

REVISIONS TO TOP/IRO RELIABILITY STANDARDS

Meeting Notes

1. Introduction

The Chair called the meeting to order at 8:00 a.m. on Tuesday, April 8, 2014 at the NERC offices in Atlanta, GA. Meeting participants were:

Members		
David Bueche, CenterPoint	Allen Klassen, Westar	Bruce Larsen, WE
Jason Marshall, ACES	Andy Pankratz, FPL, Vice Chair	Bert Peters, APS
Robert Rhodes, SPP	Kyle Russell, IESO	Eric Senkowicz, FRCC
Kevin Sherd, MISO	Dave Souder, PJM, Chair	Ed Dobrowolski, NERC
Observers		
Eugene Blick, FERC	Steve Eldridge, NERC	Ted Franks, FERC
Mike Gildea, NERC	Vic Howell, Peak Reliability	Laura Hussey, NERC
Soo Jin Kim, NERC	Brian Murphy, Next Era, PMOS	Mark Olson, NERC
Darrell Piatt, FERC	Bob Stroh, FERC	Dede Subakti, CAISO
Stacey Tyrewala, NERC		

2. Logistics and Safety Information - Ed Dobrowolski

Safety information for the Atlanta office was presented.

3. Determination of Quorum - Ed Dobrowolski

Quorum was achieved.

4. NERC Antitrust Compliance Guidelines and Public Announcement - Ed Dobrowolski

The NERC Antitrust Compliance Guidelines and public announcement were delivered.

5. SDT Participant Conduct Policy - Ed Dobrowolski

The SDT participant conduct policy was explained.

6. SDT E-mail List Policy - Ed Dobrowolski

The SDT e-mail list policy was described.

7. Membership Changes and Roster Updates - Ed Dobrowolski

There were no changes noted for SDT members.

8. Review Agenda and Objectives – Dave Souder

The agenda was reviewed and approved.

The objective of the meeting was to drive to consensus on the issues using the draft responses and the straw man standards.

9. Comments from FERC Staff – Ted Franks

FERC felt that the Technical Conferences were a good start for the project and showed there were several definitional issues that will need to be addressed. FERC acknowledges the tight project deadline and encourages people to contact them directly if there are any questions. A strong filing with thorough explanations will be needed.

10. SDT Training – Laura Hussey

The SDT was provided orientation and training during this first meeting. The slides were distributed to the SDT plus list.

11. Review Project Timeline – Ed Dobrowolski

The draft timeline was reviewed. No changes were made. MISO volunteered to host the proposed summer meeting in Carmel, IN. APS offered to host the proposed fall meeting. The exact dates of these meetings will be set based on actual filing dates.

12. General Review of the Technical Conferences – Dave Souder

There were two technical conferences: one in St. Louis, MO on March 3-4, 2014 facilitated by Sam Holeman of Duke and one in Washington, DC on March 6, 2014 facilitated by Tom Bowe of PJM. Attendance and participation was good and a number of issues were identified for SDT consideration.

13. Review of Written Comments from the Technical Conferences – Jim Case

A sub-team was formed to review the written comments from the technical conferences. The team was led by Jim Case and included Eric Senkowicz. The presentation made by the team pointed out that there was a disparity of opinions expressed with a number of minority opinions. The presentation slides were distributed to the SDT plus list. There is no obligation to provide formal written responses to these comments. The comments are simply an input for the SDT to consider in its deliberations.

14. Review of SAR Comments and Develop Responses – Kevin Sherd

A sub-team was formed to review the SAR comment responses and provide draft responses for SDT review. The sub-team was led by Kevin Sherd and included Jason Marshall, Bruce Larsen, and Kyle Russell. There were three changes made to the SAR due to industry comments:

1. Language was modified to show that the intent of the SAR is simply to evaluate how best to respond to the directive in Order 693, paragraph 1855.
2. The SW Outage Report was added as another source of input to the SDT deliberations.
3. Transmission Service Provider, Transmission Owner, and Interchange Authority were added to the list of applicable entities.

In addition, several commenters offered suggestions as to the content of the eventual standards. These comments were not about the actual content of the SAR and were simply brought to the SDT's attention for consideration moving forward.

15. **Revise SAR - Ed Dobrowolski**

Several clarifying changes were made to the SAR language. In addition, a new line item was placed in the detailed description: "Preserve the intent of the reliability objectives in the current, approved standards so that no reliability gaps are created." This was done to acknowledge comments made in the FERC NOPR for the original projects.

16. **Develop Responses to FERC NOPR Issues – Dave Souder**

This project will not be filing an official response to the NOPR. However, it was decided that making written responses in a 'separate' project document was a good way to start the SDT discussions. A sub-team of Dave Souder (lead), Andy Pankratz and Ed Dobrowolski worked on the draft responses.

Paragraph 42 – The SDT agrees that the standards should require operating to all System Operating Limits (SOL) and that all SOLs need to be monitored. The external network model is included in the FAC standards for the Transmission Operator and should cover the issue raised. SOLs that cross Transmission Operator Area boundaries will be handled by the Reliability Coordinator.

Paragraph 54 – When does the clock start for exceedances? The solution needs to consider both pre- and post-Contingency conditions. Is the 30 minute timeframe for full resolution of the problem or to start action? An SOL is not an Interconnection Reliability Operating Limit (IROL). SOLs are a local issue and the evil three are not involved. What is an unknown state? Does the definition of SOL need to be changed? A sub-team was formed to create a white paper on promoting a common understanding of what exceeding an SOL really means using the approved FAC standards as a starting point. Dave Souder will lead the team which includes Jason Marshall, Kevin Sherd, Vic Howell, Andy Pankratz, and Eugene Blick. The white paper will be added to proposed TOP-001 as an associated document (Section F).

Paragraph 55 – A sub-team will be formed to write guidelines on when an exceedance occurs. This information will show up in Section F of the proposed TOP-001-3. The sub-team will be Dave Souder (lead), Andy Pankratz, Jason Marshall, Kevin Sherd, and Vic Howell. Eugene Blick will represent FERC staff.

Paragraph 60 – The SDT does not feel that the TOP standards are the correct location for Balancing Authority requirements. There should be a separate standard for Balancing Authority requirements. However, considering the scope and deadlines for this project, the SDT will accommodate Balancing Authority requirements within the TOP standards.

Paragraph 64 – Is the Reliability Directive definition needed for reliability? Can the intent of the requirements be met by the new defined term, Operating Instruction?

Paragraph 68 – The SDT believes that 12 months is the defined timeframe for operations planning. The TPL standards are the proper forum for anything beyond 12 months. Is a separate standard needed for outage coordination?

Paragraph 70 – Most Severe Single Contingency (MSSC) is not presently a defined term. The SDT does not see a need for the term if Contingencies are defined correctly. The FAC standards require that an entity must analyze all Contingencies, not just the MSSC. The standards cannot require Real-time Contingency Analysis but a revised definition of Real-time Assessment should meet the intent. The term ‘immediately available data’ may be problematic. The eventual filing must explain how an entity identifies its largest contingency as part of its assessments.

Paragraph 78 – Data and notification issues are handled with the TOP standards. The corrective action issue is covered within the TOP standards for the Transmission Operator. However, corrective action by the Generator Operator is not part of the TOP standards. Assessments need to factor in relay considerations.

Paragraph 80 – The SDT believes that Emergency is the only term required. Adverse Reliability Impact (ARI) is essentially a sub-set of Emergency. The SDT will need to review where ARI appears in the IRO standards for uses other than notification.

Paragraph 84 – The SDT needs to consider whether the Transmission Operator should be a ‘backup’ for IROL mitigation.

Paragraph 90 – The SDT should consider actual real-world practices. FERC wants the Reliability Coordinator to be responsible for outage coordination 24 months out due to MATS/EPA retirements. One possible solution would be to strengthen the Reliability Coordinator/Planning Coordinator coordination within the TPL standard. Do we need to include Reliability Coordinator/Transmission Operator outage coordination methodology to include submittal timeframes? FERC requested that entities discuss outage coordination programs. The IERP report recommended a separate outage coordination standard.

Paragraph 92 – The concept of a secure network should be handled elsewhere but given the scope and timeframe of this project, something will need to be done here.

17. Develop Revisions to the TOP Reliability Standards – Dave Souder

TOP-001

Definition – A revised definition of Real-time Assessment was developed.

Requirement R1 – Replace Reliability Directive with Operating Instruction and make the terminology consistent with that in the IRO standards.

Requirement R2 - Replace Reliability Directive with Operating Instruction

Requirement R3 – A new requirement dealing with outage planning coordination was introduced. Is a separate standard required for outage planning coordination? Do the Transmission Operator and

Balancing Authority need separate requirements? The Generator Operator was an applicable entity in the original standards and isn't included here. The SDT believes it is covered through the data specification – the Generator Operator would be supplying necessary data to the Balancing Authority.

Requirement R4 – The requirement was re-written to respond to comments from the technical conferences. Long-term issues should be handled in the EOP standards.

Requirement R5 – ARI was deleted as Emergency was deemed sufficient. Operations Planning was added to the time horizons. The Balancing Authority is covered in approved EOP-002-3.1, Requirement R3. Coordination with the EOPFYRT may be needed.

Requirement R6 – This requirement was developed in response to the SW Outage Report and Independent Expert recommendations.

Requirement R7 – Changes were made to correspond with recommendations from the IROFYRT.

Requirement R8 – Modified to be consistent with Requirement R7.

Requirement R9 – No change.

Requirement R10 – Moved the concept of contracted services to the definition. Do we need to expand the rationale box and filing language to discuss small entity options?

Requirement R11 – Deleted as redundant to the BAL standards

Requirement R12 – Moved to proposed TOP-002

Requirement R13 – Will need to re-examine the wording after the exceedance sub-team is done with its work. Will stability-based SOLs need to be handled separately? FERC staff was concerned that the proposal doesn't answer paragraph 54 concerns.

Requirement R14 – Deleted IROL for consistency.

Requirement R15 – Deleted due to revised Requirement R13 and the separation of IROL and SOL

Requirement R16 – Split up the Transmission Operator and Balancing Authority.

Ensure that Special Protection System (SPS) additions are coordinated with the new SPS SDT.

TOP-002

Definition – Consistent terminology between Operational Planning Analysis and Real-time Assessment.

Requirement R1 – Deleted language now contained in revised definition. Deleted facility Ratings as that is contained in the SOL definition.

Requirement R2 – Added Operating Plan concept for consistency with proposed TOP-001. Should the Operating Plan include a timeframe to return the system to a secure N-1 state? The SOL exceedance sub-team will resolve this issue.

Requirement R3 - Added Operating Plan concept for consistency with proposed TOP-001. This is not a Paragraph 81 item – it is not just an administrative notice requirement as entities must know of their role in the plan or the plan won't work.

Requirement R4 – Adapted language from proposed Requirement R2 using current TOP-002 as a guide.

Requirement R5 - Adapted language from proposed Requirement R3 using current TOP-002 as a guide.

TOP-003

Requirement R1 – The SDT does not agree with the IERP report that language needs to be added to indicate that the data must be used. The list in proposed Requirement R1.1 was expanded. Proposed Requirement R1.1.5 is probably an acceptable compromise for this project considering the scope and timeline. Proposed Requirement R1.1.6 was added due to the IERP report. Is periodicity the correct term? Added 'reduced system reliability' to Requirement R1.2. Consider adding the following wording for relays: "affects normal operations and increases normal clearance beyond acceptable levels".

Requirement R2 – The SDT wants to leave the Balancing Authority as a separate requirement so that it can be more easily moved to a new, separate standard for Balancing Authorities down the road. Language was made consistent with that of proposed Requirement R1.

Requirements R3 – R5 – Language will be made consistent to other changes made during this meeting.

Review the timeframes in proposed TOP-003 Requirement R5 and proposed IRO-010 Requirement R3.

Review proposed data collection standards (approved MOD-026 and MOD-027) for consistent wording with proposed TOP and IRO standards.

18. **Develop Revisions to the IRO Reliability Standards – Dave Souder**

IRO-001

Requirement R1 – Changed Reliability Directive to Operating Instruction. Deleted qualifying statements. Now this is basically just an authority requirement.

Requirement R2 – Transmission Service Provider was added to the list. This will allow for the retirement of IRO-004. Changed Reliability Directive to Operating Instruction. The SDT does not agree with the IERP report suggestion to remove equipment from the list as you can't order an entity to do something that will damage its equipment.

Requirement R3 - Transmission Service Provider was added to the list. This will allow for the retirement of IRO-004. Changed Reliability Directive to Operating Instruction. This may be more of a compliance issue.

IRO-002

Purpose - Review the use of 'control' to ensure consistency with TOP standards.

Requirement R1 – Terminology was made consistent with the changes to proposed TOP standards. Added maintenance as per the IERP report.

Requirement R2 - Terminology was made consistent with the changes to proposed TOP standards.

Other requirements may be added to proposed IRO-002 after the mapping exercise is complete.

IRO-005

Remove Adverse Reliability Impact from the Purpose Statement and all requirements.

IRO-014

Requirement R1 - Energy and capacity shortages should be included in part 1.2. The SDT discussed including outage coordination as a required Operating Procedure/Process. FERC staff reiterated that outage coordination is one of the two key issues that FERC expressed concerns with in the NOPR. The SDT did not see a clear way to handle this in the TOP/IRO standards. An action item was taken to develop a whitepaper that shows how outage coordination is handled in all time horizons. FERC (Darrell Piatt) commented that the draft IRO-014 redline version is confusing because the black text is not what is in the currently-enforceable standard.

ARI was removed from the Purpose Statement but the use of ARI throughout the document needs to be vetted.

19. Develop Revisions to PRC-001 Reliability Standard - Dave Souder

The SDT will need to confirm that the proposed TOP-003 also reflects the Generator Operator requirements from PRC-001.

The intent for this review is to make sure that Real-time and Same Day issues in the PRC standard that will be proposed for retirement are carried over into the proposed TOP/IRO standards.

Requirement R2 - FERC staff said this provides for notification of failure of relays and to correct them as soon as possible. The SDT made revisions to proposed TOP-003 and IRO-010 data specification standards to ensure notification of failure would be covered. It was agreed that this requirement was

challenging because the Transmission Operator does not generally own the relays, so they don't directly know about failure.

Requirement R5 - Review applicable time horizon to consider "Real-time relay failure". Coordination remains as it is more of a Planning Horizon function.

Requirement R6 - Long-range planning time-horizon requirements cannot be addressed in this project. The requirement was moved to the proposed TOP standards. An action item was taken for NERC staff to work with the PRC-027 project team to ensure a gap isn't created if PRC-001 is retired.

The team supported adding status of Protection Systems and Special Protection Systems to the definition of Real-time Assessment and to make certain that proposed TOP-001 changes include the proper references to these systems.

20. Review other IRO Reliability Standards for Consistency

A sub-team of Dave Souder, Kevin Sherd, and Robert Rhodes (members of the original IRO FYRT), was formed to review proposed IRO-005 and -010, and approved IRO-008 to ensure consistency and to provide any recommended changes at the Miami meeting. The sub-team will also review the impact of suggested changes on IRO-003 IRO FYRT work.

IRO-004

Transmission Service Provider was moved to proposed IRO-001 so this standard can be retired.

IRO-010

Requirement R1 - The data specification language should mirror that in proposed TOP-003 with the addition of 'include but not limited to' language. Replaced 'create' with 'maintain'. Reference to 'Relay data' was removed from 1.1, and a specific 1.2 was created to cover 'provisions for notification of current Protection System and Special Protection System status, failure, and degradation' that impacts System reliability. This should be in both proposed TOP-003 and IRO-010. This addresses some FERC concerns in NOPR paragraph 78. The SDT agreed that lists in proposed TOP-003 Requirement R1 and IRO-010 Requirement R1 should generally match.

Requirement R2 - Match corresponding requirement in proposed TOP-003. Remove language 'as developed in R1' from IRO-010 and TOP-003. It was noted that Real-time Assessment was not consistently included in the proposed TOP-003 requirements and that it will need to be added in.

Requirement R3 - Match the proposed TOP changes. The SDT discussed the appropriate time horizons and agreed that the correct time horizons were Operations Planning, Same-day Operations, and Real-time Operations. The SDT agreed to add Distribution Providers as an applicable entity, and add to Requirement R3 as recommended by the IRO FYRT.

The recently approved MOD-026 and -027 standards provide a construct for requesting data and receiving data and should be reviewed for possible inclusion in the TOP/IRO standards.

21. Develop Implementation Plan

All members should review the proposed changes to the implementation timeline and provide feedback and concerns in the Miami meeting. FERC staff stated that, since the IRO data specification requirements already exist, that implementation could be shorter. But some entities that don't currently have Real-time Contingency Analysis will have a problem complying with Real-time Assessment requirements in 12 months. Likewise with outage coordination —if that is part of the standard and you don't already have it you won't be able to comply in 12 months.

22. Develop Comment Form for First Posting

The SDT members should review the revised standards to highlight areas of concern where we expect a lot of feedback so that we include questions that will result in targeted feedback that can be useful to moving forward. The comments should not be a vehicle for challenging the NOPR. The background section and the phrasing of the questions can be used to frame the discussion. The focus should be on 5 – 10 areas with 15 to 20 total questions.

23. Review the Project Issues and Directives Document – Dave Bueche

The sub-team for this task is Dave Bueche (lead), Allen Klassen, & Robert Rhodes. Eugene Blick will represent FERC staff. This task is to include review and consideration of the applicable IERP recommendations.

A separate sub-team will address the applicable SW Outage Report recommendations. This sub-team will be led by Kevin Sherd with Vic Howell and Dede Subkati assisting. Eugene Blick will represent FERC staff.

24. Review the Project Mapping Document – Jim Case

The sub-team for this task is Jim Case (lead), Eric Senkowicz, Bruce Larsen, & Bert Peters. Darrell Piatt will represent FERC staff.

For the filing, this document should map the currently-enforceable to proposed requirements. A suggestion was made to also have a document for industry that maps board-approved to proposed requirements but this was viewed as too much work for very little gain.

25. Review the VRF/VSL Justification Document (Placeholder for Miami meeting)

26. Determine Need For and Develop (as necessary) Technical White Papers

The SDT will develop white papers for SOL exceedance (as explained above) and outage coordination.

Outage coordination should include the SW Outage Report recommendations and address NOPR footnote 105. The outage coordination sub-team is Allen Klassen (lead), Vic Howell, Laura Hussey, and Andy Pankratz.

27. Determine Need For and Develop Project Communication Plan

SDT members should e-mail Ed Dobrowolski with a list of any regional meetings between mid-May and mid-June that we can present at. The idea is to create one set of slides that can be used for all

meetings to ensure the consistency of the message. A broad effort is required to convey background and to present this as what is needed to address FERC's concerns. The SDT should start thinking about the themes and develop a common set of slides.

Possible outreach opportunities are for Dave Souder to see the NERC Operating Committee and the RFC Reliability Committee. Something at WECC is needed if the right forum can be found. NERC ORS is a possible location during the 1st week of May.

28. **Next Steps**

The various sub-teams will now use the red-lined standards to advance their work. The focus of the next meeting will be on these documents.

29. **Future Meetings**

The next meeting will be April 22 – 24, 2014 hosted by Andy Pankratz at FPL in Miami, FL. Meeting details have been distributed.

No other meetings will be scheduled until there is an exact posting date. However, MISO has offered to host the proposed July meeting and APS has volunteered to host the proposed September meeting.

Team members should send their vacation schedules to Dave Souder so that he can understand SDT member availabilities over the 7/4 timeframe.

30. **Action Item Review**

Action items for specific agenda items are included in the text for that item. The following additional action items were developed during the meeting:

- Consider holding a Technical Conference to discuss the revised set of standards
- Check the Operating Limit Definition from the original TOP-007 to ensure Transmission Operator/Reliability Coordinator coordination
- Review all proposed standards for consistent use of 'Protection System' as opposed to 'relay'
- Set up a discussion on CIP standards with regard to the secure network issue with FPL staff at the next meeting

31. **Adjourn**

The Chair adjourned the meeting at 2:00 p.m. EDT on Thursday, April 10, 2014.