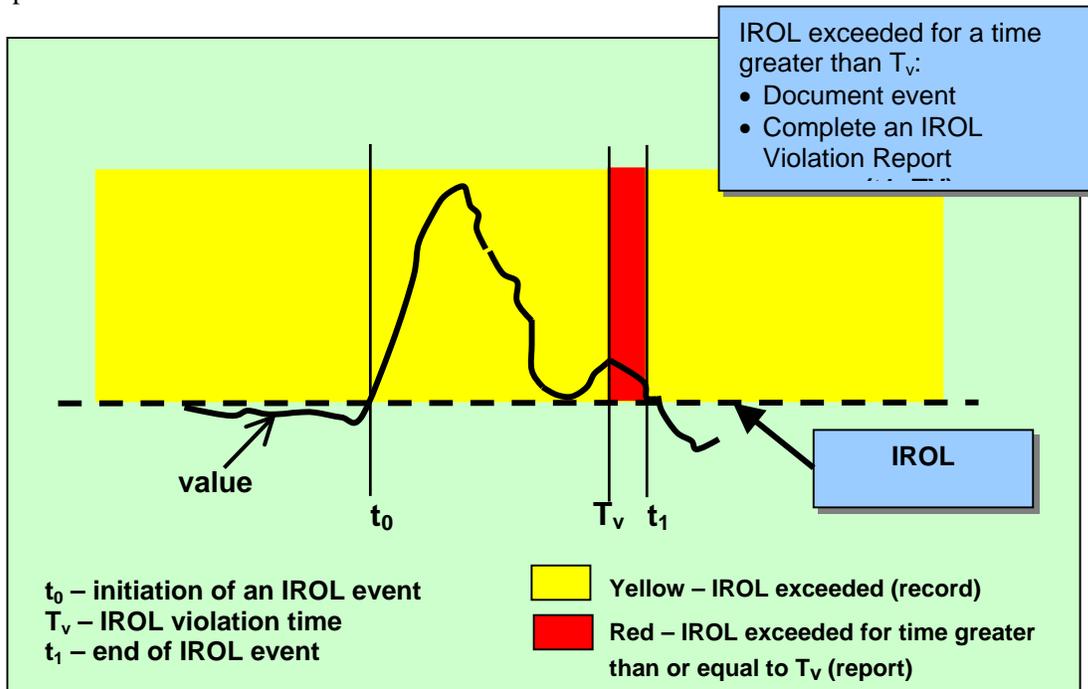


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**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208: **Opinion within ATC was divided over requirement 208. One side could agree with the requirement, its measures, and its monitoring process. The other side could not agree and specifically cited 208.1.2, 208.2.1, and 208.2.2, and those requirements to document directives and actions taken, as onerous.**

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

None.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

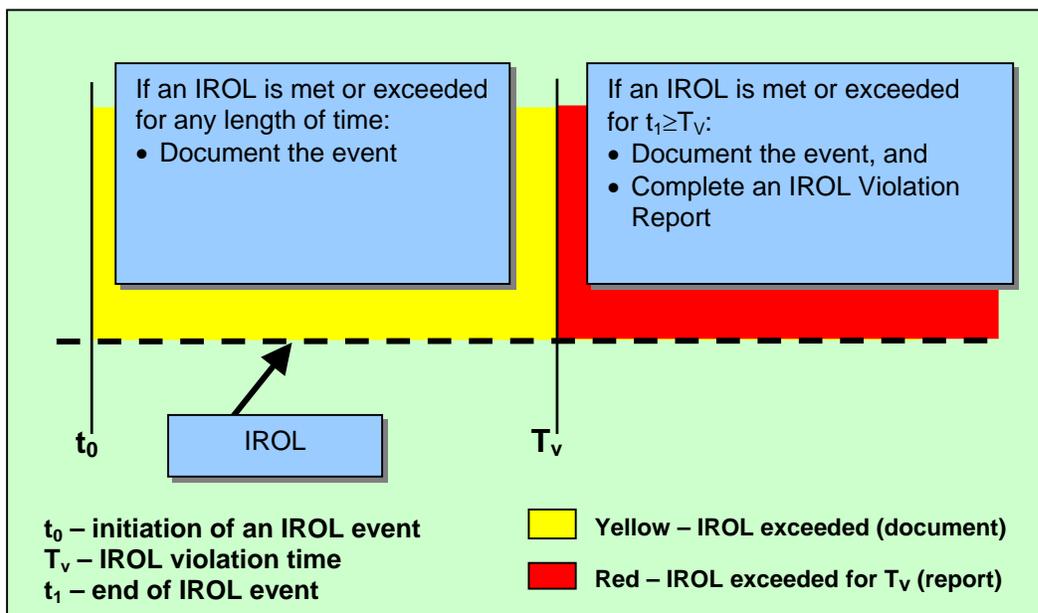
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

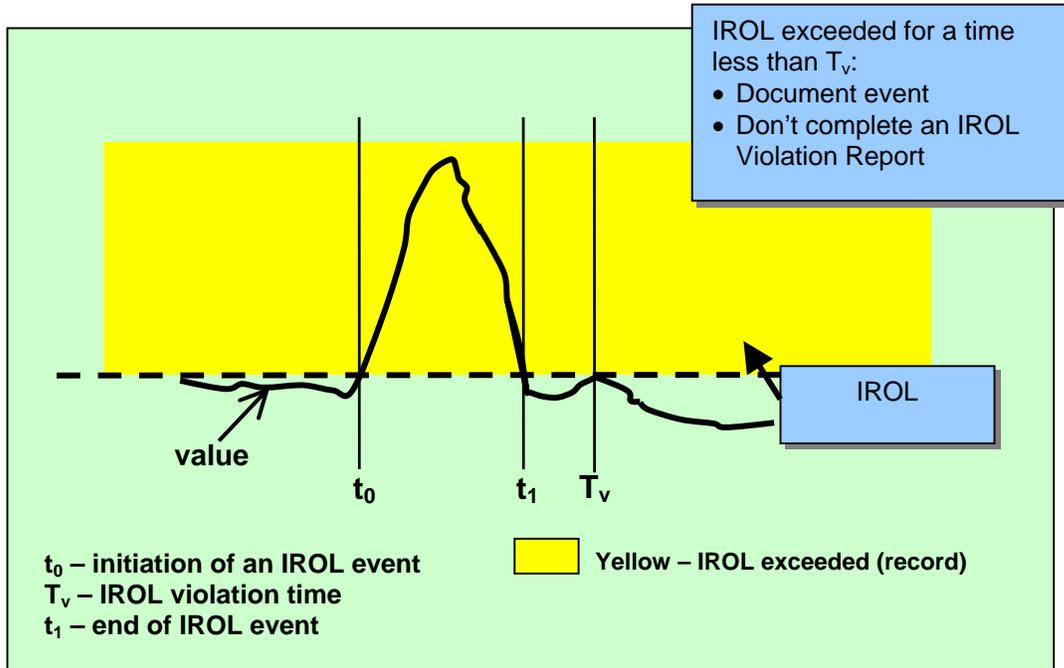
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

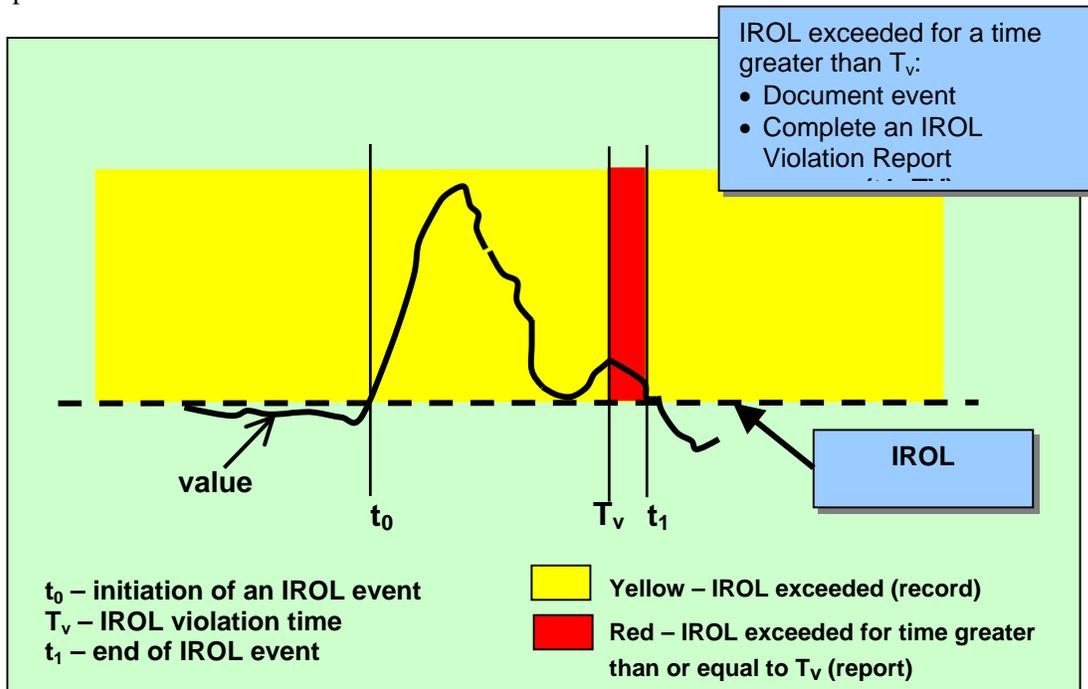


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

<b>STD Commenter Information (For Individual Commenters)</b>		<b>Key to Industry Segment #'s:</b> 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
<b>Name</b>	Monroe Landrum	
<b>Organization</b>	Southern Company	
<b>Industry Segment # 1</b>		
<b>Telephone</b>	205-257-6936	
<b>E-mail</b>	mjlandru@southernco.com	

<b>SAR Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group:</b> <i>Southern Company Transmission Planning</i>		<b>Group Representative:</b> <i>Todd Lucas</i>
		<b>Representative Phone:</b> 404-506-3564
		Representative Email: <b>telucas@southernco.com</b>
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<i>Todd Lucas</i>	<i>Southern Co</i>	<i>1</i>
<i>Joe Payne</i>	<i>Mississippi Power Company</i>	<i>1</i>
<i>Travis Koval</i>	<i>Southern Co</i>	<i>1</i>
<i>Bill Pope</i>	<i>Gulf Power Company</i>	<i>1</i>
<i>John Clark</i>	<i>Southern Co</i>	<i>1</i>
<i>David Johnson</i>	<i>Savannah Electric</i>	<i>1</i>
<i>Mike Miller</i>	<i>Southern Co</i>	<i>1</i>
<i>Jim Griffith</i>	<i>Southern Co</i>	<i>1</i>
<i>Monroe Landrum</i>	<i>Southern Co</i>	<i>1</i>

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.  
The term "Documentable Interconnection Reliability Operating Violation" is never used in the standard and has the same definition as "Interconnection Reliability Operating Event". Likewise, the term "Reportable Interconnection Reliability Operating Violation" is never used in the standard and has the same definition as "Interconnection Reliability Operating Violation". We suggest that the terms "Documentable Interconnection Reliability Operating Violation" and "Reportable Interconnection Reliability Operating Violation" be deleted from the list of definitions.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No

Comments It is not clear to us that the Transmission Operator would never be responsible for performing the requirements included in this standard. Similar to Standard 600, this requirement could apply to "the areas for which they are responsible".

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201: Should Transmission Owner be added to this??

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Comments about Requirement 202: The Transmission Operator should also be included in this requirement for "the areas for which they are responsible".

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203: The Transmission Operator should also be included in this requirement for "the areas for which they are responsible".

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205: The Transmission Operator should also be included in this requirement for "the areas for which they are responsible".

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206: The Transmission Operator should also be included in this requirement for "the areas for which they are responsible".

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### 35. List any Regional or Interconnection Differences for this standard:

We do not currently know of any Regional or Interconnection Differences at this time. However, during the initial phasing in of standards each region may find adopting or developing a different approach provides increased reliability. Therefore, we believe that differences should be considered as they are identified in the future.

### 36. Notifying the Compliance Monitor

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

### 37. Any other comments on this standard?

This standard should not be brought to ballot until the Planning Authority is defined in the Functional Model since the Planning Authority is assigned requirements in this standard.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

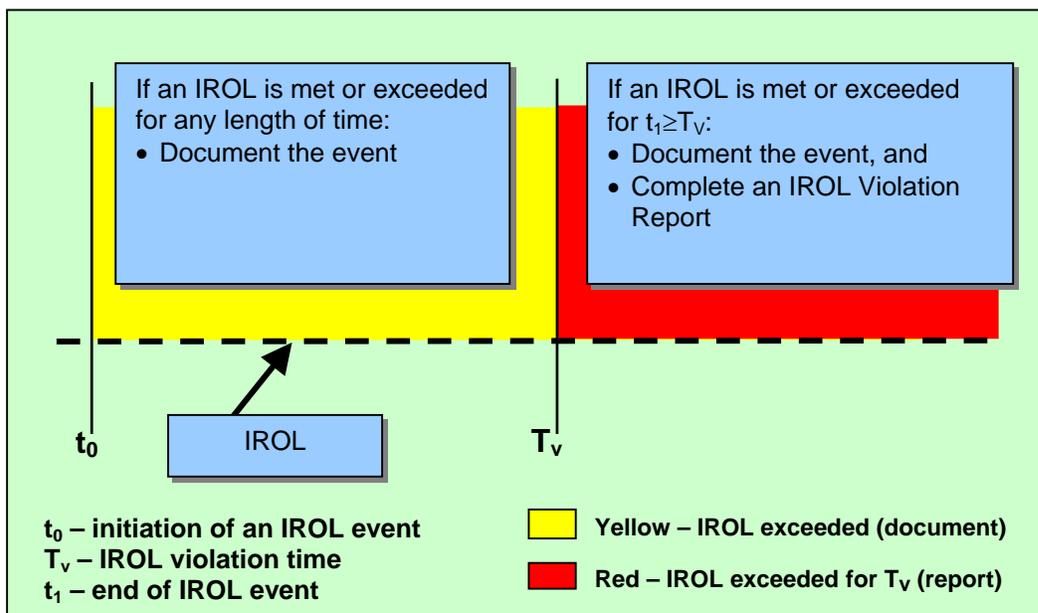
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

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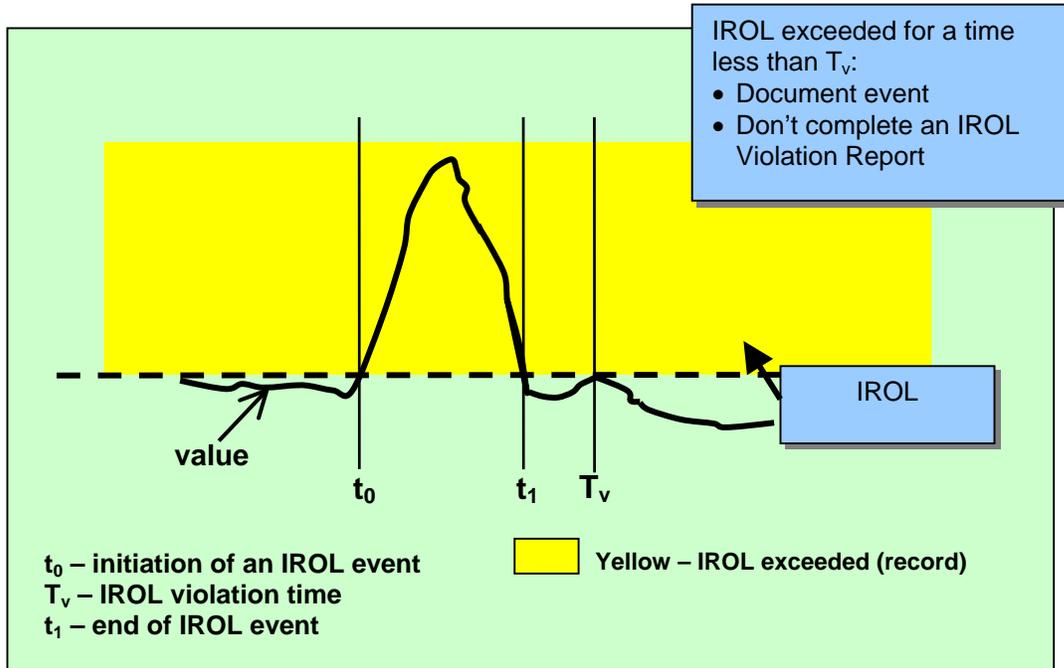
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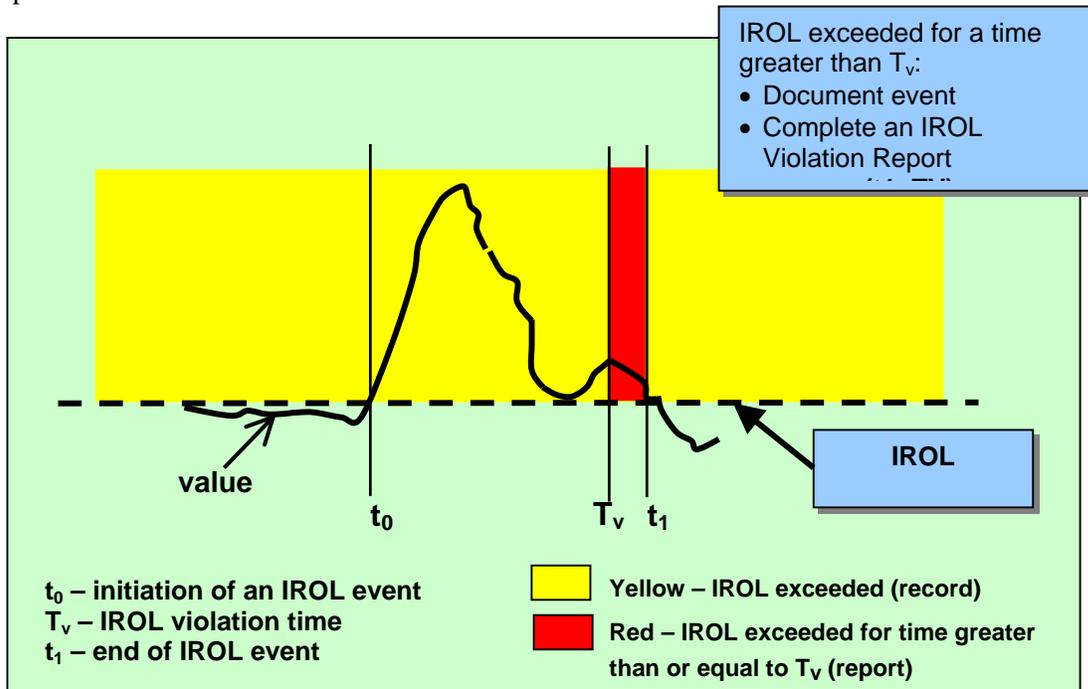


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
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- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

In the definition of **cascading outages** the term “**beyond an area predetermined by appropriate studies**” should be specifically defined. Suggestion: “**beyond the control area of the initial disturbance**”.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments:

Page 3, paragraph 3 says: “**Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages**”. Considering the events leading to the recent blackout, this section may have to be revised. Suggestion: allow a system to exceed local operating limits only if a controlled islanding scheme is in place, which can be shown to prevent cascading for the operating condition in question.

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?

Yes                       No

4. Do you agree with the measures?

Yes                       No

5. Do you agree with the compliance monitoring process?

Yes                       No

6. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 201:

### Requirement 202 - Monitoring

7. Do you agree with the requirement?

Yes                       No

8. Do you agree with the measures?

Yes                       No

9. Do you agree with the compliance monitoring process?

Yes                       No

10. Do you agree with the levels of non-compliance?

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Yes                       No

Comments about Requirement 202:

**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?

Yes                       No

12. Do you agree with the measures?

Yes                       No

13. Do you agree with the compliance monitoring process?

Yes                       No

14. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?

Yes                       No

16. Do you agree with the measures?

Yes                       No

17. Do you agree with the compliance monitoring process?

Yes                       No

18. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes                       No

20. Do you agree with the measures?

Yes                       No

21. Do you agree with the compliance monitoring process?

Yes                       No

22. Do you agree with the levels of non-compliance?

Yes                       No

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Comments about Requirement 205:

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208: [Suggestion: Include generator operator in section 1.1](#)

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

**None**

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
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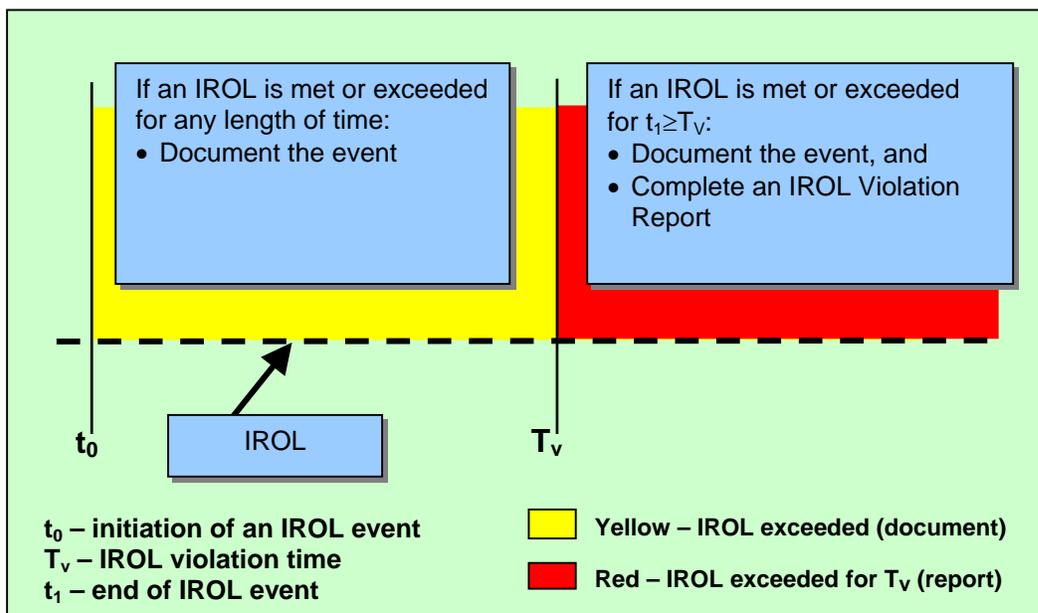
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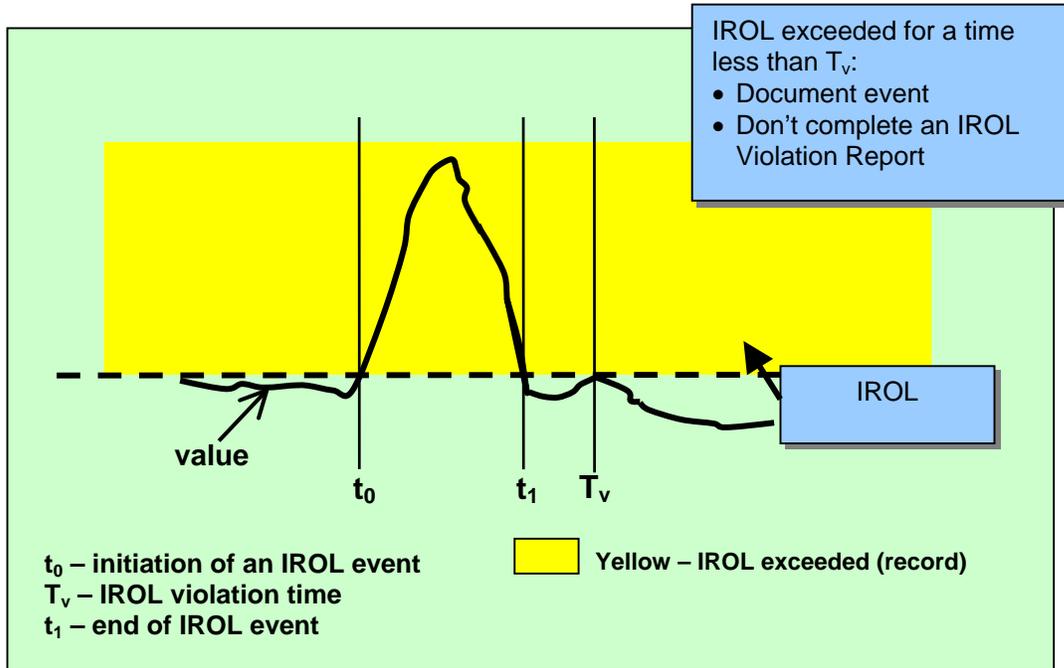
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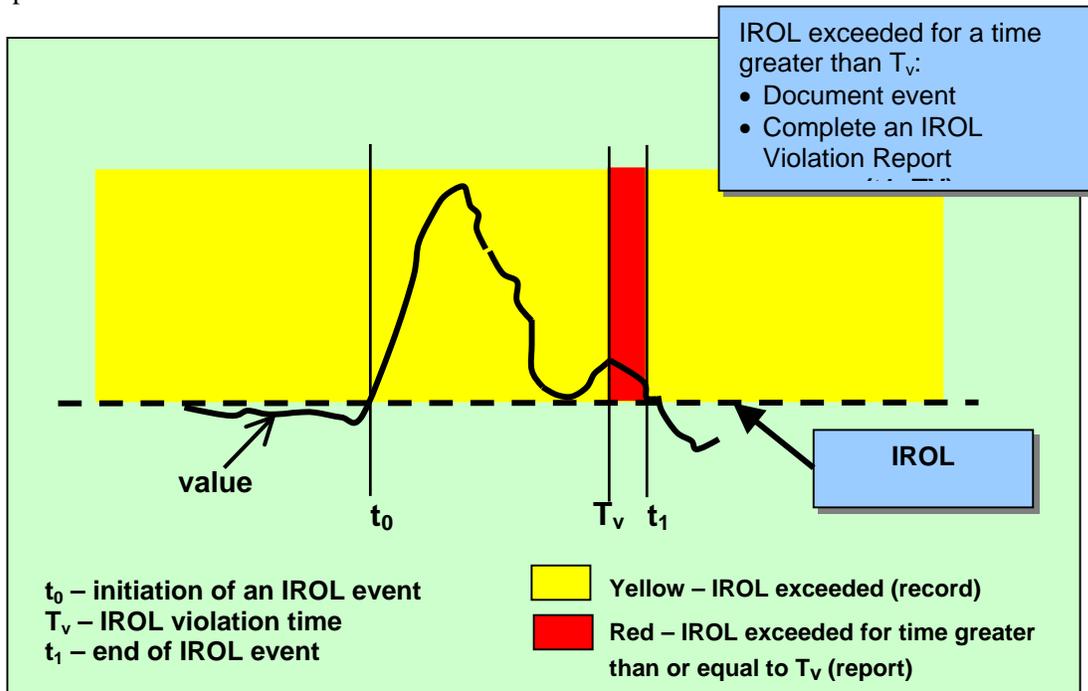


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- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

- **Reliability Authority does not have “control” of the system, but provides direction to the asset owners/operators. Therefore, suggest the following change:**

Reliability Authority Area: A defined electrical system bounded by interconnection (tie-line) metering and telemetry under the direction of a single reliability authority.

- **The definition of “Documentable Interconnection Reliability Operating Limit Violation” appears to be redundant to the definition of “Interconnection Reliability Operating Limit Event.” Suggest deletion of “Documentable Interconnection Reliability Limit Violation.”**
2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments:

This standard should be modified to specify non-redundant requirements for the TO responsibilities for operating within system operating limits or a separate standard created for this issue.

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

The statements in sections 1.1.1 and 1.1.2 imply that the Planning Authority Area is the same size as the Reliability Authority Area. Entities that perform planning authority functions may not cover the same geographical area as their respective reliability authorities. The statements should be changed as follows: “The reliability authority and planning authority(ies) shall...”

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. This Standard could be improved by formatting (where possible) Measurement 2.1 to relate to Requirement 1.1 and Measurement 2.2 to relate to Requirement 1.2, etc. rather than listing the measures and requirements arbitrarily and independently.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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In order to tie the OEC's to the Measures, Section 4 should be clarified to read:

4.3. The entity responsible shall have the following Objective Evidence for Compliance available upon the request of its compliance monitor:

- 4.3.1. List of interconnection reliability operating limits for the reliability authority's reliability area **as described in Measure 2.1 above**
- 4.3.2. List of facilities (or groups of facilities) in the reliability authority's reliability area that are subject to interconnection reliability operating limits **as described in Measure 2.2 above**

**Requirement 202 - Monitoring**

- 7. Do you agree with the requirement?  
 Yes                       No
- 8. Do you agree with the measures?  
 Yes                       No
- 9. Do you agree with the compliance monitoring process?  
 Yes                       No
- 10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

It appears from the wording of this draft standard Section 202 Monitoring, 1. Requirements, Item 1.1 that the RA is operating the power system. This requirement must be reworded:

- 1.1. The reliability authority shall monitor real-time system operating parameters to determine if the reliability area is operating within its interconnection reliability operating limits.

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3.1 is too specific for the measures it supports. It may be a practical solution that the real-time data and interconnection reliability operating limits be made available to operators in the form of a "display", however this solution is not prescribed in the measures and should not be listed exclusively.

Suggest that section 4.3.1 be rewritten to read:

- 4.3.1. **Process used for monitoring and comparing real time data associated with interconnection reliability operating limits in accordance with Measure 2.3 above. This may be accomplished through the use of an operator display and should demonstrate compliance with Measures 2.1 and 2.2.**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

It appears from the wording of this draft standard Section 203 Analysis and Assessments, 1. Requirements, Item 1.1 that the RA is operating the power system. This requirement must be reworded:

- 1.1. The reliability authority shall perform operational planning analyses to verify that the planned bulk electric system operations will not exceed any of its interconnection reliability operating limits.

The wording of Item 1.2 should also be revised:

- 1.2. The reliability authority shall perform real-time assessments to verify that **the power system** it is not exceeding any interconnection reliability operating limits.

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be rewritten to read:

- 4.3. **The reliability authority shall demonstrate in accordance with Measure 2.1, the following upon the request of the compliance monitor:**
- 4.3.1. **Ability to perform an operational planning analysis**  
4.3.2. **Ability to perform a real time assessment**

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No

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18. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 204:

RA should only be penalized if the RA failed to direct action. If an operating entity fails to implement the directed action then the RA should not be penalized (if the RA does not have direct operational control.)

Section 5.4 should be amended to include "and RA failed to direct action."

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be re-written to read:

- 4.3. The reliability authority shall have the following available upon the request of its compliance monitor:
  - 4.3.1. Operations logs or other documentation **in accordance with Measure 2.1** and the actions or directives issued for each of these instances
  - 4.3.2. Interconnection Reliability Operating Limit Violation Reports **completed in accordance with Measure 2.2**

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes  No

20. Do you agree with the measures?

Yes  No

21. Do you agree with the compliance monitoring process?

Yes  No

22. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 205:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3 should be rewritten to read:

- 4.3. The reliability authority shall have the following available upon the request of the compliance monitor:
  - 4.3.1. Data specification(s) **in accordance with Measure 2.1**

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4.3.2. Proof of distribution of the data specification(s) **in accordance with Measure 2.2**

**Requirement 206 - Data Provision**

23. Do you agree with the requirement?

Yes  No

24. Do you agree with the measures?

Yes  No

25. Do you agree with the compliance monitoring process?

Yes  No

26. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 206:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures.

Section 4.3.1 is too specific for the measure it supports. A possible solution might be:

4.3.1. **Documentation** indicating data was sent to the reliability authority **in accordance with Measure 2.1**

Non-compliance in data submission could take several forms and levels of impact to reliability.

Section 5 should be modified as follows:

5. Levels of Non-compliance:

5.1. Level one: **Data was provided, but not in the mutually agreed format**

5.2. Level two: **Data was provided, but not within the time-frame specified**

5.3. Level three: **Incomplete data was provided**

5.4. Level four: Data **was** not provided to the reliability authority as specified.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?

Yes  No

28. Do you agree with the measures?

Yes  No

29. Do you agree with the compliance monitoring process?

Yes  No

30. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 207:

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Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. The Levels of non-compliance should be objectively determined based on the evidence.

Measure 2.1 should be modified to include:

- 2.1. The reliability authority shall have a documented action plan that addresses preventing and mitigating instances of exceeding interconnection reliability operating limits. The plan shall **identify and** be coordinated with those entities responsible for acting and with those entities impacted by such actions.

Section 4.3 should be modified to include:

- 4.3. The reliability authority shall make the following available for inspection by the compliance monitor upon request:
  - 4.3.1 Action plan **developed in accordance with Measure 2.1**

Section 5 should be modified to include:

- 5. Levels of Non-compliance
  - 5.1. Level one: Action plan exists but wasn't coordinated with all involved and impacted entities
  - 5.2. Level two: Action plan exists but wasn't coordinated with any involved or any impacted entities
  - 5.3. Level three: **Action plan is incomplete**
  - 5.4. Level four: No action plan

**Requirement 208 – Reliability Authority Directives**

- 31. Do you agree with the requirement?  
 Yes                       No
- 32. Do you agree with the measures?  
 Yes                       No
- 33. Do you agree with the compliance monitoring process?  
 Yes                       No
- 34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

Generally, the Measures should be tied to the Requirements and the Objective Evidence for Compliance (OEC) should be tied to the Measures. Non-compliance could take several forms and levels of impact to reliability. The Levels of non-compliance should be objectively determined based on the evidence.

Section 4.3.1 should be modified to read:

- 4.3.1. Operations log or other data source(s) to show the following for each

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instance of being issued a reliability authority directive relative to an interconnection reliability operating limit:

- 4.3.1.1. Date and time of each of directive received
- 4.3.1.2. Directive issued
- 4.3.1.3. Actions taken in response to directive **in accordance with Measure 2.1**

Section 5 should be modified as follows:

### 5. Levels of Non-compliance

5.1 Level one: **Operations log or other data source(s) do not show one of the following:**

- 5.1.1 **Date and time of each of directive received**
- 5.1.2 **Directive issued**
- 5.1.3 **Actions taken in response to directive**

5.2 Level two: **Operations log or other data source(s) do not show any of the following:**

- 5.1.4 **Date and time of each of directive received**
- 5.1.5 **Directive issued**
- 5.1.6 **Actions taken in response to directive**

5.3 Level three: Not applicable.

5.4 Level four: Did not follow directives.

### 35. List any Regional or Interconnection Differences for this standard:

None

### 36. Notifying the Compliance Monitor

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments:**

### 37. Any other comments on this standard?

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- Please note that throughout the standard the  $T_v$  term is used but is not formatted the same ( $T_v$  vs.  $T_v$ ). This is a minor, formatting issue, but should be consistent throughout to reduce confusion.



Mr. Timothy R. Gallagher  
Director-Standards  
North American Electric Reliability Council  
116-390 Village Boulevard  
Princeton, New Jersey 08540

Re: Comments by the Independent Electricity Market Operator (IMO) to Posted NERC Standards:

Dear Mr. Gallagher,

The Independent Electricity Market Operator (IMO) respectfully submits the following comments, to the following posted Standards.

1. **NERC Standard 200, “Monitor and Assess Short Term Transmission Reliability-Operate Within Limits”**
2. **NERC Standard 300, “Balance Resources and Demand”**
3. **NERC Standard 600, “Determine Facility Ratings, System Operating Limits and Transfer Capabilities”**

**General comments to all standards posted to date:**

The first concerns the repeated insertion of the monetary “Sanctions Table.” Sanctions in whatever form have no direct relevance to the reliability standard being developed. They belong in a stand-alone document, endorsed by NERC and the Regions, that specifically address the enforcement process of the standards. Furthermore monetary sanctions have not been broadly endorsed, and this continues to be an outstanding issue with all posted standards to date. It is the IMO's opinion that these references must be removed

The second deals with the need for supporting documentation, such as provided for the Balancing Resources and Demand standard, that clearly articulates the "principles" and/or "objective" that each drafting team used in developing each specific standard and measure. This would greatly aid, particularly during the standard development stages, in understanding the "intent" of the DRAFT standard, which tends to be written in generic terms.

Other comments to specific language in the Standards follow:

**1. NERC Standard 200, “Monitor and Assess Short Term Transmission Reliability-Operate Within Limits”**

Definitions:

$T_v$ : The violation time associated with a limit.

This definition seems to reflect the compliance violation time frame, but the usage of the  $T_v$  term in the draft standard is the "maximum acceptable response time" as determined by the RA/PA.

BPS (Bulk Power System) - Definition for BPS is required.

Sections 201 IROL Identification, requirements and measures read as follows:

**1. Requirements**

- 1.1. The reliability authority and planning authority shall identify and document which facilities (or groups of facilities) in the reliability authority's reliability area are subject to interconnection reliability operating limits.
- 1.2. The reliability authority and planning authority shall identify each interconnection reliability operating limit within the reliability authority's reliability area.
  - 1.2.1. The reliability authority or planning authority shall identify a maximum response time (Tv) for any interconnection reliability operating limit that does not already have a Tv.

**2. Measures**

- 2.1. The entity responsible shall establish a list of interconnection reliability operating limits for the reliability authority's reliability area.
  - 2.1.1. The entity responsible shall establish a maximum response time (Tv) for any interconnection reliability operating limit that does not already have a Tv.
- 2.2. The entity responsible shall establish a list of facilities (or groups of facilities) in the reliability authority's reliability area that are subject to interconnection reliability operating limits

IMO believes that the present definition of Tv, which is "self-defined, as so broad that the re-preparation time of thirty minutes has been lost. It is unclear if this was indeed the intent based on Section 203 requirements 1.1 and 1.2 and measure 2.1.2.

In Section 201 (1.2.1):

- the reliability authority or planning authority identifying Tv must establish and present the process through which Tv is derived, or the re-preparation time of thirty minutes should become the standard default absent such a process.
- the reliability authority or planning authority identifying Tv in one region/area must have a peer review and dispute resolution process with its' neighboring region(s)/area(s) to ensure a mutually acceptable Tv. Additionally, Section 1.1 suggests the need for a demonstrated process to "... identify and document which facilities (or groups of facilities) in the reliability authority's reliability area are subject to interconnection reliability operating limits." The mechanism to determine this critical element of the definition cannot be left open-ended. Without a recognized and accepted process, significant inconsistencies will result throughout the Interconnections.

A further concern with the draft is the continuing difficulty of defining wide area impact versus local impact. As the Standard defines "Cascading Outages":

**Cascading Outages:** The uncontrolled successive loss of system elements triggered by an incident at any location. Cascading results in widespread service interruption, which cannot be restrained from sequentially spreading beyond an area predetermined by appropriate studies.

There is no guidance on how the parameters are to be defined which would permit the identification of the local area and the widespread area. It also fails to recognize that a local area problem may evolve into a wider area problem depending on the load, time of day, recent contingencies and other factors. A well defined process for determining what is (and what is not) a reportable event is essential.

## Section 202 Monitoring read as follows

### 1. Requirements

- 1.1. The reliability authority shall monitor real-time system operating parameters to
- 1.2. Determine if it is operating its reliability area within its interconnection reliability operating limits.

### 2. Measures

- 2.1. The reliability authority shall have interconnection reliability operating limits available for its operations personnel's real-time use.
- 2.2. The reliability authority shall have real-time data available in a form that system operators can compare to the interconnection reliability operating limits.
- 2.3. The reliability authority shall monitor system operating parameters and compare these against its interconnection reliability operating limits.

The term "real-time" as used in the above lacks clarity in defining how well the RA monitors data ( ie how often - every 2 sec; 10 seconds, etc). As an example a RA may sample data instantly (real time), but only monitor once every 30 minutes. It is IMO's view, such sampling frequency satisfies the above measures, however, its adequacy for maintaining system reliability must be questioned.

## Section 203 Analysis and Assessment

### 1. Requirements

- 1.1. The reliability authority shall perform operational planning analyses to verify that its planned bulk electric system operations will not exceed any of its interconnection reliability operating limits.
- 1.2. The reliability authority shall perform real-time assessments to verify that it is not exceeding any interconnection reliability operating limits.

### 2. Measures

- 2.1. The reliability authority shall identify operating situations or events that impact its ability to operate its reliability area without exceeding any identified interconnection reliability operating limits.
  - 2.1.1. The reliability authority shall conduct an operational planning analysis at least once each day, evaluating the next day's projected system operating conditions
  - 2.1.2. The reliability authority shall conduct a real-time assessment periodically, but at least once every 30 minutes.

The standard must provide a clear distinction between i) how often IROL's, are assessed, whether in real time or for operational planning analyses and ii) how quickly an IROL violation must be resolved. Requirement 1.2 "..... **to verify** that it is not exceeding any interconnection reliability operating limits" can be, in IMO's opinion, interrupted as to how quickly an IROL violation must be resolved...ie: each time it is detected in real-time, which shall be within 30 minutes or less in accordance with measure 2.1.2. This requirement belongs in section 201.

## Section 204 Actions

### 1. Requirements

- 1.3. The reliability authority shall act1 or direct others to act to:
  - 1.3.1. Prevent instances where interconnection reliability operating limits may be exceeded
  - 1.3.2. 1.1.2. Mitigate the magnitude and duration of instances where interconnection reliability operating limits have been exceeded

- 1.4. The reliability authority shall document instances of exceeding interconnection reliability operating limits and shall document and complete an Interconnection Reliability Operating Limit Violation Report for instances of exceeding interconnection reliability operating limits for time 2 greater than or equal to Tv.

A further concern with the draft is the continuing difficulty of defining wide area impact versus local impact and the actions that are to be taken in such situations. As the Standard defines “Cascading Outages”:

**Cascading Outages:** The uncontrolled successive loss of system elements triggered by an incident at any location. Cascading results in widespread service interruption, which cannot be restrained from sequentially spreading beyond an area predetermined by appropriate studies.

In Section 201 there is no guidance on how the parameters are to be defined which would permit the identification of the local area and the widespread area. Further, fails to recognize that a local area problem or an "out of scope coverage" may evolve into a wider area problem depending on the load, time of day, recent contingencies and other factors. A well-defined process for determining what is (and what is not) a reportable event is essential. While, Section 204 fails to identify what actions are to be taken in such "out of scope coverage" situations.

## **2. NERC Standard 300, “Balance Resources and Demand”**

The IMO fully supports the comments put forth by NPCC - entitled “NPCC Comments On The NERC Balancing Standard,” which details numerous concerns with the methodology of the proposed new standard for frequency control.

## **3. NERC Standard 600, “Determine Facility Ratings, System Operating Limits and Transfer Capabilities”**

Refer to the attached STD Comment form for "**Determine Facility Ratings, System Operating Limits and Transfer Capabilities**"



*Ron Falsetti*

IMO Reliability Compliance Program  
Independent Electricity Market Operator (IMO)

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**Comment Form – 1st Posting of the draft ‘Determine Facility Ratings, System Operating Limits, and Transfer Capabilities’ Standard**

*Note – This form is to be used to comment on version 1 of the Determine Facility Ratings, System Operating Limits, and Transfer Capabilities Standard.*

*Comments will be accepted from July 1 – August 29, 2003.*

**Please review the draft standard and answer the questions in the yellow boxes. Send completed comment forms to [sarcomm@nerc.com](mailto:sarcomm@nerc.com)**

*If you have questions, please call Tim Gallagher at 609-452-8060 or send a question to [timg@nerc.com](mailto:timg@nerc.com)*

**SAR Commenter Information (For Individual Commenters)**

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**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



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each of these pairs, the draft standard requires the development and availability of a “methodology” to determine the required quantities and secondly the application of this methodology in the establishment and communication of these values to the users of the values. These standards were developed assuming that the Facility Ratings, System Operating Limits and Transfer Capability values are to be provided to the user (e.g. those entities performing the reliability authority, planning authority, and transmission operator functions) on a schedule established by the *user*. The SDT endeavored to ensure that this draft standard would not require the determination of various values that had no identified user. For this reason, the user of the various values must request the specific values from the value provider (e.g. those entities performing the facility owner and planning authority functions) through the establishment of a schedule to supply the data.

### **Levels of Noncompliance:**

In the three ‘methodologies’ sections (601, 603, 605), the levels of noncompliance are based upon the availability and completeness of the documented procedures. In the three ‘communication’ sections (602, 603, 605), the levels of noncompliance are based on the availability of the values requested by the users of the information and the consistency of these values with the documented methodologies.

### **Sanctions:**

The SDT believes that failure to comply with the three ‘methodologies’ sections (601, 603, 605) does not warrant monetary sanctions, since the methodologies themselves would not directly impact the reliable operation of the transmission system.

The unavailability of Facility Rating *values*, System Operating Limit *values* and to a lesser extent, Transfer Capability *values* will have a real and detrimental impact on the real time reliability of the transmission system as well as the validity of transmission plans for future transmission system additions. Therefore, the three ‘communication’ sections (602, 604, 606) include monetary sanctions for repeated and/or significant noncompliance as per the sanction table. The SDT believes that nominal, fixed dollar sanctions are appropriate in these cases. The application of ‘per MW’ variable sanctions would be inappropriate for these infractions compared to the consequences of violating the requirements of the standard. While the SDT realizes that a minor omission of a requested value could result in sanction, the SDT also believes that graduated sanctions based upon the level of ‘completeness’ of the data received by the users are impractical. The SDT is of the opinion that not all values have equal importance to the reliability of the transmission system, and therefore, sanctions based upon ‘percentage of requested data received’ (perhaps omitting values of specific critical limitations) would be arbitrary.

### **Relationship with “Operate Within Limits” Standard:**

The SDT suggests that this draft standard be reviewed in concert with the “Operate Within Limits” draft standard. The Facility Ratings, System Operating Limits, and Transfer Capabilities draft standard requires the availability and usability of these data. The Operate Within Limits standard addresses the use of a subset of these values in real time operation. The SDT believes that the definitions developed in conjunction with this standard do not prohibit the stratification, or sub-classification, of the requested data (Facility Ratings, System Operating Limits, Transfer Capabilities) for specific uses or users. The intent and purpose of this standard, however, is to identify *all* system operating limits and not to differentiate them based upon the impacts of violating them.

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**1. This standard assumes that the reliability authority has the ultimate responsibility to establish system operating limits and relies upon the transmission operator for input. Have the roles and responsibilities of transmission operators versus reliability authorities in determining system operating limits been properly characterized in this standard?**

Yes

No

Comments

**2. Do you agree that identifying and communicating all system operating limits is within the scope of this standard and is necessary for reliability?**

Yes

No

Comments

**3. NERC Regions have the right to ask for Regional differences for inclusion in NERC standards. Such differences would apply only to the listed Region and would become an enforceable part of the NERC standard only if approved by the industry. NPCC has requested a Regional difference in section 603. Do you think NPCC’s Regional difference should be included in this standard?**

Yes

No

Comments The NPCC criteria is more stringent than the NERC standard.

**4. Are you aware of any other Regional differences that should be included in this standard?**

Yes

No

Comments Possibly ERCOT and WSCC will have differences.

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**5. Do you agree with the sanction philosophy in this standard? (No financial penalties for methodology violations, nominal fixed monetary penalties for failure to communicate values).**

Yes

No

Comments Financial penalties should not be applied. This would open the gate to financial penalties for the many, much more severe violations addressed in other standards. The IMO feels that non-monetary sanctions are sufficient.

**6. Do you agree with the proposed requirements and measurements in section 601?**

Yes

No

Comments

**7. Do you agree with the proposed compliance monitoring process in section 601?**

Yes

No

Comments

**8. Do you agree with the proposed levels of non-compliance in section 601?**

Yes

No

Comments See general comment below

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**9. Do you agree with the proposed requirements and measurements in section 602?**

Yes

No

Comments

**10. Do you agree with the proposed compliance monitoring process in section 602?**

Yes

No

Comments

**11. Do you agree with the proposed levels of non-compliance in section 602?**

Yes

No

Comments The levels do not seem to follow any progression which would suggest increasing severity. Why is failure to have all ratings for existing facilities any different than not having all ratings for new facilities: level 1 as opposed to level 2? Either you have ratings or not.

**12. Do you agree with the proposed requirements and measurements in section 603?**

Yes

No

Comments

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**13. Do you agree with the proposed compliance monitoring process in section 603?**

Yes

No

Comments

**14. Do you agree with the proposed levels of non-compliance in section 603?**

Yes

No

Comments See general comment below

**15. Do you agree with the proposed requirements and measurements in section 604?**

Yes

No

Comments

**16. Do you agree with the proposed compliance monitoring process in section 604?**

Yes

No

Comments

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**17. Do you agree with the proposed levels of non-compliance in section 604?**

Yes

No

Comments See general comment below

**18. Do you agree with the proposed requirements and measurements in section 605?**

Yes

No

Comments

**19. Do you agree with the proposed compliance monitoring process in section 605?**

Yes

No

Comments

**20. Do you agree with the proposed levels of non-compliance in section 605?**

Yes

No

Comments The level 2 and 3 violations seem more severe than the violation addressed in level 4.

**21. Do you agree with the proposed requirements and measurements in section 606?**

Yes

No

Comments

**Comment Form – 1st Posting of the draft ‘Determine Facility Ratings, System Operating Limits, and Transfer Capabilities’ Standard**

---

**22. Do you agree with the proposed compliance monitoring process in section 606?**

Yes

No

Comments

**23. Do you agree with the proposed levels of non-compliance in section 606?**

Yes

No

Comments See general comment below

**24. What additional clarification, details, or modifications to this standard are necessary before it can be brought to ballot?**

Comments All the sanctions text should be removed, as they are dealt with elsewhere.

**25. Please enter any other comments you have regarding this standard in the space below.**

Comments

The proposed non-compliance levels for all these standards do not follow a natural progression. They seem to be somewhat contrived and slotted into the 4 levels.

601.4.2.2 - 10 years seems rather infrequent. Should provide opportunity for some verification when ratings change.

601.4.3, 602.4.4, 604.4.4, 606.4.4 - 3 years may not be long enough, given the typical timelines required to resolve differences.

603 Table I Note a) – reference is made to NERC Planning Standards – Will these still exist after the new family of standards are in place.

603 Table IA

– The NERC standard permits this table to be included here, but is it really necessary to have it here, other than for information purposes. At the NERC level, would it be sufficient to just note

**Comment Form – 1st Posting of the draft ‘Determine Facility Ratings, System Operating Limits, and Transfer Capabilities’ Standard**

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that NPCC has more stringent criteria and refer the reader to the NPCC standards.

- In the 2<sup>nd</sup> row, for “Cascading outages”, superscript “f” should be “c”. Under category C, for “Double Circuit Tower” (item #3) superscript “e” should be “f”
- Note “e” text requires reformatting to remove blank line.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
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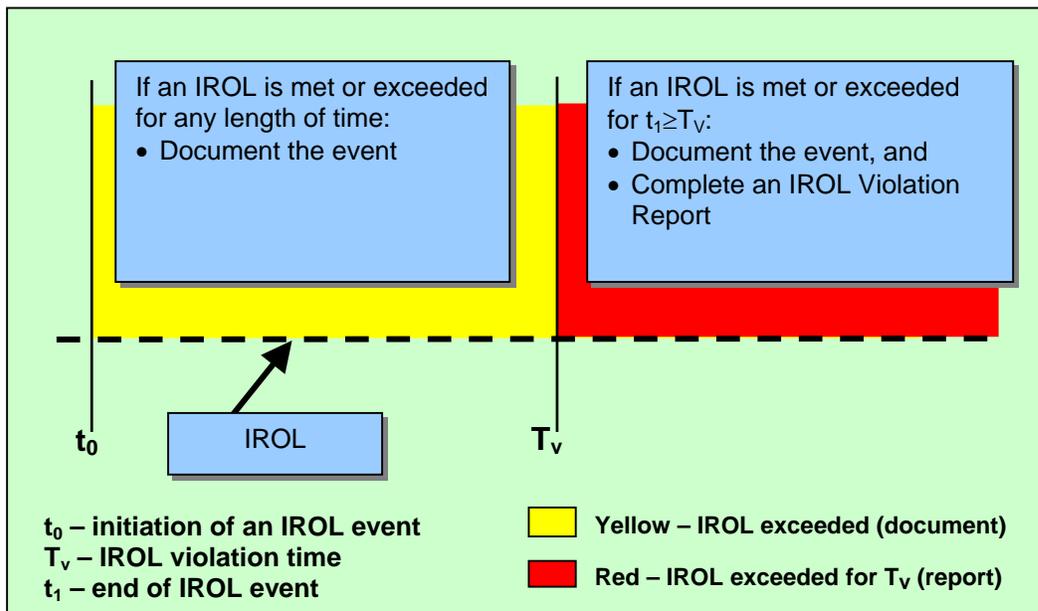
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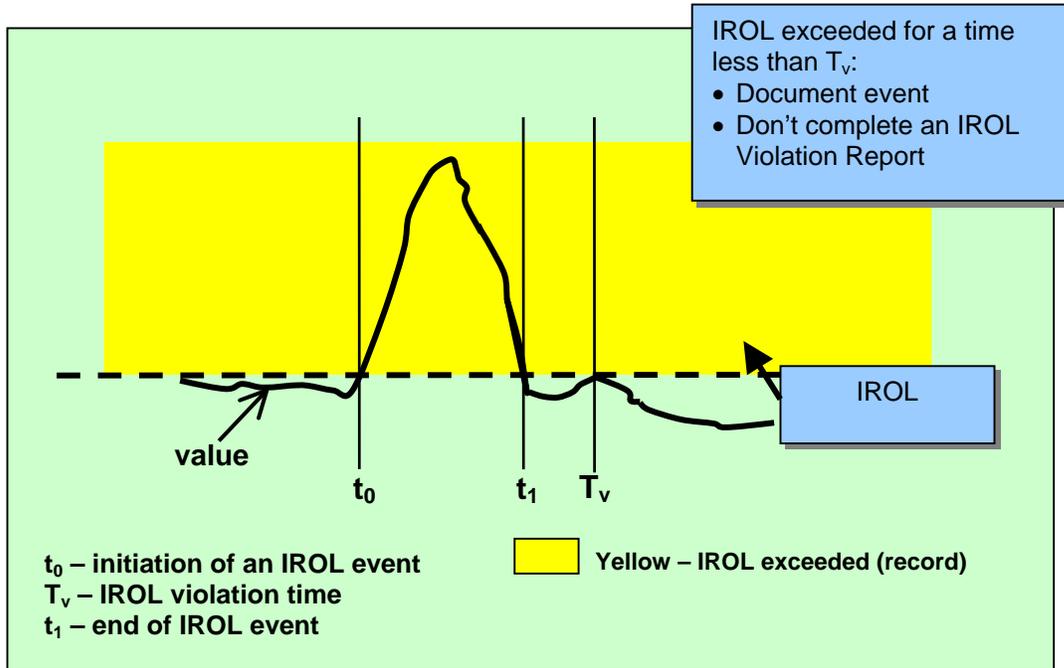
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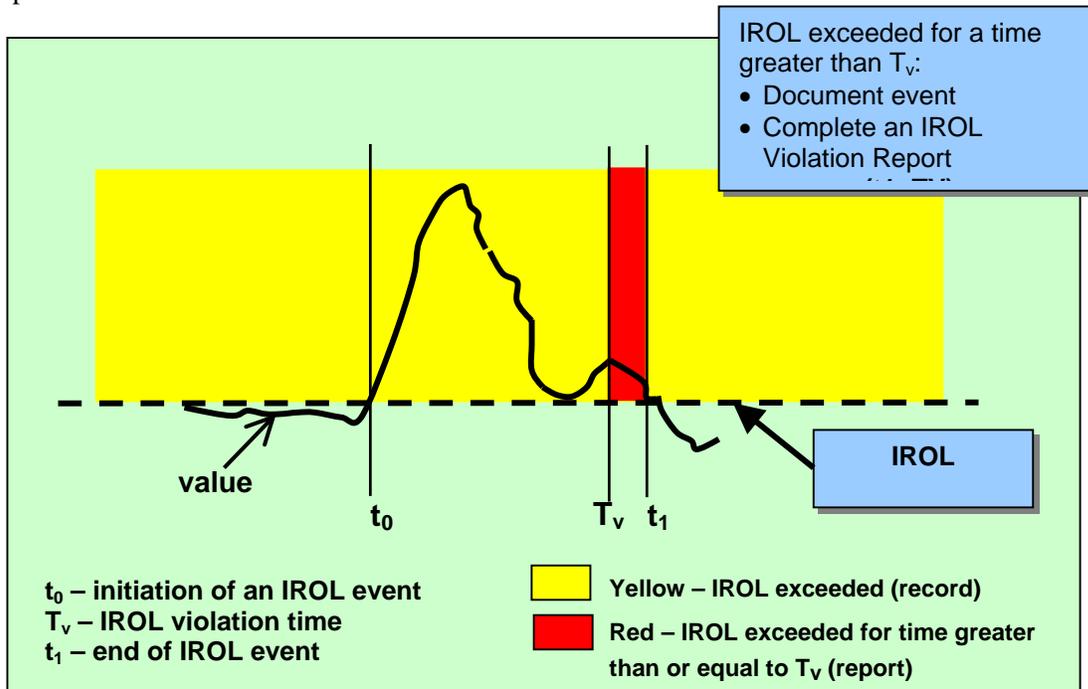


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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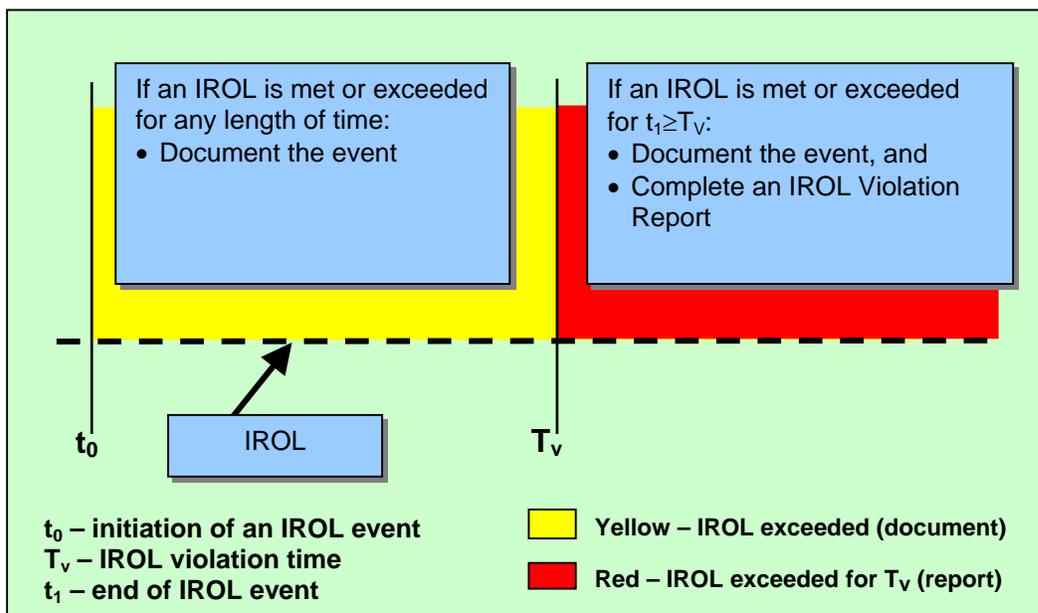
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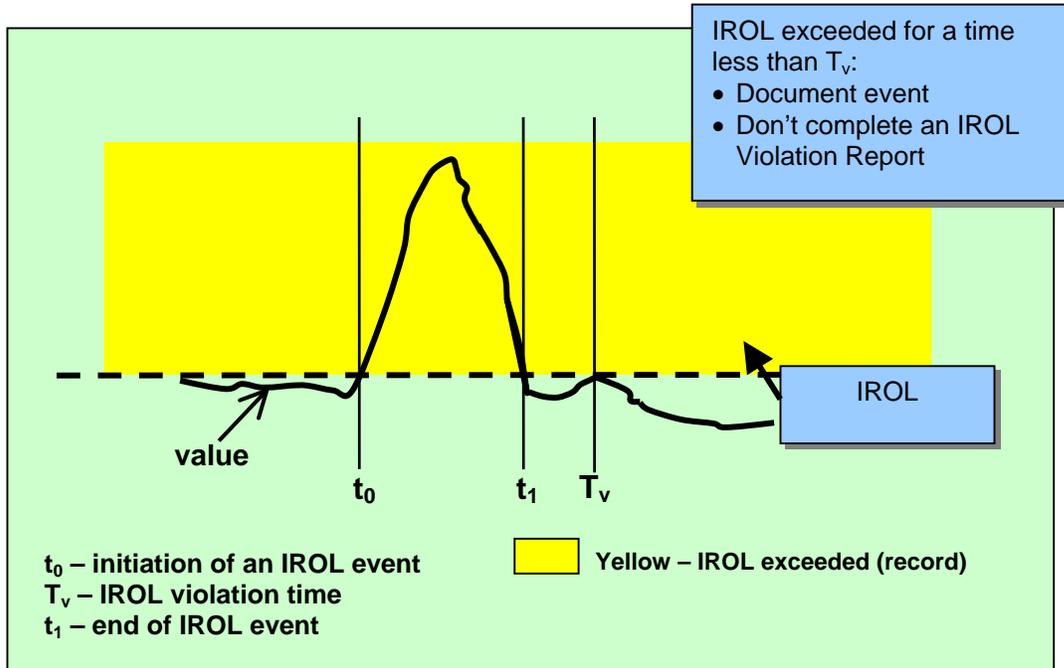
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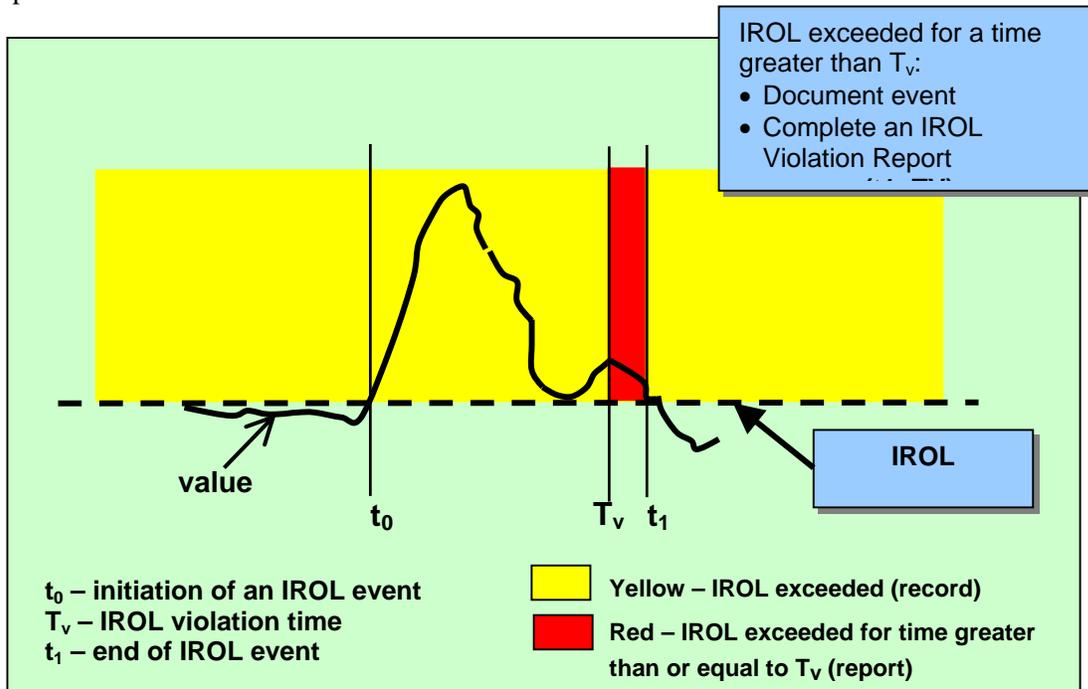


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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

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- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
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**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!

<b>STD Commenter Information (For Individual Commenters)</b>	<b>Key to Industry Segment #'s:</b> 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
<b>Name</b>	
<b>Organization</b>	
<b>Industry Segment #</b>	
<b>Telephone</b>	
<b>E-mail</b>	

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<b>STD Commenter Information (For Groups Submitting Group Comments)</b>		
<b>Name of Group: NPCC CP9</b>	<b>Group Chair: Guy V. Zito</b>	
	<b>Chair Phone: 212-840-1070</b>	
	<b>Chair Email: gzito@npcc.org</b>	
<b>List of Group Participants that Support These Comments:</b>		
<b>Name</b>	<b>Company</b>	<b>Industry Segment #</b>
<b>Michael Schiavone</b>	<b>National Grid USA</b>	<b>1</b>
<b>Roger Champagne</b>	<b>Hydro-Quebec TransEnergie</b>	<b>1</b>
<b>Ralph Rufrano</b>	<b>New York Power Authority</b>	<b>1</b>
<b>David Little</b>	<b>Nova Scotia Power Inc.</b> Representing the Maritimes Area of Canada	<b>1</b>
<b>David Kiguel</b>	<b>Hydro One Networks (Ontario)</b>	<b>1</b>
<b>Michael Potishnak</b>	<b>ISO-New England</b>	<b>2</b>
<b>Barry Gee</b>	<b>National Grid USA</b>	<b>1</b>
<b>Dan Stosick</b>	<b>ISO-New England</b>	<b>2</b>
<b>Fernando Saavedra</b>	<b>ISO-New England</b>	<b>2</b>
<b>Greg Campoli</b>	<b>New York ISO</b>	<b>2</b>

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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

NPCC feels that with respect to  $T_v$  there must be an established process through which this is derived or the re-preparation time of thirty minutes should become the standard default absent such a process.

Regarding Cascading Outages; There is no guidance on how the parameters are to be defined which would permit the identification of the local area and the widespread area. It also fails to recognize that a local area problem may evolve into a wider area problem depending on the load, time of day, recent contingencies and other factors. A well-defined process for determining what is (and what is not) a reportable event is essential.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?

Yes                       No

4. Do you agree with the measures?

Yes                       No

5. Do you agree with the compliance monitoring process?

Yes                       No

6. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 201:

IROL will not always be known ahead of time. An unusual combination of events could create an IROL type event that was unplanned for. Some of the IROL may be time variant so the Compliance Monitoring Process section needs to address this.

Regarding levels of compliance it is suggested that less severe levels of non-compliance be associated with incompleteness or inaccuracy of the list. NPCC suggests that compliance with only IROLs for planned system conditions be the requirement.

### Requirement 202 - Monitoring

7. Do you agree with the requirement?

Yes                       No

8. Do you agree with the measures?

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Yes                       No

9. Do you agree with the compliance monitoring process?

Yes                       No

10. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 202:

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

NPCC requests the drafting team to provide their thoughts and incorporate allowances in the compliance area for EMS "down time" for maintenance or to switch over to backup system should problems arise.

Although we agree with the measures stated, we would suggest that more frequent in-day analyses based on changed system conditions to predict system performance in the coming hours be required.

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

NPCC also suggests adding "footnote 1" that appears on page 10 to the Level one non-compliance measure to capture the thought that no overt action is sometimes an acceptable action.

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?

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Yes

No

22. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 205:

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

Regarding the level of non-compliance for not providing data to the reliability authority, NPCC feels that there should be some differentiation between not submitting any data and submitting partial data or new/additional data and perhaps there needs to be some more granularity in the description of what constitutes non-compliance.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

NPCC suggests that there be timeframe requirement added instead of "upon request" to providing the Action plan and suggests 20 business days.

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

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Comments about Requirement 208:

Although we agree with the level four instance of non-compliance it would be beneficial for the compliance monitor to require data and other information surrounding the inaction.

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

NPCC is adamantly opposed to monetary sanctions and feels letters of increasing severity are a more effective compliance tool for ensuring adherence to standards.

NPCC also feels there is a lack of coordination between the standard drafting teams and has noted instances where one team felt an issue was addressed in a separate standard to later learn it was not. As an example, with respect to the Balancing Resources standard, transmission overloads that are caused by poor control are not covered by this standard unless they reach a high level IROL. It later was identified that where this was thought to have been covered, the Operate Within Limits Standard, it was not. We would suggest that there be technical oversight as we go forward with these processes to ensure there are no “gaps” or critical reliability issues that are not addressed in the resultant standards.

Establishment of the IROL should be done in the Facility Rating Standard because that is the standard that establishes Operating Limits otherwise the wording of the title should be changed to Establish IROL and Operate within Limits.

From a global perspective it might be a prudent action to place the NERC RS development in a moratorium until the investigation into the blackout cause is completed and determinations have been made. There could be new Reliability issues that need to be captured in the developing RS that need to be incorporated into the upcoming draft RS.

NPCC seeks explanation for drawing the line at addressing only instability, cascading outages and separation. For example, what standard, if any, will address the scenario where an entity operates their system to cause a sizable thermal overload on a

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transmission line in another entity's system. (e.g. a transmission line burns down if the affected entity does not take corrective action)

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Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

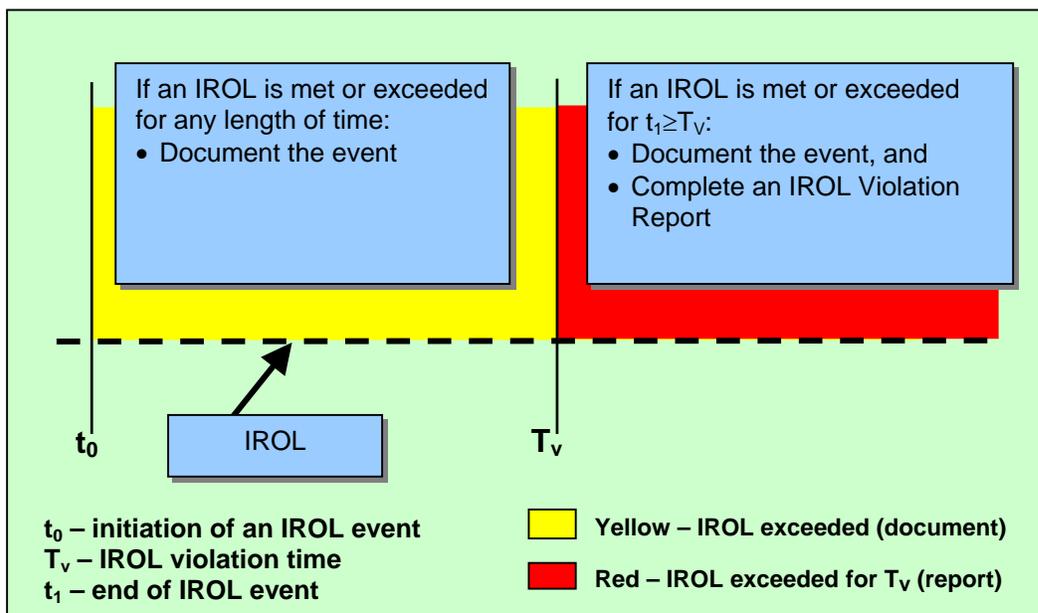
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

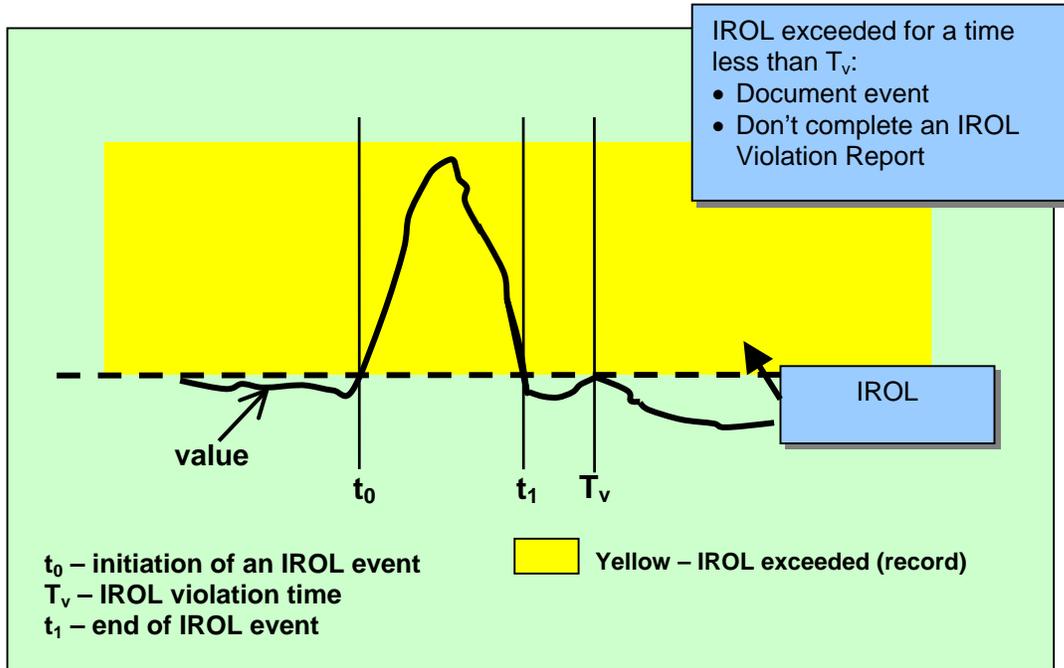
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

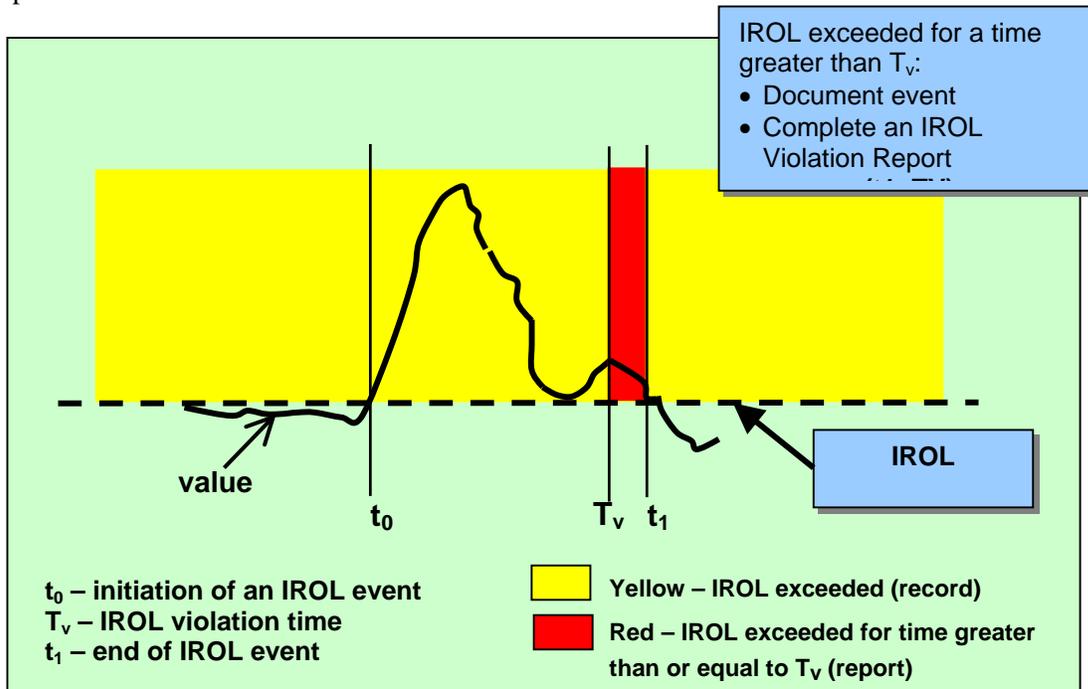


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The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
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The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

The “Transmission Operator” definition appears to be a definition for transmission provider. The functional model defines Transmission Operator as: “Operates and maintains the transmission facilities, and executes switching orders”.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments

There should be some responsibilities for both RA (present day Reliability Coordinator) and the Transmission Operator. They aren’t necessarily the same requirements.

The TO-RA relationship is akin to the pilot-air traffic controller relationship. Both monitor some common items. In genera, one view is local, the other is broader and at a higher level. Both have a responsibility for air safety.

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

Who is “the entity responsible”?

It would be preferable to have limits populated in a common database available to all reliability entities so that there’s no miscommunication of limits between PA, TO and RA or misunderstandings of one RA’s impact on another. Also, the RA wouldn’t be hit with a level 4 compliance violation for failing to produce a piece of paper during a site visit.

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The Planning Authority is to provide limits used by the RA. The posted functional model has no details on the planning authority. Perhaps the standard should say, the planning authority and/or Transmission Operator

**Requirement 202 - Monitoring**

- 7. Do you agree with the requirement?  
 Yes                       No
  
- 8. Do you agree with the measures?  
 Yes                       No
  
- 9. Do you agree with the compliance monitoring process?  
 Yes                       No
  
- 10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

TOs should also be monitoring this.

What if other authorities refuse to provide data or provide corrupt data to the RA? It appears the RA is accountable, which doesn't seem appropriate.

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

There can be up to 365 of both “real time assessment” and “planning analysis” violations in a year. Although it’s not likely many will occur, probably every RA will have occurrences of data transmission problems or EMS outages of 30 minutes in a year. Keep in mind the RA relies on data provided by others.

Since this is self-reported, it’s akin to a person sending an annual letter to their state patrol telling them how many times they were speeding during the year so that they can receive back the proper number of tickets in the mail.

To accrue a level 4 violation for each data hiccup or EMS outage doesn’t seem appropriate.

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

In this section, the RA gets a level 4 compliance violation if a limit is exceeded, the RA takes action and the limit is exceeded for  $T_v$ . It appears the RA is accountable if they take timely action (direct corrective measures) and the other authorities (IA, BA, TO) fail to respond.

Also, it appears that the same penalty is assessed whether the RA failed to act for one event or 100 events for the year.

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes                       No

20. Do you agree with the measures?

Yes                       No

21. Do you agree with the compliance monitoring process?

Yes                       No

22. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 205:

Why does the RA have to notify the Compliance Monitor within 5 days if an entity doesn't provide data to the RA if "data provision" is monitored via annual self-certification?

The standard requires the RA to be responsible for collecting data from all participants in a "mutually agreeable" format. This seems to be saying that each generator owner, BA, TP can ask for a different format. If the RA doesn't agree to this, the RA becomes non-compliant because it is failing to collect data.

The RA should have the authority to require consistent data formats from each participant group (the participant group as a whole should have a say in the data format, not each individual participant).

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

This section appears to have an “all or nothing” format. The RA needs a great deal of information to fulfill its obligations. The “level 4” violation should only be for failure to provide data on IROL elements. There should perhaps be some scaled compliance level for failure to provide other data, such as:

Level 1: failure to provide 10% of the RA’s required data or data transmission failures greater than X% of the year.

Level 2: failure to provide 10% of the RA’s required data or data transmission failures greater than X% of the year.

Level 3: failure to provide 10% of the RA’s required data or data transmission failures greater than X% of the year.

Level 4: Failure to provide data for any IORL or pre-contingent element.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

How do you demonstrate coordination of an action plan?

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?

Yes

No

32. Do you agree with the measures?

Yes

No

33. Do you agree with the compliance monitoring process?

Yes

No

34. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 208:

The “measures” section only say that the various authorities only have to document the directive and the actions they took (not that they actually followed the directive).

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments** There does not appear to be a need to make submissions within 5 business days. It may take a while to sort out a problem.

**37. Any other comments on this standard?**

In general, the level of compliance violation should be proportional to its impact on reliability (not the size of the entity).

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

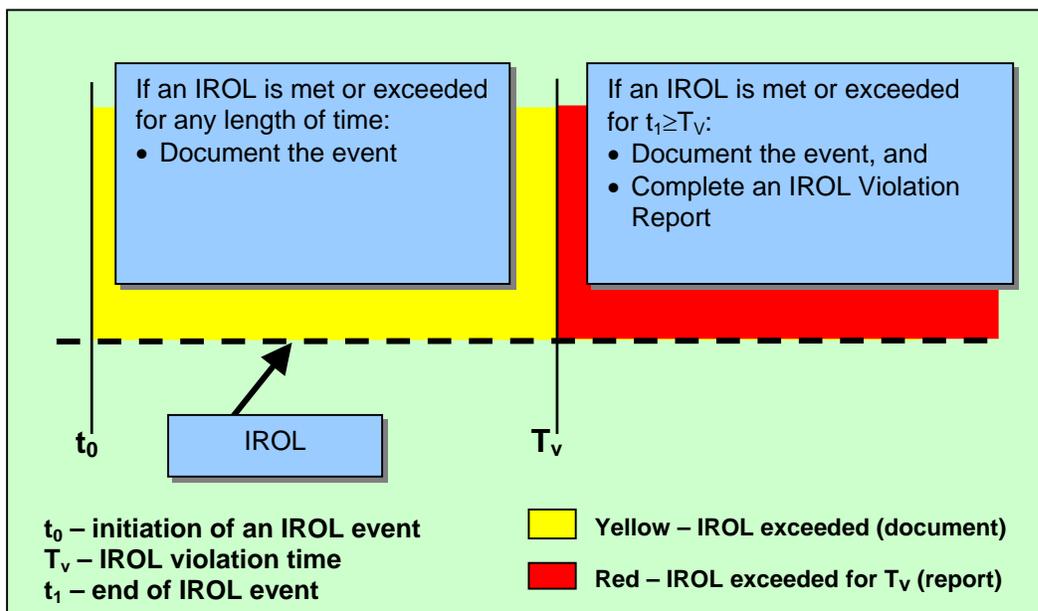
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

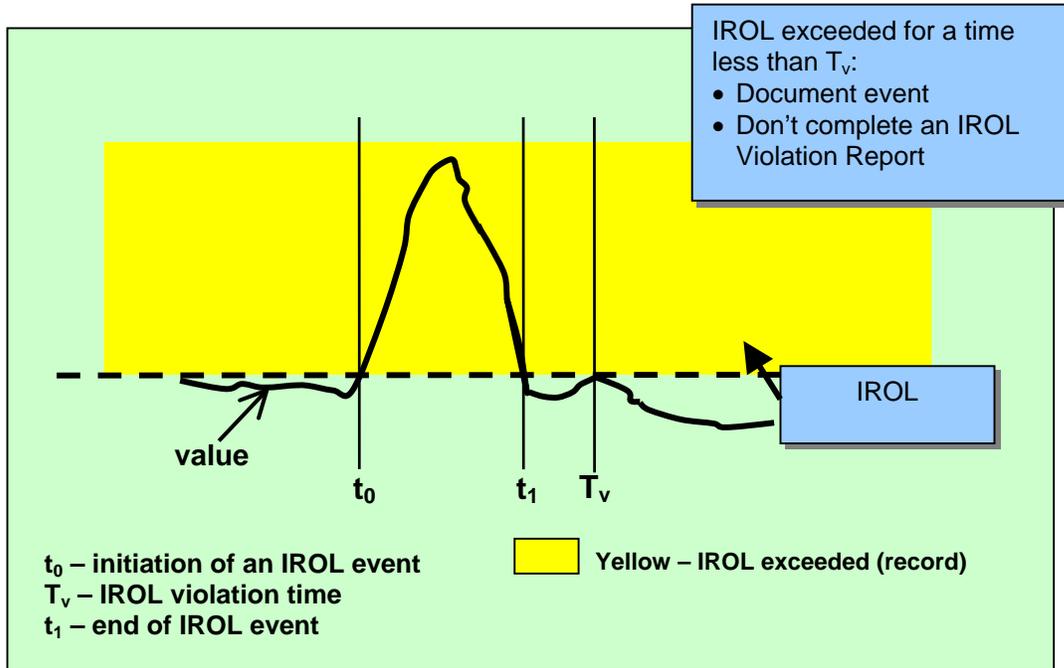
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

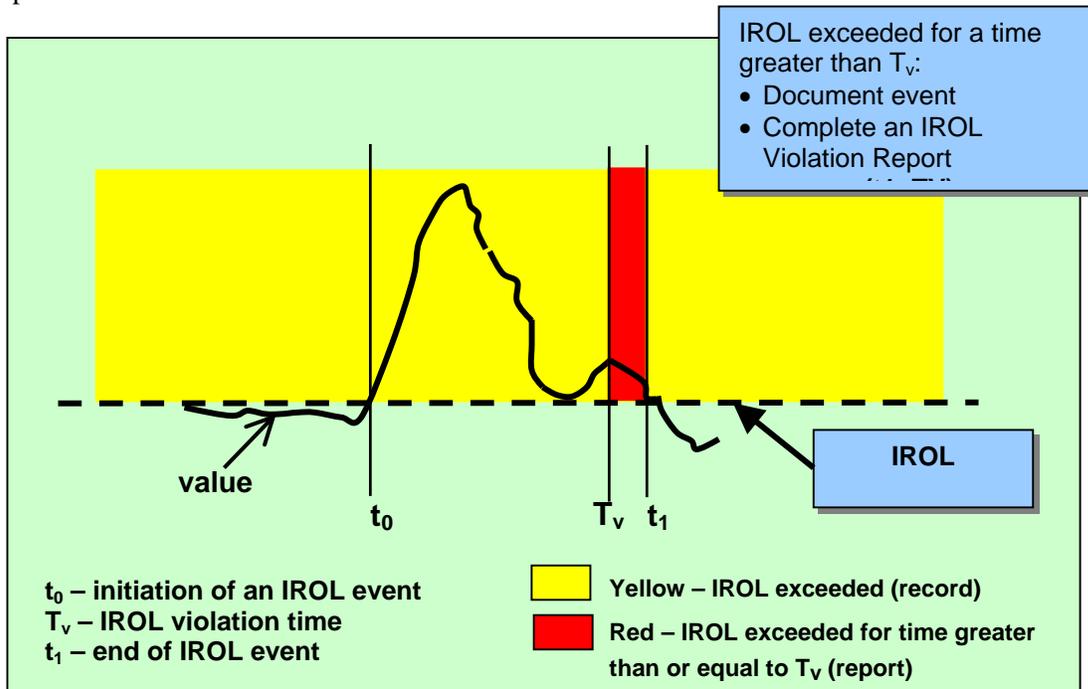


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Background**

1. Do you agree with the definitions provided in the front of this standard?  
 Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?  
 Yes                       No  
Comments AE agrees that two organizations controlling the same limit is not productive.

**Requirement 201 - Interconnection Reliability Operating Limit Identification**

3. Do you agree with the requirement?  
 Yes                       No
4. Do you agree with the measures?  
 Yes                       No
5. Do you agree with the compliance monitoring process?  
 Yes                       No
6. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 201:

**Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?  
 Yes                       No
20. Do you agree with the measures?  
 Yes                       No
21. Do you agree with the compliance monitoring process?  
 Yes                       No
22. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 205: However, refer to comment under question 37.

**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206: However, refer to comment under question 37.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 208:

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

**RA data collection and communication is required under Std. 200 and 600 with financial sanction for noncompliance under both. An organization should not be hit with financial sanctions under both standards for not communicating the data. Only one standard should apply.**

August 29, 2003

Comments

200- Operate within Interconnection Reliability Operating Limits

CS Review Team Comments:

- The definitions are well thought out.
- The document has been written in a manner that meets many of the concerns we had with the first draft.
- The key compliance issues that should be measures are captured in 202, 203 and 204. (The other measures, identifying the elements, data collection, data provision, action plan, and RA Directives are important as supporting requirements but do not require a compliance structure. Suggest that the certification process should spell out the policies, procedures and processes, reporting relationships and data collection requirements.)
- There are some concerns with the Compliance levels, and the CS and CRS will discuss that in Charleston, September 8 and 9.
- The added comments below deal mostly with the Compliance Monitoring Process.

201

1. Change 4.1 to: The responsible entity shall demonstrate compliance to the compliance monitor within the first year that this standard becomes effective or the first year the entity commences operation by information submittal to the compliance monitor, either on or off site at the compliance monitors discretion.
2. 4.2 Subsequent to the initial compliance review, the entity responsible shall demonstrate compliance through self-certification submitted to its compliance monitor annually.
3. 4.3 Compliance will be re-verified at least every three years using a scheduled on-site review method or un-scheduled (investigation) method, or review of information submitted as requested, at the discretion of the compliance monitor.
4. Change 4.2 and 4.3 to 4.4 and 4.5

202

1. Change 4.1 to: The responsible entity shall demonstrate compliance to the compliance monitor within the first year that this standard becomes effective or the first year the entity commences operation by information submittal to the compliance monitor, either on or off site at the compliance monitors discretion.
2. Add new 4.2 Subsequent to the initial compliance review, compliance will be re-verified at least every three years using a scheduled on-site review method or un-scheduled (investigation of complaint) method, review of information submitted as requested, or through self-certification, at the discretion of the compliance monitor.
5. Re-number 4.2 and 4.3 to 4.3 and 4.4

203

1. Change 4.1 to: The responsible entity shall demonstrate compliance to the compliance monitor within the first year that this standard becomes effective or

- the first year the entity commences operation by information submittal to the compliance monitor, either on or off site at the compliance monitors discretion.
2. Add new 4.2 Subsequent to the initial compliance review, compliance will be re-verified at least every three years using a scheduled on-site review method or un-scheduled (investigation of complaint) method, review of information submitted as requested, or through self-certification, at the discretion of the compliance monitor.
  3. Re-number 4.2 and 4.3 to 4.3 and 4.4

#### 204

1. Change 4.1 to: The responsible entity shall demonstrate compliance to the compliance monitor within the first year that this standard becomes effective or the first year the entity commences operation by information submittal to the compliance monitor, either on or off site at the compliance monitors discretion.
2. Add new 4.2 Subsequent to the initial compliance review, compliance will be re-verified at least every three years using a scheduled on-site review method or un-scheduled (investigation) method, review of information submitted as requested, or through self-certification, at the discretion of the compliance monitor.
3. Re-number 4.2 and 4.3 to 4.3 and 4.4

#### 205

1. Change 4.1 to: The responsible entity shall demonstrate compliance to the compliance monitor within the first year that this standard becomes effective or the first year the entity commences operation by information submittal to the compliance monitor, either on or off site at the compliance monitors discretion.
2. Add new 4.2 Subsequent to the initial compliance review, compliance will be re-verified at least every three years using a scheduled on-site review method or un-scheduled (investigation) method, review of information submitted as requested, or through self-certification, at the discretion of the compliance monitor.
3. Re-number 4.2 and 4.3 to 4.3 and 4.4

#### 206 OK

#### 207

1. Change 4.1 to: The responsible entity shall demonstrate compliance to the compliance monitor within the first year that this standard becomes effective or the first year the entity commences operation by information submittal to the compliance monitor, either on or off site at the compliance monitors discretion.
2. Add new 4.2 Subsequent to the initial compliance review, compliance will be re-verified at least every three years using a scheduled on-site review method or un-scheduled (investigation) method, review of information submitted as requested, or through self-certification, at the discretion of the compliance monitor.
3. Re-number 4.2 and 4.3 to 4.3 and 4.4

#### 208 OK

**Comment Form – 1st Posting of the draft ‘Determine Facility Ratings, System Operating Limits, and Transfer Capabilities’ Standard**

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*Note – This form is to be used to comment on version 1 of the Determine Facility Ratings, System Operating Limits, and Transfer Capabilities Standard.*

*Comments will be accepted from July 1 – August 29, 2003.*

**Please review the draft standard and answer the questions in the yellow boxes. Send completed comment forms to [sarcomm@nerc.com](mailto:sarcomm@nerc.com)**

*If you have questions, please call Tim Gallagher at 609-452-8060 or send a question to [timg@nerc.com](mailto:timg@nerc.com)*

**SAR Commenter Information (For Individual Commenters)**

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**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



## Comment Form – 1st Posting of the draft ‘Determine Facility Ratings, System Operating Limits, and Transfer Capabilities’ Standard

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each of these pairs, the draft standard requires the development and availability of a “methodology” to determine the required quantities and secondly the application of this methodology in the establishment and communication of these values to the users of the values. These standards were developed assuming that the Facility Ratings, System Operating Limits and Transfer Capability values are to be provided to the user (e.g. those entities performing the reliability authority, planning authority, and transmission operator functions) on a schedule established by the *user*. The SDT endeavored to ensure that this draft standard would not require the determination of various values that had no identified user. For this reason, the user of the various values must request the specific values from the value provider (e.g. those entities performing the facility owner and planning authority functions) through the establishment of a schedule to supply the data.

### **Levels of Noncompliance:**

In the three ‘methodologies’ sections (601, 603, 605), the levels of noncompliance are based upon the availability and completeness of the documented procedures. In the three ‘communication’ sections (602, 603, 605), the levels of noncompliance are based on the availability of the values requested by the users of the information and the consistency of these values with the documented methodologies.

### **Sanctions:**

The SDT believes that failure to comply with the three ‘methodologies’ sections (601, 603, 605) does not warrant monetary sanctions, since the methodologies themselves would not directly impact the reliable operation of the transmission system.

The unavailability of Facility Rating *values*, System Operating Limit *values* and to a lesser extent, Transfer Capability *values* will have a real and detrimental impact on the real time reliability of the transmission system as well as the validity of transmission plans for future transmission system additions. Therefore, the three ‘communication’ sections (602, 604, 606) include monetary sanctions for repeated and/or significant noncompliance as per the sanction table. The SDT believes that nominal, fixed dollar sanctions are appropriate in these cases. The application of ‘per MW’ variable sanctions would be inappropriate for these infractions compared to the consequences of violating the requirements of the standard. While the SDT realizes that a minor omission of a requested value could result in sanction, the SDT also believes that graduated sanctions based upon the level of ‘completeness’ of the data received by the users are impractical. The SDT is of the opinion that not all values have equal importance to the reliability of the transmission system, and therefore, sanctions based upon ‘percentage of requested data received’ (perhaps omitting values of specific critical limitations) would be arbitrary.

### **Relationship with “Operate Within Limits” Standard:**

The SDT suggests that this draft standard be reviewed in concert with the “Operate Within Limits” draft standard. The Facility Ratings, System Operating Limits, and Transfer Capabilities draft standard requires the availability and usability of these data. The Operate Within Limits standard addresses the use of a subset of these values in real time operation. The SDT believes that the definitions developed in conjunction with this standard do not prohibit the stratification, or sub-classification, of the requested data (Facility Ratings, System Operating Limits, Transfer Capabilities) for specific uses or users. The intent and purpose of this standard, however, is to identify *all* system operating limits and not to differentiate them based upon the impacts of violating them.

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**1. This standard assumes that the reliability authority has the ultimate responsibility to establish system operating limits and relies upon the transmission operator for input. Have the roles and responsibilities of transmission operators versus reliability authorities in determining system operating limits been properly characterized in this standard?**

Yes

No

Comments

**2. Do you agree that identifying and communicating all system operating limits is within the scope of this standard and is necessary for reliability?**

Yes

No

Comments

**3. NERC Regions have the right to ask for Regional differences for inclusion in NERC standards. Such differences would apply only to the listed Region and would become an enforceable part of the NERC standard only if approved by the industry. NPCC has requested a Regional difference in section 603. Do you think NPCC’s Regional difference should be included in this standard?**

Yes

No

Comments The NPCC criteria is more stringent than the NERC standard.

**4. Are you aware of any other Regional differences that should be included in this standard?**

Yes

No

Comments Possibly ERCOT and WSCC will have differences.

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**5. Do you agree with the sanction philosophy in this standard? (No financial penalties for methodology violations, nominal fixed monetary penalties for failure to communicate values).**

Yes

No

Comments Financial penalties should not be applied. This would open the gate to financial penalties for the many, much more severe violations addressed in other standards. The IMO feels that non-monetary sanctions are sufficient.

**6. Do you agree with the proposed requirements and measurements in section 601?**

Yes

No

Comments

**7. Do you agree with the proposed compliance monitoring process in section 601?**

Yes

No

Comments

**8. Do you agree with the proposed levels of non-compliance in section 601?**

Yes

No

Comments See general comment below

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**9. Do you agree with the proposed requirements and measurements in section 602?**

Yes

No

Comments

**10. Do you agree with the proposed compliance monitoring process in section 602?**

Yes

No

Comments

**11. Do you agree with the proposed levels of non-compliance in section 602?**

Yes

No

Comments The levels do not seem to follow any progression which would suggest increasing severity. Why is failure to have all ratings for existing facilities any different than not having all ratings for new facilities: level 1 as opposed to level 2? Either you have ratings or not.

**12. Do you agree with the proposed requirements and measurements in section 603?**

Yes

No

Comments

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**13. Do you agree with the proposed compliance monitoring process in section 603?**

Yes

No

Comments

**14. Do you agree with the proposed levels of non-compliance in section 603?**

Yes

No

Comments See general comment below

**15. Do you agree with the proposed requirements and measurements in section 604?**

Yes

No

Comments

**16. Do you agree with the proposed compliance monitoring process in section 604?**

Yes

No

Comments

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**17. Do you agree with the proposed levels of non-compliance in section 604?**

Yes

No

Comments See general comment below

**18. Do you agree with the proposed requirements and measurements in section 605?**

Yes

No

Comments

**19. Do you agree with the proposed compliance monitoring process in section 605?**

Yes

No

Comments

**20. Do you agree with the proposed levels of non-compliance in section 605?**

Yes

No

Comments The level 2 and 3 violations seem more severe than the violation addressed in level 4.

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**21. Do you agree with the proposed requirements and measurements in section 606?**

Yes

No

Comments

**22. Do you agree with the proposed compliance monitoring process in section 606?**

Yes

No

Comments

**23. Do you agree with the proposed levels of non-compliance in section 606?**

Yes

No

Comments See general comment below

**24. What additional clarification, details, or modifications to this standard are necessary before it can be brought to ballot?**

Comments All the sanctions text should be removed, as they are dealt with elsewhere.

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**25. Please enter any other comments you have regarding this standard in the space below.**

Comments

The proposed non-compliance levels for all these standards do not follow a natural progression. They seem to be somewhat contrived and slotted into the 4 levels.

601.4.2.2 - 10 years seems rather infrequent. Should provide opportunity for some verification when ratings change.

601.4.3, 602.4.4, 604.4.4, 606.4.4 - 3 years may not be long enough, given the typical timelines required to resolve differences.

603 Table I Note a) – reference is made to NERC Planning Standards – Will these still exist after the new family of standards are in place.

603 Table IA

- The NERC standard permits this table to be included here, but is it really necessary to have it here, other than for information purposes. At the NERC level, would it be sufficient to just note that NPCC has more stringent criteria and refer the reader to the NPCC standards.
- In the 2<sup>nd</sup> row, for “Cascading outages”, superscript “f” should be “c”. Under category C, for “Double Circuit Tower” (item #3) superscript “e” should be “f”
- Note “e” text requires reformatting to remove blank line.

## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

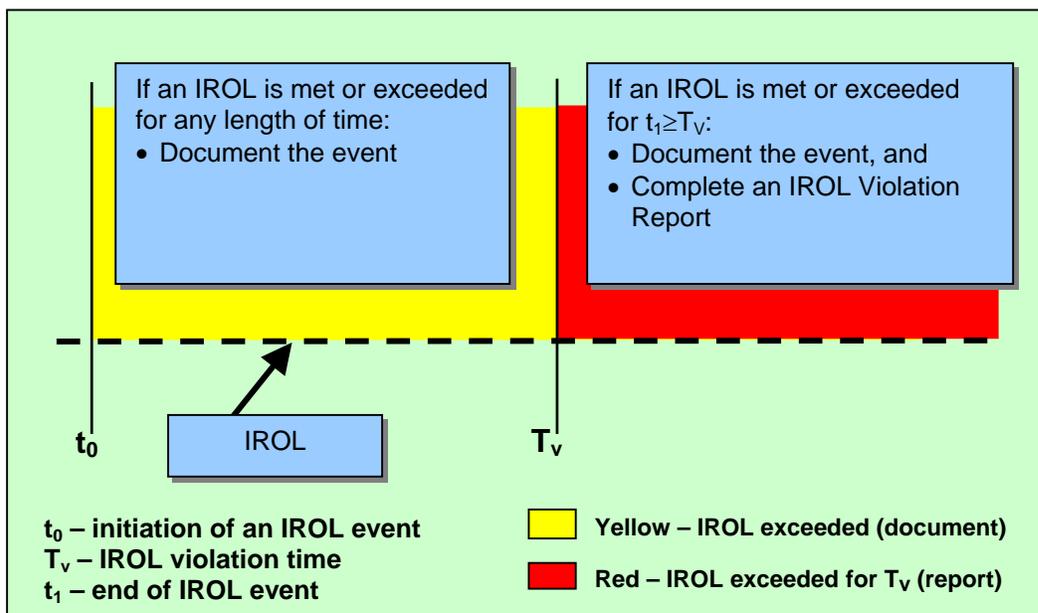
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

### Major Changes to this Standard:

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

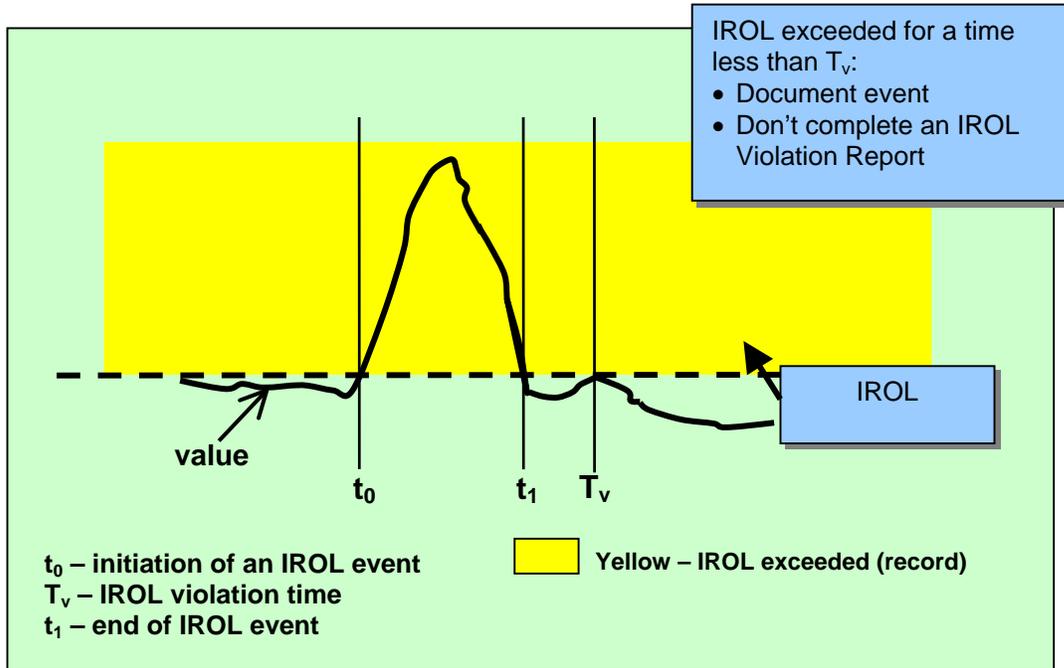
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

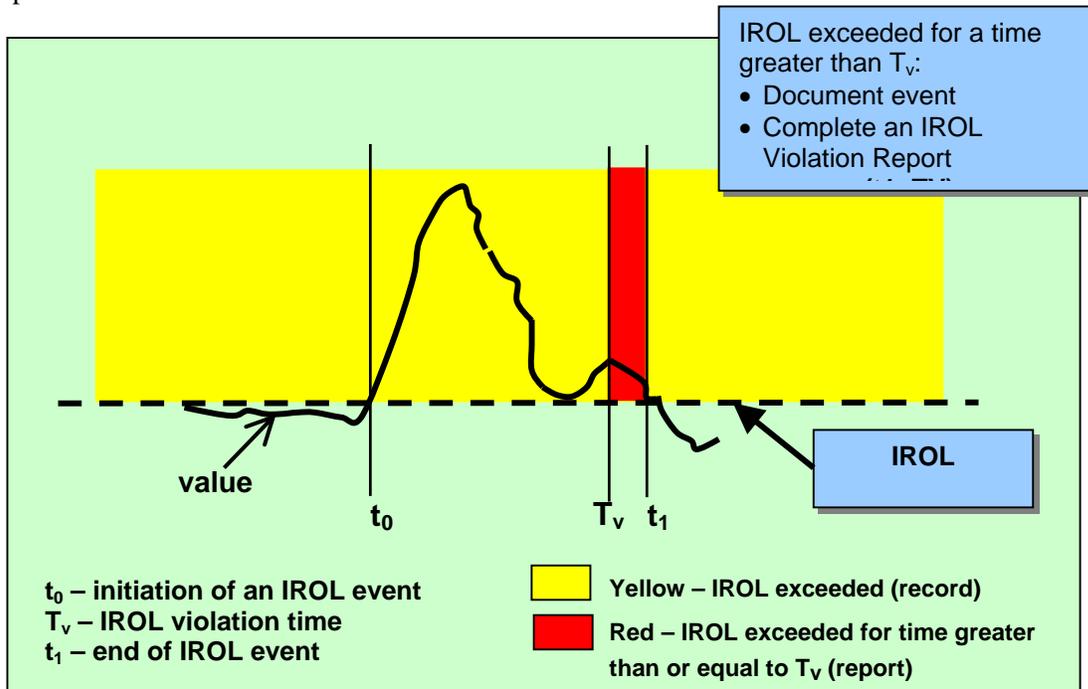


**Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard**

The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	<p>Defines for each measure:</p> <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	<p>Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.</p>
Sanctions	<p>Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.</p>

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



## Comment Form for 2<sup>nd</sup> Posting of Operate within Interconnection Reliability Operating Limits Standard

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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

ISO-NE believes that, with respect to  $T_v$ , there must be an established process through which this is derived or the re-preparation time of thirty minutes should become the standard default absent such a process.

Regarding Cascading Outages, There is no guidance on how the parameters are to be defined which would permit the identification of the local area and the widespread area. It also fails to recognize that a local area problem may evolve into a wider area problem depending on the load, time of day, recent contingencies and other factors. A well-defined process for determining what is (and what is not) a reportable event is essential.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?

Yes                       No

4. Do you agree with the measures?

Yes                       No

5. Do you agree with the compliance monitoring process?

Yes                       No

6. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 201:

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 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 potential impact to the bulk power system.

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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.

### **Requirement 202 - Monitoring**

7. Do you agree with the requirement?  
 Yes                       No
8. Do you agree with the measures?  
 Yes                       No
9. Do you agree with the compliance monitoring process?  
 Yes                       No
10. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 202:

ISO-NE believes that, as stated above, data should not be archived unless the limit is not cleared within 30 minutes. Additionally, we suggest the data retention requirement of three years be modified to a 12-month rolling retention.

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**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?  
 Yes                       No
12. Do you agree with the measures?  
 Yes                       No
13. Do you agree with the compliance monitoring process?  
 Yes                       No
14. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 203:

ISO-NE requests the drafting team to provide their thoughts and incorporate allowances in the compliance area for EMS “down time” for maintenance or to switch over to backup system should problems arise.

ISO-NE suggests that more frequent in-day analyses, based on changed system conditions to predict system performance in the coming hours, be required. Again, we believe this relates directly to “hardening up” the  $T_v$  value (i.e. if  $T_v$  is fifteen minutes, how does the ‘at least every 30 minutes’ requirement support reliable operation regarding that specific limit?).

**Requirement 204 - Actions**

15. Do you agree with the requirement?  
 Yes                       No
16. Do you agree with the measures?  
 Yes                       No
17. Do you agree with the compliance monitoring process?  
 Yes                       No
18. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 204:

ISO-NE also suggests adding “footnote 1” that appears on page 10 to the Level one non-compliance measure to capture the thought that no overt action is sometimes an acceptable action.

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 suggest this approach be adopted.

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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 potential 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.

### **Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes

No

20. Do you agree with the measures?

Yes

No

21. Do you agree with the compliance monitoring process?

Yes

No

22. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 205:

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206:

Under the Section 4.3.1 “Copies of transmittal cover letters...” may not be an appropriate measure for instances of notification of missing data. For example, most of the data required is transmitted electronically from field equipment, through ICCP/SCADA, and into the EMS. Where would such “cover letters” fall in this process?

Regarding the level of non-compliance for not providing data to the reliability authority, ISO-NE believes that there should be some differentiation between not submitting any data and submitting partial data or new/additional data and perhaps there needs to be some more granularity in the description of what constitutes non-compliance.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207:

ISO-NE again suggests that provisions be made for mitigating actions which were not previously identified by study, but cleared the limit violation. If these provisions are not included, it may restrict the actions that may be taken and, ultimately, adversely impact reliability (i.e. there may be actions that can be taken in real-time, given an existing network configuration which was not envisioned at the time the operational analysis was done; however, if NERC Standards mandate that an action plan be followed, these actions may not be taken or seriously considered).

All data retention requirements of three years should be modified to a 12-month rolling retention.

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?

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Yes

No

33. Do you agree with the compliance monitoring process?

Yes

No

34. Do you agree with the levels of non-compliance?

Yes

No

Comments about Requirement 208:

Although we agree with the level four instance of non-compliance, it would be beneficial for the compliance monitor to require data and other information surrounding the inaction.

**35. List any Regional or Interconnection Differences for this standard:**

**36. Notifying the Compliance Monitor**

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

**Include in this standard**

**Include in a Compliance Enforcement Program Document**

**Comments**

**37. Any other comments on this standard?**

ISO-NE is adamantly opposed to monetary sanctions and believes that letters of increasing severity are a much more effective compliance tool for ensuring adherence to standards.

ISO-NE also believes there is a lack of coordination between the standard drafting teams and has noted instances where one team felt an issue was addressed in a separate standard to later learn it was not. As an example, with respect to the Balancing Resources standard, transmission overloads that are caused by poor control are not covered by this standard unless they reach a high level IROL. It later was identified that where this was thought to have been covered, the Operate Within Limits Standard, it was not. We would suggest that there be technical oversight as we go forward with these processes to ensure there are no “gaps” or critical reliability issues that are not addressed in the resultant standards.

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 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 potential impact to the bulk power system.

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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.

From a global perspective, it would be a prudent action to place the NERC RS development in a moratorium until the investigation into the August 14<sup>th</sup> blackout cause is completed and determinations have been made. There could be new reliability issues that need to be captured in the developing RS that need to be incorporated into the upcoming draft RS.

ISO-NE also seeks explanation for drawing the line at addressing only instability, cascading outages and separation. For example, what standard, if any, will address the scenario where an entity operates their system to cause a sizable thermal overload on a transmission line in another entity's system. (e.g. a transmission line burns down if the affected entity does not take corrective action).

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Note – This form is to comment on version 2 of the Monitor and Assess Short-term Transmission Reliability – Operate Within Transmission Limits Standard (now called ‘Operate Within Interconnection Reliability Operating Limits’.)  
 The latest version of this Standard (OPER\_WITHN\_LMTS\_05\_02) is posted on the Standards website at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>  
 E-mail this form between July 1–August 29, 2003, to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with “Comments” in the subject line.

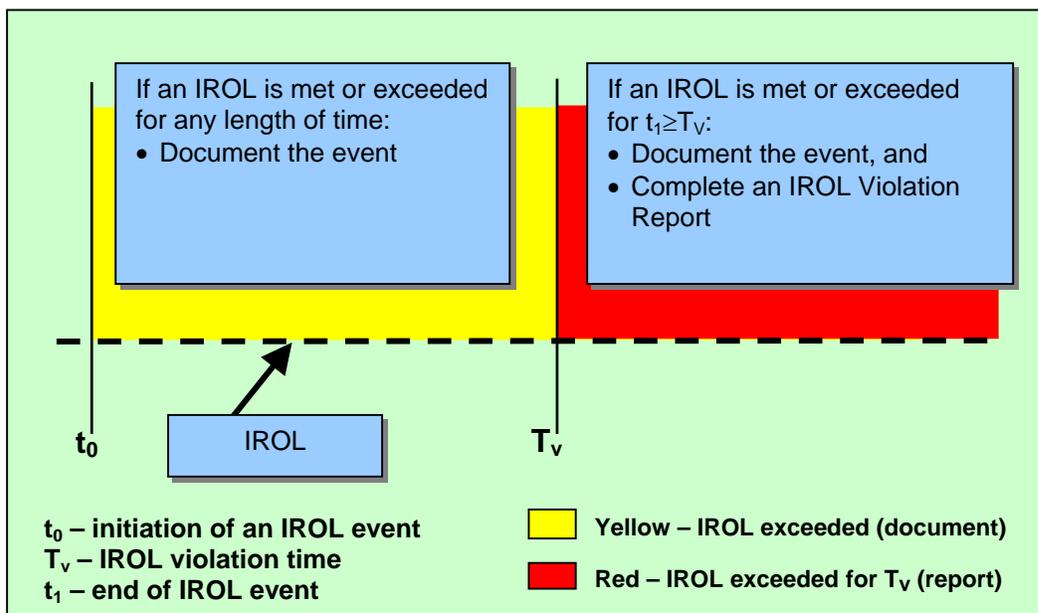
If you have any questions about this Standards Draft Comment Form, please contact the Director of Standards – Tim Gallagher at 609-452-8060.

**Major Changes to this Standard:**

The Standards Drafting Team made several changes to this standard, based on the comments submitted during the first posting of this standard. You can see the Standards Drafting Team’s consideration of those comments at: <http://www.nerc.com/~filez/standards/Monitor-Assess.html>

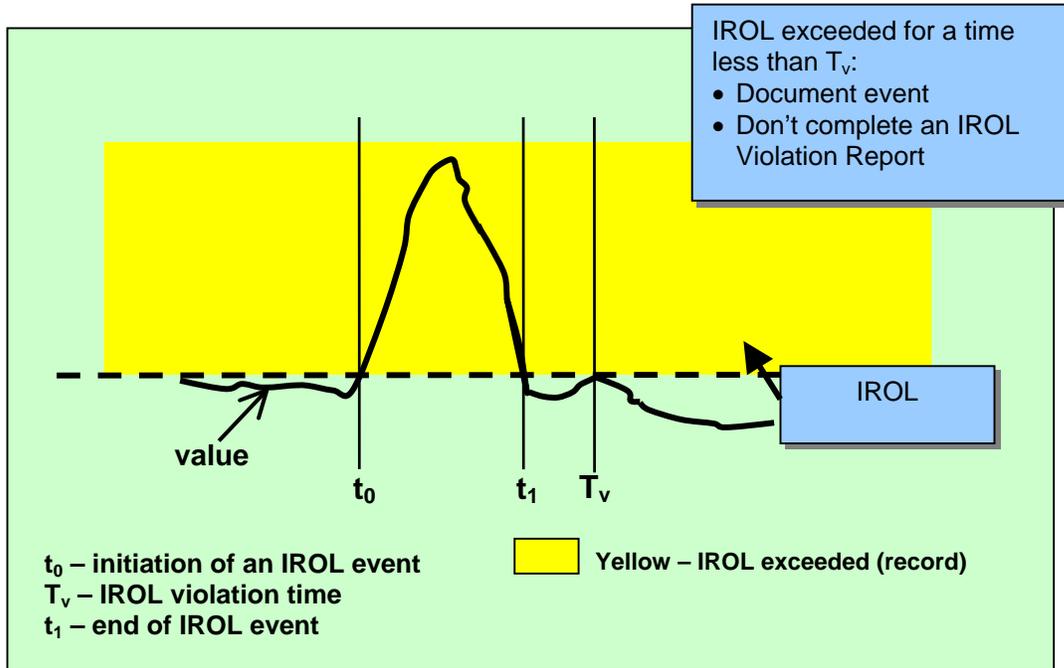
**Definition of System Operating Limits Addressed by this Standard.** The system operating limits being addressed by this standard are called, ‘interconnection reliability operating limits’ or ‘IROLs.’ Each IROL is a system operating limit established by the Reliability Authority following the “Determine Facility Ratings, System Operating Limits and Transfer Capabilities” standard. IROLs are the subset of system operating limits that, if exceeded, may cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Each IROL has both a magnitude and a duration component. The duration component may be different for each IROL and may be as short as ‘0’ minutes.

When an IROL is exceeded (operating in the ‘yellow’ area in the following figure), then the RA must act or direct others to act. The clock starts ticking once the value is equal to or greater than the IROL. (This is  $t_0$ .) The clock continues to tick until the value is returned to a magnitude that is less than the IROL. Note that the value must remain below the IROL for a minimum of 30 seconds for the clock to stop. (The end of the event is marked by  $t_1$ .) If the duration of the event is less than  $T_v$ , then the event must be documented. If the duration of the event is equal to or greater than  $T_v$  (enters the red area in the following figure), then the event must be documented and reported to the Compliance Monitor.

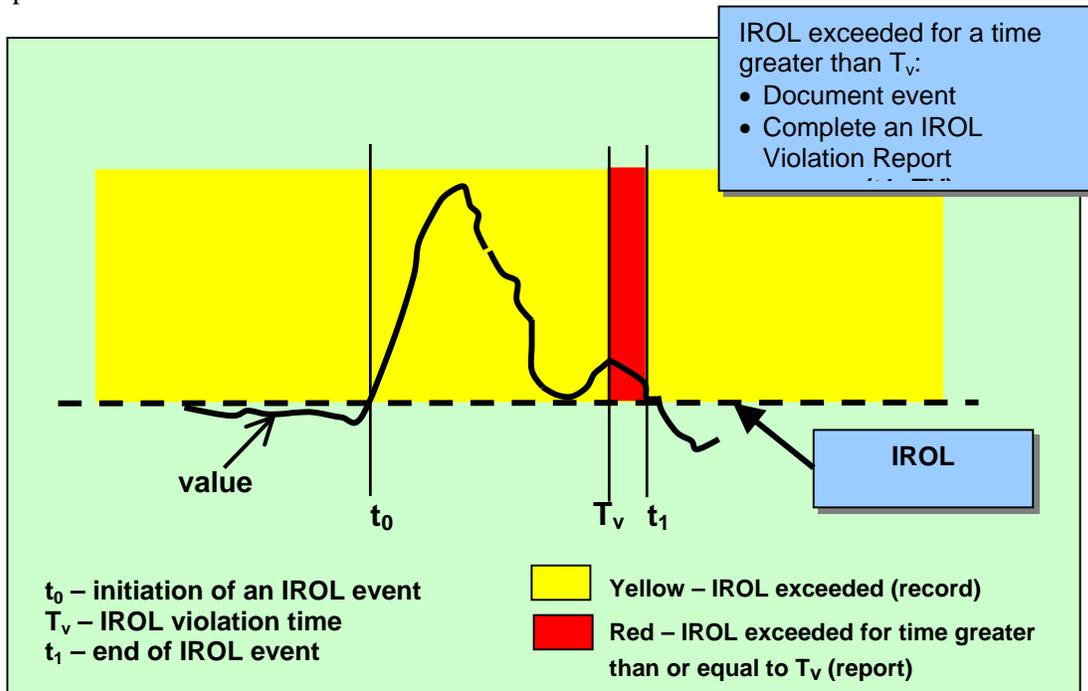


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The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (when the value enters the ‘yellow’ area) and continues to the end of the event  $t_1$ , when the value returns to a magnitude that is less than the IROL and remains under the IROL for at least 30 seconds. In this example,  $t_1$  is less than  $T_v$ , and the event must be documented, but the event does not need to be reported to the Compliance Monitor with an IROL Violation Report.



The following figure provides an example of an event where some value exceeds its IROL. The clock starts ticking at  $t_0$  (enters the ‘yellow area’) and continues to the end of the event, when the value returns to a magnitude that is less than the IROL and remains below the IROL for at least 30 seconds. In this example,  $t_1$  is greater than  $T_v$  (enters the ‘red area’), and the event must be documented and reported to the Compliance Monitor.



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**Requirement to Establish a List of IROLs.** When this standard was first drafted, the Determine Facility Ratings, System Operating Limits and Transfer Capabilities Team (Facility Ratings Team) was still working on its SAR. The Facility Ratings Team developed a definition of a system operating limit, but did not develop a term to identify the subset of system operating limits addressed by this standard. This version of this standard includes a new requirement that the RA or PA identify the facilities in the reliability area that are subject to IROLs, and that the RA or TOP identify the IROLs within that reliability area. The list of facilities subject to IROLs is expected to remain relatively constant, with a change or two in a year – but the list of IROLs is dynamic and could change daily.

**TOP Requirements.** The first version of this standard included several requirements for Transmission Operators that were identical, or nearly identical, to requirements for the Reliability Authority. Several commenters indicated that these redundant requirements were inappropriate. Some commenters indicated the TOP requirements were inappropriate because they could lead to operating confusion by having multiple entities trying to control the same limit. Other commenters indicated that having the same requirement assigned to both the RA and the TOP wasn't supported in the Functional Model. (Under the Functional Model, each responsibility is assigned to a single function, and no responsibility is assigned to more than one function.) Other commenters indicated that under the Functional Model, the Transmission Operator has the following responsibility:

- “Provides local network integrity by defining operating limits, developing contingency plans, and monitoring operations.”

This reliability standard focuses on the subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system and is clearly under the responsibility of the Reliability Authority. Exceeding a system operating limit associated with the local network integrity is important, but is not likely, by itself, to put the interconnection at risk of instability, uncontrolled separation or cascading outages.

For these reasons, this second version of the standard does not contain the following requirements for the TOP:

- 202 - The Transmission Operator (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.
- 204 - The Transmission Operator (TOP) shall specify and collect the data it needs (from its associated Balancing Authorities (BAs), Interchange Authorities (IAs), Generators and Reliability Authority (RA) and other associated TOPs] to maintain the models needed to support real time monitoring and reliability analyses.
- 211 - 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.
- 213 - 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.
- 215 - The Transmission Operator (TOP) shall have a documented mitigation plan that identifies actions to be taken to prevent exceeding an identified system operating limit.
- 217 - The Transmission Operator (TOP) shall document instances of exceeding identified system operating limits

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Because several commenters indicated a desire to have requirements that address the TOP's control of its system operating limits, the SDT has sent a letter to the Director of Standards to apprise him of the situation and request appropriate follow-up.

### **Requirement to Follow RA Directives**

Several commenters indicated there should be a requirement for TOPs to follow the RA's directives. The functional model includes the following under the functional relationships of the RA:

- Issues corrective actions (e.g., curtailments or load shedding) to Transmission Operators, Transmission Service Providers, Balancing Authorities, and Interchange Authorities

In preventing or relieving IROLs, the RA may direct not only the TOP, but also the BA, and IA and these functions were added to this new requirement to follow RA directives.

The SDT could not identify any actions the TSP would take to prevent or relieve instances of exceeding IROLs, and did not include the TSP in the list of functions that must comply with the RA's directives.

**RA to RA Coordination.** Several commenters indicated a need to add a requirement for the Reliability Authority to coordinate its actions with other Reliability Authorities. There is another standard called, "Coordinate Operations" that addresses the coordination between Reliability Authorities.

**Levels of Non-compliance.** There were many comments submitted, asking that the SDT include more than one level of non-compliance for each requirement. The SDT considered this, and added more levels in some cases, but not in all cases. These new standards are very different from the existing Operating Policies and Planning Standards. The new standards provide much less specificity on 'how' to achieve the performance requirement – and attempt to describe more objective performance goals. From the SDT's perspective, either the performance goal is met or it isn't met – there isn't a gray area where partial credit is appropriate. In this standard, the focus is on a subset of system operating limits that, if exceeded, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the bulk transmission system. Implementing a system that 'forgives' RAs for missing this performance goal seems inappropriate to the SDT. As you review the revised standard, the SDT asks that you consider the ramifications of not meeting the requirement. If the ramifications are severe enough, then consider whether multiple levels of non-compliance are appropriate.

**RA Responsibility for Effort or Achievement.** This standard includes a requirement that the RA act or direct others to act to return to an operating state where no IROL has been exceeded before the time of the event exceeds the IROL's  $T_v$ . Several commenters suggested that the RA should not be penalized if the RA directed others to act, but they failed to act in time to prevent exceeding an IROL for its  $T_v$ . The SDT understands that there is division in the industry on this issue, and asks that you pay special attention to the levels of non-compliance in this standard. The SDT believes that the RA must be held accountable for achieving results – not just for trying to achieve those results.

**Compliance Monitoring Process.** There were several comments submitted with questions about the compliance monitoring process and the terminology used to define how compliance will be administered. The Reliability Standards Process Manual includes the following table that identifies what compliance elements must be addressed within each standard. Standards Drafting Teams are responsible for drafting the Compliance Monitoring Process for each standard, and for identifying Levels of Non-compliance. The Sanctions table is referenced in each standard, but is updated each year as part of the Compliance Program.

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Compliance Monitoring Process	Defines for each measure: <ul style="list-style-type: none"> <li>– The specific data or information that is required to measure performance or outcomes.</li> <li>– The entity that is responsible to provide the data or information for measuring performance or outcomes.</li> <li>– The process that will be used to evaluate data or information for the purpose of assessing performance or outcomes.</li> <li>– The entity that is responsible for evaluating data or information to assess performance or outcomes.</li> <li>– The time period in which performance or outcomes is measured, evaluated, then reset.</li> <li>– Measurement data retention requirements and assignment of responsibility for data archiving.</li> </ul>
Levels of Non-Compliance	Defines the levels of non-compliance for each measure, typically based on the actual or potential severity of the consequences of non-compliance.
Sanctions	Defines all penalties or sanctions associated with non-compliance, typically based on level of non-compliance and number of offenses.

The following information was provided by the Director of Compliance to help teams identify the compliance monitoring process for each requirement in the standard.

- **Self-Certification** – A process whereby an entity submits a form to its Compliance Monitor, indicating that the entity is in compliance with a specific requirement or set of requirements for a reliability standard. Self-certification forms generally require the signature of an officer of the corporation. Most self-certification forms are completed each year.
- **Periodic Reporting** – An established monitoring and reporting process (to measure compliance with one or more requirements for a standard) with a defined frequency such as monthly reports, or quarterly reports. Each entity submits a form to its Compliance Monitor per the announced frequency.
- **Spot Reporting or Spot Reviews** – A monitoring and reporting process (to measure compliance with one or more requirements for a standard) without an announced schedule. Each entity submits a form to its Compliance Monitor when requested by that Compliance Monitor.
- **Exception Reporting** - A reporting process where, when an entity’s performance meets certain criteria, such as exceeding certain operating limits, that entity is responsible for reporting its performance to its Compliance Monitor.
- **Triggered Investigation** – An investigation initiated when the Compliance Monitor becomes aware of operational performance that has jeopardized reliability of the bulk electric system. The intent of the investigation is to verify that the entity responsible is aware of the seriousness of any infractions and to determine if the unreliable performance was an aberration or part of a pattern of unreliable operational performance.

**Definitions.** The last comment form asked if there were any terms that should be defined as part of the development of this standard. Each term that is in the revised standard has been defined. None of the terms was in the NERC Terms Used in the Policies, but several of the terms were in the NERC Glossary. If the term was previously defined as part of the NERC Glossary, we’ve adopted that definition. Several of the terms related to the Functional Model, and we’ve included the definitions provided in the Functional Model.

The SDT thanks all who contributed comments on the first posting of this standard. Your feedback provided the guidance needed to revise this standard!



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### Background

1. Do you agree with the definitions provided in the front of this standard?

Yes                       No

Identify any definitions that you feel need to be revised, and if possible provide a suggested revision.

Assuming that the intent of including the definitions is a placeholder until a new Glossary is developed, then it is appropriate that the definitions be provided with the standard. There is a risk of a conflicting definition if more than one document. The only definitions that should appear in the Standard should be those specific to THIS standard and NOT defined in a higher level or more authoritative document. There is/was a NERC Glossary of Terms that contains consensus definitions of terms (including BES, instability, etc.). There is a clear risk of writing a new or conflicting definition.

2. Do you agree with the SDT that the redundant requirements for the Transmission Operator should be deleted from this standard?

Yes                       No

Comments:

Conditionally that it cannot be interpreted to absolve or insulate the TOP from responsibility for following the directive(s) of the RA.

### Requirement 201 - Interconnection Reliability Operating Limit Identification

3. Do you agree with the requirement?

Yes                       No

4. Do you agree with the measures?

Yes                       No

5. Do you agree with the compliance monitoring process?

Yes                       No

6. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 201: While 201.4.1 states "self-certification" who is the ultimate arbiter of what is the "complete list" of facilities and limits? The levels of non-compliance do not allow for degrees of compliance (e.g., list is not complete). We disagree with the imposition of monetary sanctions as it has not been demonstrated to be an effective means of achieving compliance.

### Requirement 202 - Monitoring

7. Do you agree with the requirement?

Yes                       No

8. Do you agree with the measures?

Yes                       No

9. Do you agree with the compliance monitoring process?

Yes                       No

10. Do you agree with the levels of non-compliance?

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Yes                       No

Comments about Requirement 202: The levels of non-compliance do not allow for degrees of compliance (e.g., list is not complete). We disagree with the imposition of monetary sanctions as it has not been demonstrated to be an effective means of achieving compliance.

**Requirement 203 - Analyses and Assessments**

11. Do you agree with the requirement?

Yes                       No

12. Do you agree with the measures?

Yes                       No

13. Do you agree with the compliance monitoring process?

Yes                       No

14. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 203: the general nature of this requirement seems “open-ended” and does not reflect the reality of system analysis capabilities. R203.2.1.1 appears to require day-ahead assessment of voltage and stability, and R203.2.1.2 requires that assessment be performed every 30-minutes. Analysis of voltage or transient stability is not possible in a (near) real-time environment, and may not be practical even in a day-ahead context. Data to perform such analysis may also be required from planning, balancing and scheduling authorities and market operations. Should the Planning Authority be required to evaluate the “maintainability” of the “as designed” system to insure that system security can be preserved during equipment maintenance outages?

We disagree with the imposition of monetary sanctions as it has not been demonstrated to be an effective means of achieving compliance.

**Requirement 204 - Actions**

15. Do you agree with the requirement?

Yes                       No

16. Do you agree with the measures?

Yes                       No

17. Do you agree with the compliance monitoring process?

Yes                       No

18. Do you agree with the levels of non-compliance?

Yes                       No

Comments about Requirement 204: The level of compliance does not recognize that there could be frequent occurrences where a limit is exceeded and then clears with no action being required or taken – that no action was taken could be (incorrectly) interpreted as a compliance violation for which there was no IROL violation. There are also examples of system limits that can be violated by external cause for which the RA has no control over – is the RA expected to take all actions (including shed

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firm load) to correct for a condition which it neither caused, nor has the means to correct through other means?

We disagree with the imposition of monetary sanctions as it has not been demonstrated to be an effective means of achieving compliance.

**Requirement 205 - Data Specification**

19. Do you agree with the requirement?

Yes  No

20. Do you agree with the measures?

Yes  No

21. Do you agree with the compliance monitoring process?

Yes  No

22. Do you agree with the levels of non-compliance?

Yes  No

Comments about Requirement 205: Entities providing data should be expanded to include the Planning authority, loads (and other PSE, etc.). Measures does not recognize that certain aspects of data communication/collection can take weeks/months to implement, and the process of getting data for new facilities needs to be started with the Planning authority – hardly a matter of 5 days. The EMS systems being used by RAs are at a point that manual process is ineffective (if even possible) – the standard should encourage increased functionality of automated back-up systems or redundant EMS capabilities to insure continuity of data and functionality.

205.1.3 remove phrase “that has facilities monitored by the reliability authority”

We disagree with the imposition of monetary sanctions as it has not been demonstrated to be an effective means of achieving compliance.

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**Requirement 206 - Data Provision**

23. Do you agree with the requirement?  
 Yes                       No
24. Do you agree with the measures?  
 Yes                       No
25. Do you agree with the compliance monitoring process?  
 Yes                       No
26. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 206: Entities providing data should be expanded to include the Planning authority, loads (and other PSE, etc.).  
We disagree with the imposition of monetary sanctions as it has not been demonstrated to be an effective means of achieving compliance.

**Requirement 207 - Action Plan**

27. Do you agree with the requirement?  
 Yes                       No
28. Do you agree with the measures?  
 Yes                       No
29. Do you agree with the compliance monitoring process?  
 Yes                       No
30. Do you agree with the levels of non-compliance?  
 Yes                       No

Comments about Requirement 207: Requirement is too vague; what is an "action plan" – please define. The 207.2.1.1 measure is a conditional definition of "action plan" and, as such, should be in the glossary of terms. We disagree with the imposition of monetary sanctions as it has not been demonstrated to be an effective means of achieving compliance.

**Requirement 208 – Reliability Authority Directives**

31. Do you agree with the requirement?  
 Yes                       No
32. Do you agree with the measures?  
 Yes                       No
33. Do you agree with the compliance monitoring process?  
 Yes                       No
34. Do you agree with the levels of non-compliance?  
 Yes                       No

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Comments about Requirement 208: RAs using real-time security constrained dispatch may automatically correct for limit violations by adjusting output of one or more generators. The process is automatic and may only generate logs entries on an exception basis – when a generator fails to follow dispatch signals. It should also be noted that these systems typically have performance penalties as part of the energy accounting process and therefore the imposition of monetary sanctions would not be necessary to achieve compliance.

### 35. List any Regional or Interconnection Differences for this standard:

### 36. Notifying the Compliance Monitor

One of the elements in Requirement 205 - Data Specification & Collection is:

- *The reliability authority shall notify its compliance monitor when an entity does not provide data as specified.*

In response to the first posting of this draft standard, several commenters indicated that requirement should not be included in the standard. The reason provided was:

- *The reference to notification of Compliance Monitor should not be specific to this or another standard and should be centralized in a compliance document.*

The SDT originally included this to ensure that the compliance monitor would know if some entity had failed to provide the RA with critical data – the intent was to give the Compliance Monitor information to start a ‘triggered investigation’. The existing compliance program documents do not contain any documentation to address the need to notify the compliance monitor. The SDT is undecided about whether the requirement to notify the compliance monitor should be included in this standard.

Do you think this standard should include language that requires the RA to notify its compliance monitor – or do you think notification of the compliance monitor should be addressed more globally in a Compliance Enforcement Program document?

Include in this standard

Include in a Compliance Enforcement Program Document

Comments

### 37. Any other comments on this standard?