Unofficial Comment Form
Project 2014-03 Revisions to TOP/IRO Reliability Standards

Please DO NOT use this form for submitting comments. Please use the electronic form to submit comments on the Standard. The electronic comment form must be completed by July 2, 2014.

If you have questions please contact Ed Dobrowolski at ed.dobrowolski@nerc.net or by telephone at 609-947-3673.

The project web page can be found at: http://www.nerc.com/pa/Stand/Pages/Project-2014-03-Revisions-to-TOP-and-IRO-Standards.aspx

Background Information - Project 2014-03 - Revisions to TOP/IRO Reliability Standards
On April 16, 2013, NERC submitted two petitions requesting Commission approval of TOP and IRO standards.

On November 21, 2013, FERC issued a NOPR proposing to remand three revised TOP Reliability Standards: TOP-001-2 (Transmission Operations), TOP-002-3 (Operations Planning), TOP-003-2 (Operational Reliability Data), and one Protection Systems (PRC) Reliability Standard, PRC-001-2 (System Protection Coordination) to replace the eight currently-effective TOP standards and four revised IRO Reliability Standards: IRO-001-3 (Responsibilities and Authorities), IRO-002-3 (Analysis Tools), IRO-005-4 (Current Day Operations), and IRO-014-2 (Coordination Among Reliability Coordinators) to replace six currently-effective IRO standards. In the NOPR, FERC stated that NERC “has removed critical reliability aspects that are included in the currently-effective standards without adequately addressing these aspects in the proposed standards.”

In response, NERC filed a motion requesting that FERC defer action on the NOPR until January 31, 2015 to provide NERC and the industry the opportunity to thoroughly examine the technical concerns raised in the NOPR and afford time to review the proposed TOP and IRO Standards through the NERC standards development process. That motion to defer action was granted on January 14, 2014.

The drafting team formed to address those concerns has made revisions to the TOP and IRO standards proposed to be remanded, along with several other IRO standards to provide consistency amongst the TOP and IRO standards, to address NOPR issues and recommendations made by the Independent Expert Review Panel, the IRO five-year review team, and the 2011 SW Outage Report.

You do not have to answer all questions. Enter comments in simple text format. Bullets, numbers, and special formatting will not be retained.
The SDT requests that commenters not use these comments as a forum for questioning the issues raised in the FERC NOPR of November 21, 2013, but to objectively evaluate the work of the SDT in responding to the issues raised in the NOPR, and the recommendations made by the Independent Expert Review Panel (IERP), the IRO FYRT, and the SW Outage Report.

Questions

1. Do you agree with the changes made to proposed IRO-001-4? If not, please provide technical rationale for your disagreement along with suggested language changes.

   Yes:

   No: X

Comments: To be consistent with the format of other approved standards, remove the bullets from Section C. Compliance, sub-Part 1.3 Data Retention (page 7).

An Operating Instruction applies to both Normal and Emergency operations. Therefore, the VSL should be graduated similar to COM-002-4 R5. OI issued during an Emergency is a Severe VSL and OI issued during Normal events is a Moderate VSL.

2. Do you agree with the changes made to proposed IRO-002-4? If not, please provide technical rationale for your disagreement along with suggested language changes.

   Yes:

   No: X

Comments: To be consistent with other approved standards, add an "s" to "compliance audit", self-certification", "complaint" and change "compliance investigations" to "compliance violation investigation" in Section 1.2 Compliance Monitoring and Enforcement Processes.

To be consistent with the format of other approved standards, remove the bullets from Section C. Compliance, sub-Part 1.3 Data Retention (page 7).
Requirements R1 and R2 appear redundant to the COM-001 Standard; suggest these requirements be deleted. R1 requires voice communication as opposed to the COM-001-2 requirement for the RC to utilize Interpersonal Communication, which is defined as “Any medium that allows two or more individuals to interact, consult, or exchange information.” Is a RC supposed to have voice communication and Interpersonal Communication, or does voice communication apply to both IRO-002 and COM-001? If this is the case, then these two requirements are redundant.

R2 requires data links while the VSL utilizes data link facilities. We prefer the use of data link facilities. The use of facilities would imply that this is not a SCADA point by point requirement but an overall emplacement of equipment required to transmit data. It also helps address the concern that the requirement as written implies the data link is operational 24/7. The NERC Event Analysis Program has issued lessons learned where data communications between entities have been interrupted due to EMS issues. Finally, it would avoid any redundancy with the proposed IRO-010 R3 or IRO-014 R3.

R3- System Operators should have authority to both approve and disapprove planned outages. From R3, “...maintenance of its monitoring and analysis capabilities.” What is “its” referring to? The Rationale isn’t clear on this either.

R4- Suggest rephrasing R4 because the last phrase starting with word “including” is modifying the Facilities being monitored and not the type of exceedances being monitored for. Reword to “Each Reliability Coordinator shall monitor facilities, including sub-100 kV facilities when necessary and the status of Special Protection Systems in its Reliability Coordinator Area and neighboring Reliability Coordinator Areas to determine any potential System Operating Limit and Interconnection Reliability Operating Limit exceedances within its Reliability Coordinator Area.”

R5 contains some ‘how, not why’ language: “giving particular emphasis to alarm management and awareness systems, automated data transfers,” which may, in fact, produce a lowest common denominator approach to EMS systems. A part of the Requirement is also redundant to COM-001: “over a redundant and highly reliable infrastructure.” R5 could be improved to become performance oriented by removing ambiguous terms. For example, what is the measure of particular emphasis, and highly reliable? Also, does redundancy mean to have a Primary and Backup in which case EOP-008 already requires this redundancy? We suggest rephrasing to: Each Reliability Coordinator shall have systems that provide Real-time situational awareness of the BES to its System Operators.

3. Do you agree with the changes made to proposed IRO-008-2? If not, please provide technical rationale for your disagreement along with suggested language changes.

Yes:

No: X
Comments:

Under the section "Definitions of Terms used in the Standard" it is stated that there are no new or revised definitions proposed in this standard revision, but the standard refers to a revised definition of "Operational Planning Analysis".

Suggest keeping the Purpose of IRO-008-1. The proposed Purpose in IRO-008-2 does not adequately introduce what the performed analyses and assessments are performed on.

4. Do you agree with the changes made to proposed IRO-010-2? If not, please provide technical rationale for your disagreement along with suggested language changes.
   Yes: 
   No: X

Comments: Similar to TOP-003, R1 and R2 VRFs should be Low, not Medium.

5. Do you agree with the changes made to proposed IRO-014-3? If not, please provide technical rationale for your disagreement along with suggested language changes.
   Yes: 
   No: X

Comments:

In Measure M1, for consistency remove the "s" from "notifications" so that the language matches that of R1, or add an a "s" to "notification" in R1.

To be consistent with other approved standards, add an "s" to "compliance audit", self-certification", "complaint" and "compliance violation investigation" in Section C. Compliance, sub-Part 1.2 Compliance Monitoring and Enforcement Processes.

To be consistent with the format of other approved standards, remove the bullets from Section C. Compliance, sub-Part 1.3 Data Retention.

Requirements R2 and R4, as well as R1 sub-Part 1.1, indicate “and the process to follow in making those notifications.” Drafting Teams should focus on developing results-based standards.
6. The drafting team has proposed a new standard to address outage coordination concerns. Do you agree with the new standard, IRO-017-1? If not, please provide technical rationale for your disagreement along with suggested language changes.

Yes: 

No: X

Comments: The Purpose needs to be revised to indicate that the outages are properly coordinated between whom?

To be consistent with other approved standards, add an "s" to "compliance audit", self-certification", "complaint" and "compliance violation investigation" in Section C. Compliance, sub-Part 1.2 Compliance Monitoring and Enforcement Processes.

7. Do you agree with the changes made to proposed TOP-001-3? If not, please provide technical rationale for your disagreement along with suggested language changes.

Yes: 

No: X

Comments: Requirement R5 has a zero-defect problem similar to what was argued for COM-002-4. A single instance of a failure to comply with any Operating Instruction results in a severe violation. We recommend a revision to this approach more consistent with the COM-002-4 penalties. A demonstrated pattern of problems would trigger a Severe VSL, but isolated single events, which did not impact the BES, should not be penalized. (It is hard to argue that not following an OI when one can during an Emergency would not be a severe VSL. Graduated levels could be similar to COM-002-4 R5.) FERC has stated that VSLs should be graded. These are not. Further, intent to perform should count in favor of any entity that is unable to implement an Operating Instruction due to a technical or reliability related concerns. (It is hard to argue that not following an OI when one can during an Emergency would not be Severe. Graduated levels could be similar to COM-002-4 R5.)

Regarding Requirement R13, TOPs perform Real-time Reliability Assessments using their EMS Contingency Analysis systems and it is reasonable to expect that such systems would generate results at least every 30 minutes. However, a failure of the EMS or SCADA or of the contingency analysis software should not automatically result in a severe violation. For example, EOP-008-1 R1 allows a TOP two hours following the loss of primary control center functionality to re-establish situational awareness, yet such an event would automatically result in a severe violation of this requirement.

We suggest revising R13 to read:
Each Transmission Operator shall perform a Real-time Assessment at least once every 30 minutes when the EMS and SCADA are functional.

There is no way to perform a Real – time Assessment without EMS and SCADA given the new definition.

In Measure M4, change Generation Operation to Generator Operator.

In Measure M5, suggest changing "...Operating Instruction issued by the Transmission Operator(s)" to "...Operating Instructions issued by the Balancing Authority" to match the language in R5.

In Measure M6, suggest changing "Balancing Authority" to "Transmission Operator" in the last sentence of the paragraph "If such a situation has not occurred, the Balancing Authority, Generator Operator, Distribution Provider, or Load-Serving Entity may provide an attestation." to match the language in R6.

Regarding Measure M8, no evidence is needed to show that the Transmission Operator informed the impacted Balancing Authorities. If so, why are they included in R8?

Throughout the standard we find "an SOL". In the IRO standards we see "a SOL". Should be “a SOL”.

To be consistent with other approved standards, add an "s" to "compliance audit", self-certification", "complaint" and "compliance violation investigation" in Section C. Compliance, sub-Part 1.2 Compliance Monitoring and Enforcement Processes.

Requirements R1 and R2 appear to create a double jeopardy situation as the TOP is already obligated to comply with all the other requirements for which it is the functional entity. To do so might necessitate issuing Operating Instructions to direct others to act. For example: A TOP needs to issue an Operating Instruction to shed load to comply with EOP. If the TOP does not issue the OI then it won’t comply with its EOP load shed plan. That is a failure to shed load and failure to issue the OI.

It is important to clarify R7 by retaining the concept of comparability of actions. For example, the requested TOP or BA should not be expected to implement load shedding if the requesting TOP hasn’t exhausted that option. Suggest changing emergency procedures to comparable emergency procedures.

In R8 we agree the TO should inform impacted entities of operations that result in an emergency. However, including operations that “could result in an emergency” is far too broad and might potentially result in limitless notifications.

R9 has several issues that need to be addressed. The SDT is utilizing the word negative to limit the need to make notifications, but it is introducing ambiguities in the meaning and determination of negative impact that could result in an unbounded requirement to make notifications. We suggest introducing additional phrases to define negative. Negative impact should mean to reduce the ability to perform an entity’s reliability function. The Measure states this is limited to planned outages while the requirement does not use the word planned. This needs to be resolved. The requirement to coordinate outages would conflict with and cause double jeopardy with the existing COM-001 R3 requirement to coordinate telecom systems within and between areas, including investigating and recommending solutions to problems. It also conflicts with proposed COM-001-2 R10 to within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. The Southwest Outage Report was specific about loss of RTCA. As written the requirement could be interpreted to mean recording loss
of a control point or analog value and whether it impacted another NERC entity, and evidence of notification. Consider revising R9 to read:

Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator and those interconnected NERC registered entities that utilize the outages equipment in the performance of their reliability functions of outages of telemetering and telecommunication equipment, control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities.

A different approach would be to split the requirements into a BA and a TOP limited Requirement. The BA would remain the same as the suggested rephrasing above and the TOP would state:

Each Transmission Operator shall notify its Reliability Coordinator and those interconnected NERC registered entities that are within the TOP Area that the TOP Real-time Contingency Analysis tools are not functioning properly and reduces the ability of the TOP to monitor its area.

Regarding R10, if a sub-100 kV facility is needed to maintain reliability, it should be included in the BES by exception. This standard should require the TOP to monitor BES Elements in its area. Monitoring BES Elements beyond that is the responsibility of the RC. Monitoring of neighboring facilities presents an authority issue, which is clearly defined in the IERP Report, and Paragraphs 84 and 87 of the NOPR. R10 as written implies the TOP needs to monitor its neighboring TOP’s entire area when in reality a subset of facilities may be all that is required. One suggestion rephrasing is Each Transmission Operator shall monitor Facilities within its Transmission Operator Area and those Facilities it determines as necessary in its neighboring Transmission Operator Areas to maintain reliability within its Transmission Operator Area... Another suggestion is:

Each Transmission Operator shall monitor Facilities within its Transmission Operator Area including sub-100 kV facilities needed to maintain reliability and the status of Special Protection Systems within its Transmission Operator Area and neighboring Transmission Operator Areas to maintain reliability within its Transmission Operator Area.

Requirement R16 could be clarified by using the wording in IRO-002-2 R8, which is the same requirement for the RC.

Requirement R17 could be clarified by using the wording in IRO-002-2 R8, which is the same requirement for the RC.

Requirement R16 and R17—System Operators should have authority to both approve and disapprove planned outages and maintenance of its monitoring and Real-time assessment (analysis) capabilities. “...maintenance of its monitoring and analysis capabilities.” What is “its” referring to? The Rationale isn’t clear on this either.
8. Do you agree with the changes made to proposed TOP-002-4? If not, please provide technical rationale for your disagreement along with suggested language changes.

Yes:

No: X

Comments: To be consistent with other approved standards, add an "s" to "compliance audit", self-certification", "complaint" and change "compliance investigations" to "compliance violation investigation" in Section C. Compliance, sub-Part 1.2 Compliance Monitoring and Enforcement Processes.

9. Do you agree with the changes made to proposed TOP-003-3? If not, please provide technical rationale for your disagreement along with suggested language changes.

Yes:

No: X

Comments: To be consistent with other approved standards, add an "s" to "compliance audit", self-certification", "complaint" and change "compliance investigations" to "compliance violation investigation" in Section C. Compliance, sub-Part 1.2 Compliance Monitoring and Enforcement Processes.

To be consistent with other approved standards, remove the bullets from Section C. Compliance, sub-Part 1.3 Data Retention.

Under the section "Definitions of Terms used in the Standard" it is stated that there are no new or revised definitions proposed in this standard revision, however, the standard’s use of "Operational Planning Analysis" is a revision to its definition.
10. The mapping document posted on the project page explains how the drafting team believes Requirements from 5 IRO standards that are proposed for retirement are addressed without creating any reliability gaps. Do you agree with the retirement of standards IRO-003-2, IRO-004-2, IRO-005-3.1a, IRO-015-1, and IRO-016-1? If not, why not? Please be specific.

Yes:

No:

Comments:

11. The mapping document posted on the project page explains how the drafting team believes Requirements from 5 TOP standards and 1 PER standard that are proposed for retirement are addressed without creating any reliability gaps. Do you agree with the retirement of standards TOP-004-2, TOP-005-2a, TOP-006-3, TOP-007-0, TOP-008-1, and PER-001-0? If not, why not? Please be specific.

Yes:

No: X

Comments: We do not agree with retiring PER-001 R1. This requirement requires operating personnel to have the authority to shed load without consulting non-operating management personnel. There have been instances where load shedding was delayed by non-operating managers or attempts to seek permission to shed load. The System Operator is responsible for maintaining a reliable system in Real-time and they should have full authority to shed load. The SDT reference to the FERC Order does not apply to PER-001.

We do not agree with retiring TOP-002 R19. R19 requires the TOP to have an accurate model. The Planning Coordinator model may not be suitable for operations. There are scripts that can convert the Planning model into an Operations model, but these are not uniformly available. The new requirements for conducting an Operating Planning assessment and Real Time Assessment imply that operations has an accurate model. Referring to MOD-033 does not properly support retirement. MOD-033 places a requirement on the PC to have a model but does not require the PC to provide it to the TOP. The question of who is responsible for accuracy of the Real-time model is not answered in MOD-033. The fact that the TOP has to provide behavior data to the PC does not mean it has an accurate model.

Agree with retiring TOP-004 R5 requiring remaining connected to the Grid, but suggest the justification is in the proposed TOP-0013 R14 and R15.

Agree with retiring TOP-006 R4 but do not agree with the justification pointing to TOP-003. TOP-006 R4 requires a load forecast to be completed for Operational Planning. The justification states this, but it should point to Operational Planning TOP-002-4 R1 and R2.
Agree with retiring TOP-006 R6 but do not agree with the justification pointing to BAL-005 frequency metering. TOP’s monitor line flows, voltages, SOL and IROL. These items have nothing to do with BAL standards. This requirement sets the stage for situational awareness and monitoring tools. The better reference is TOP-001 R10 which requires the TOP to monitor.

12. The SDT is seeking input on whether 30 minutes is the correct periodicity for the performance of Real-time Assessments for Reliability Coordinators and Transmission Operators. Please explain what you feel the correct periodicity and supply technical rationale for your suggestion.

Comments: 30 minutes is appropriate and consistent with the current NERC EAP guidelines for monitoring and control functionality under normal operating conditions. However, exceptions need to be afforded for EMS system failures and unplanned Control Center outages and/or evacuations, or system blackout, e.g., Hurricanes Katrina, Ike, and Sandy, 2003 Northeast Blackout, 2012 Southwest Blackout. See EOP-004-2 — Attachment 1, Standard EOP-008-1 — Loss of Control Center Functionality, Standard COM-001-2 — Communications (R9), Standard EOP-005-2 — System Restoration from Blackstart Resources, Standard EOP-008-1 — Loss of Control Center Functionality.

13. Do you have any comments on the SOL Exceedance White Paper? If so, please provide technical rationale for your disagreement along with suggested language changes.

Yes: X

No:

Comments: The SOL Whitepaper provides a good example of evaluating system performance. However, it implies that the continuous thermal rating is a hard limit. A Rating Authority may establish applicable pre-contingency thermal limits that are higher than the continuous rating under specific circumstances and do not result in equipment damage. The acceptable pre-contingency performance defined on page 2, item (b) can be written as "All Facilities shall be within their pre-Contingency thermal limits" rather than "All Facilities shall be within their Normal (continuous) Facility Ratings and thermal limits." This is consistent with the methodology for voltage limits listed on page 2, item (c).

From an operational perspective, it is not practical to cover any and all unit instability issues which may remain local in nature. We agree that, to the extent unit instability would cascade into system instability, operating plans must protect against that. Operationally you need to protect against the loss of units regardless of cause.
14. The SDT has made revisions to VRFs and VSLs as needed to conform to changes made to requirements. Do you agree with the VRFs and VSLs for the nine posted standards? If you do not agree, please indicate specifically which standard(s) and requirement(s), and whether it is the VRF or VSLs you disagree with, and explain why.

Yes:

No: X

Comments: IRO-008-2: R5 requires a real-time assessment every 30 minutes. The VSL is graduated in 5 minute increments. The VSL does not specify the period being measured. The existing IRO-008-1 utilizes a 24 hour sampling in the existing VSL. A similar approach should be used. Each VSL should be checking the completed assessments in a 24 hour period and that the periodicity was within a time bound. So VSL Low would be: The Reliability Coordinator performed Real-time Assessments but did so at a periodicity of more than 30 minutes but less than 35 minutes OR for any sample 24 hour period within the 30 day retention period, a Real-time Assessment was not conducted for one 30-minute period within that 24-hour period.

IRO-014--In the VSL Table repeat the header row for all pages containing the VSL table.

IRO-014 R6 (Severe VSL) : in order to be consistent with other standards, change the tense of the verb "exists" to "existed".

IRO-017-- R2 VRFs should be Medium, not Low. This is a performance requirement.

TOP-001 R3 thru R6 VSLs--an Operating Instruction applies to both Normal and Emergency operations. Therefore the VSL should be graduated similarly to COM-002-4 R5. OI issued during an Emergency is a Severe VSL and OI issued during Normal events is Moderate VSL.

In the VSL Table, for R3 and R5 (Severe VSL), suggest changing the sentence to "The responsible entity did not comply with an Operating Instruction issued by the Transmission Operator when such an action could have been physically implemented and would not have violated safety, equipment, regulatory or statutory requirements."

In the VSL Table for R7 (Severe VSL), suggest changing the sentence to "The Transmission Operator or Balancing Authority did not provide assistance to Transmission Operators, if requested, when the requesting entity had implemented its emergency procedures when such actions could have been physically implemented and would not have violated safety, equipment, regulatory, or statutory requirements."

In the VSL Table for R8 (all VSL levels) change the tense of the verb "result in" to "resulted in, or could have resulted in ...." to match the rest of the VSL that is written in the same tense.
15. Are there any other concerns with these standards that haven’t been covered in previous questions and comments?

Yes: 

No: X

Comments: