

Consideration of Comments

Project Name: 2009-02 Real-time Monitoring and Analysis Capabilities

Comment Period Start Date: 07/16/2015

Comment Period End Date: 08/17/2015

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Director of Standards, [Howard Gugel](#) (via email) or at (404) 446-2560.

Questions

1. Do you agree with the proposed scope for Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.
2. Provide any additional comments for the Standard Drafting Team (SDT) to consider, if desired.

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

1. Do you agree with the proposed scope for Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.

Summary: The SDT thanks all commenters. Most commenters agree with the proposed scope for Project 2009-02. Some commenters raised concerns or provided recommendations that are summarized as follows:

- **Some commenters believe Project 2009-02 is not necessary, or that the reliability objectives should be addressed through the NERC Organization Certification Process.** The SDT maintains that the recommendations from BES event reports and the Real-time Tools Best Practices Task Force (RBPTF) Report that are referenced in the project SAR, as well as regulatory directives, establish the need for development of reliability standards. The SDT agrees that these capabilities should be demonstrated at the organization certification stage, but believes they should also be maintained on an ongoing basis through adherence to standards. Furthermore, development of standards is appropriate since, in general, organization certifications are based on the body of approved standards.

- **A commenter recommended modifying the SAR to indicate that the project could develop modifications to existing standards.** The SDT agrees that the project could either develop new standard(s) or modify existing TOP and IRO standards and modified the SAR accordingly.
- **A commenter noted notification of unavailability of analysis capabilities is implied in proposed TOP and IRO standards that are pending FERC approval.** The SDT agrees and modified the SAR to remove this reliability objective from Project 2009-02 scope.
- Several commenters provided recommendations for consideration during standards development.

Specific responses to all commenters are provided below.

Thomas Foltz - AEP - 5 -

Selected Answer: Yes

Andrew Puztai - American Transmission Company, LLC - 1 -

Selected Answer: Yes

Leonard Kula - Independent Electricity System Operator - 2 -

Selected Answer: No

Answer Comment:

We agree with the need to establish the requirements for real-time monitoring and analysis capabilities used by System Operators in support of reliable System operations. However, we believe such requirements do not rise up to the level of Reliability Standards, whose objective is to drive the proper behaviors that contribute to reliability.

We believe real-time monitoring and analysis capabilities are the “one-off” type that is required for performing a registered entity’s functions. Such capabilities need to be provided and tested at the organization certification stage, and in subsequent verification stages. Another example of this type of requirement is the provision of redundant communication facilities, or the installation of disturbance monitoring devices.

Therefore, we do not support this SAR, and propose that the requirements for providing the real-time monitoring and analysis capabilities be stipulated in the concerned functional entities’ organization certification requirement.

Response: Thank you for your comment. The SDT believes that the recommendations from BES event reports and the RTBPTF Report that are referenced in the project SAR, as well as regulatory directives, establish the need for development of reliability standards. Project 2009-02 has been scoped to include recommendations and directives that have not been addressed in other standards. The SDT agrees that these capabilities should be demonstrated at the organization certification stage, and should also be maintained on an ongoing basis through adherence to standards. Development of standards is also appropriate since, in general, organization certifications are based on the body of approved standards.

Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO**Group Name:**

MRO-NERC Standards Review Forum (NSRF)

| Group Member Name | Entity | Region | Segments |
|-------------------|-------------------------------|--------|----------|
| Joe Depoorter | Madison Gas & Electric | MRO | 3,4,5,6 |
| Amy Casucelli | Xcel Energy | MRO | 1,3,5,6 |
| Chuck Lawrence | American Transmission Company | MRO | 1 |

| | | | |
|--------------------|--------------------------------------|-----|---------|
| Chuck Wicklund | Otter Tail Power Company | MRO | 1,3,5 |
| Theresa Allard | Minnkota Power Cooperative, Inc | MRO | 1,3,5,6 |
| Dave Rudolph | Basin Electric Power Cooperative | MRO | 1,3,5,6 |
| Kayleigh Wilkerson | Lincoln Electric System | MRO | 1,3,5,6 |
| Jodi Jenson | Western Area Power Administration | MRO | 1,6 |
| Larry Heckert | Alliant Energy | MRO | 4 |
| Mahmood Safi | Omaha Public Utility District | MRO | 1,3,5,6 |
| Marie Knox | Midwest ISO Inc. | MRO | 2 |
| Mike Brytowski | Great River Energy | MRO | 1,3,5,6 |
| Randi Nyholm | Minnesota Power | MRO | 1,5 |
| Scott Nickels | Rochester Public Utilities | MRO | 4 |
| Terry Harbour | MidAmerican Energy Company | MRO | 1,3,5,6 |
| Tom Breene | Wisconsin Public Service Corporation | MRO | 3,4,5,6 |
| Tony Eddleman | Nebraska Public Power District | MRO | 1,3,5 |

Selected Answer:

Yes

Answer Comment:

The NSRF is aware of the Commission directives and past outage reports that have set the foundation for this project. Taken singularly (looking at these objectives, only) this Project should be rather straight forward. But as the SDT knows, the newly developed Requirements will be in addition to the real-time responsibilities that (System) operators have currently, in maintaining a balanced and secure system.

The NSRF wishes to remind the SDT that awareness (within Situational Awareness) should not turn into Situational Assurance (beyond a doubt). That *awareness* is “*knowing*” that something exist that may impact you and not necessarily having an *in depth understanding* of the root cause and effect of the situation. As an example, a TOP has a 345kV line trip and lock out. The TOP should have an *in depth understanding* of how the megawatt flows of their system will change when this lock out occurs. The impact BA Area does not need to *know* much beyond that the line has tripped, but rather needs the

awareness that they may be called upon to help reconfigure their system (re-dispatch generation, shed load, etc.).

All Requirements (present and future) cannot remove the possibility of human error. A contributing factor to human error is data overload (ie, alarms [actual and false] communications [phone call, radio call, blast calls], processing this tremendous amount of information, having information constantly in a state of change and being compliant with ALL currently enforceable Standards. Note that System Operators have a higher tendency to make mistakes when their systems are stressed and usually in an emergency condition (either a capacity or transmission emergency). Not that their tools failed them but rather the most critical element or system condition wasn't mitigated first. The SDT must remain aware to *complexity creep* and look at ALL real-time operator responsibilities when developing this project and that adding new responsibilities may be detrimental to system reliability..

The NSRF looks forward to working with the SDT on this Project.

Note: We have progressed and are now aware of systems and conditions since the 2003 Blackout. Please consider this. Tools should be used as a "control" within an entity's Risk Assessment.

Response: Thank you for your comment.

John Fontenot - Bryan Texas Utilities - 1 -

Selected Answer: Yes

Kathleen Goodman - ISO New England, Inc. - 2 - NA - Not Applicable

Group Name: Standards Review Committee (SRC)

| Group Member Name | Entity | Region | Segments |
|-------------------|--------|--------|----------|
| Charles Yeung | SPP | SPP | 2 |
| Ben Li | IESO | NPCC | 2 |
| Greg Campoli | NYISO | NPCC | 2 |
| Matthew Goldberg | ISO-NE | NPCC | 2 |
| Christina Bigelow | ERCOT | TRE | 2 |
| Terry Bilke | MISO | MRO | 2 |
| Al Dicaprio | PJM | RFC | 2 |
| Ali Miremadi | CAISO | WECC | 2 |

Selected Answer:

No

Answer Comment:

This proposed project appears to be well-suited for a guideline document as opposed to a Standard. As written, the SAR appears to intend to write a “how” not “what” Standard (*i.e.*, it does not appear to be a results-based standard). The SRC believes that the existing Standards (*i.e.*, IRO, TOP and BAL) sufficiently define what needs to be monitored by each entity without defining the tools (*i.e.*, without defining the “how”), which is appropriate. In the alternative, this could be considered a process to be used for Certifying new entities for assurance that they have the ability to monitor appropriately in accordance with the Standards Requirements.

The SRC notes that the tools available to operators have progressed well beyond those available in 2003. If defined tools would have been hardcoded in a standard at that time, it would have limited focus and investment to those things that were in the standard. Further, expanding on our point above, the SRC believes that the “what” regarding tools is more appropriately captured in the certification expectations for BAs, RCs, and TOPs. Additionally, it would be appropriate for Regions to evaluate tools as part of the Registered Entity’s Inherent Risk Assessment (IRA). This would include the scope of tools, backups, etc. and would provide an adaptable approach that would encourage continuous improvement.

Additionally, the SRC recommends that NERC coordinate with the NATF to encourage inclusion of an ongoing “care and feeding” of tools evaluation and information sharing in their efforts with the provision that they make information on good practices available to the wider NERC community so that non-members can learn from the innovation of others.

Finally, to avoid these issues in the future and to support communicating to FERC when a Standard is not needed and another tool is more suitable, the SRC suggests that future SARs be voted on by industry to determine whether they should proceed as a Standards project or another means is a more appropriate method through which to achieve the SAR’s objective.

Response: Thank you for your comment. The SDT believes that the recommendations from BES event reports and the RTBPTF Report that are referenced in the project SAR, as well as regulatory directives, establish the need for development of reliability standards. Project 2009-02 has been scoped to include recommendations and directives that have not been addressed in other standards. The SDT agrees that approved and proposed standards define requirements for performing monitoring and analysis tasks as described in the SAR Justification White Paper, and that the proposed project should not define or prescribe specific tools. In addressing the issues and recommendations identified in the SAR, the SDT will develop appropriate results-based requirements. The SDT agrees that monitoring and analysis capabilities should be demonstrated at the organization certification stage, and should also be maintained on an ongoing basis through adherence to standards. Development of standards is also appropriate since, in general, organization certifications are based on the body of approved standards.

Likes: 1 Tri-State G and T Association, Inc., 1,3,5, Banuelos Sergio

Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC

Selected Answer: No

Answer Comment:

1. Tri-State Generation and Transmission supports the comments submit by the Standards Review Committee (SRC).

2. In addition, Tri-State also would like to add the following. Tri-State recognizes that Real-time situational awareness might have been a factor of the 2003 Northeast blackout and the 2011 Southwest blackout, however we believe that over the past four years there has been significant developments and improvement in the tools that operators have available particularly within the WECC region. Additionally, the recent bifurcation in the WECC region and the subsequent creation of a standalone Reliability Coordinator has led to significant improvements in regional coordination, operations, and overall system visibility. We believe the new TOP-003-1 standard directly addresses the 'what' leaving the 'how' up to the individual utility, specifically:

Requirement R10 for Monitoring power System data in Real-time (and TOP-003-3)

Requirement R13 for Determining the current state of the BES and Evaluating the impact of 'what if' events on the current state of the BES

Requirement R19 for Exchanging power System data in Real-time

3. Tri-State does not agree with the SAR and its intentions but should the SAR proceed we urge the SDT to better define the intentions of the SAR. Specifically Tri-State does not understand how the SDT intends to quantify acceptable "quality" without resulting in a subjective audit? Also what is included in the term "analysis capabilities" and how will these items be sufficiently quantified to allow for a consistent audit approach across the various Regional Entities?

Response: Thank you for your comment.

1. See response to SRC.

2. The SDT has reviewed all proposed TOP and IRO standards from Project 2014-03, including TOP-001-3, and established the project scope accordingly as described in the SAR Justification White Paper.

3. Specific concerns related to the requirements will be addressed by the SDT in standards development. Analysis capabilities are described by the defined term Real-time Assessment.

christina bigelow - Electric Reliability Council of Texas, Inc. - 2 -

Selected Answer: Yes

Answer Comment: ERCOT supports the SRC's comments regarding the proposed SAR, but - should the SAR proceed - would urge the SDT to ensure that the focus remains on what needs to be done - not how it should be done.

Response: Thank you for your comment. See response to SRC.

Scott Langston - Tallahassee Electric (City of Tallahassee, FL) - 1 -

Selected Answer: Yes

Richard Hoag - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6 - RFC

Group Name: FE RBB

| Group Member Name | Entity | Region | Segments |
|-------------------|-----------------------|--------|---------------------|
| William Smith | FirstenergyCorp | RFC | 1 |
| Cindy Stewart | FirstEnergy Corp. | RFC | 3 |
| Doug Hohlbaugh | Ohio Edison | RFC | 4 |
| Robert Loy | FirstEnergy Solutions | RFC | 5 |
| Richard Hoag | FirstenergyCorp | RFC | NA - Not Applicable |
| Ann Ivanc | FirstEnergy Solutions | FRCC | 6 |

Selected Answer:

Yes

Answer Comment:

The SAR has the "NEW" Standard box checked but not the "Revision to existing Standard" box. Based on the statement below from the SAR, FirstEnergy feels the "Revision to existing Standard" should be checked also so other Standards can be included if necessary..

- P 905: *Further, consistent with the NOPR, the Commission directs the ERO to modify IRO-002-1 to require a minimum set of tools that must be made available to the reliability coordinator. We believe this requirement will ensure that a reliability coordinator has the tools it needs to perform its functions.*

Response: Thank you for your comment. The SDT agrees and has revised the SAR accordingly.

Oliver Burke - Entergy - Entergy Services, Inc. - 1 -**Selected Answer:**

No

Answer Comment:

How does NERC's Project 2009-02 differ from the work about to begin in the NERC Synchrophasor Measurements Subcommittee (SMS)? Should this project be part of SMS? In my mind there is a great deal of overlap between the new SMS and Project 2009-02 and to a large extent, Project 2009-2 is dependent on the work to be done by SMS. Entergy recommends a delay or no vote on this project until SMS work is completed.

Response: Thank you for your comment. The scope for Project 2009-02 addresses specific recommendations and directives as described in the SAR. This scope differs from the approved project scope for SMS. The SDT does not agree that Project 2009-02 is dependent upon completion of work done by SMS.

Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC,SPP

Selected Answer:

Yes

Lee Pedowicz - Northeast Power Coordinating Council - 10 - NPCC

Group Name:

NPCC--Project 2009-02

| Group Member Name | Entity | Region | Segments |
|-------------------|---|--------|----------|
| Alan Adamson | New York State Reliability Council, LLC | NPCC | 10 |
| David Burke | Orange and Rockland Utilities Inc. | NPCC | 3 |
| Greg Campoli | New York Independent System Operator | NPCC | 2 |
| Sylvain Clermont | Hydro-Quebec TransEnergie | NPCC | 1 |
| Kelly Dash | Consolidated Edison Co. of New York, Inc. | NPCC | 1 |
| Gerry Dunbar | Northeast Power Coordinating Council | NPCC | 10 |
| Mark Kenny | Northeast Utilities | NPCC | 1 |
| Helen Lainis | Independent Electricity System Operator | NPCC | 2 |
| Rob Vance | New Brunswick Power Corporation | NPCC | 9 |
| Paul Malozewski | Hydro One Networks Inc. | NPCC | 1 |
| Bruce Metruck | New York Power Authority | NPCC | 6 |
| Lee Pedowicz | Northeast Power Coordinating Council | NPCC | 10 |
| Si Truc Phan | Hydro-Quebec TransEnergie | NPCC | 1 |
| David Ramkalawan | Ontario Power Generation, Inc. | NPCC | 5 |
| Brian Robinson | Utility Services | NPCC | 8 |
| Wayne Sipperly | New York Power Authority | NPCC | 5 |
| Edward Bedder | Orange and Rockland Utilities Inc. | NPCC | 1 |
| Peter Yost | Consolidated Edison Co. of New York, Inc. | NPCC | 3 |
| Michael Jones | National Grid | NPCC | 1 |
| Brian Shanahan | National Grid | NPCC | 1 |
| Michael Forte | Consolidated Edison Co. of New York, Inc. | NPCC | 1 |
| Glen Smith | Entergy Services, Inc. | NPCC | 5 |
| Brian O'Boyle | Consolidated Edison Co. of New York, Inc. | NPCC | 8 |
| RuiDa Shu | Northeast Power Coordinating Council | NPCC | 10 |

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|------------------------|--------------------------------------|------|----|
| Connie Lowe | Dominion Resources Services, Inc. | NPCC | 5 |
| Guy Zito | Northeast Power Coordinating Council | NPCC | 10 |
| Silvia Parada Mitchell | NextEra Energy, LLC | NPCC | 5 |
| Kathleen Goodman | ISO - New England | NPCC | 2 |
| Robert Pellegrini | The United Illuminating Company | NPCC | 1 |

Selected Answer:

Yes

Answer Comment:

Suggest revising the Purpose to make it more encompassing. Suggest the following wording:

To establish situational awareness capabilities with results-based requirements for monitoring and analysis used by System Operators in support of reliable Real-time System operations.

The concepts being proposed in the scope of the SAR can be realized by revising the appropriate TOP and IRO standards by either revising existing requirements, or adding requirements. A new standard may not be necessary. Therefore, the SAR should provide the Drafting Team with the flexibility to add requirements to IRO-010-2 and TOP-003. For example, Requirement R2 in IRO-010-2 stipulates that:

“R2. The Reliability Coordinator shall distribute its data specification to entities that have data required by the Reliability Coordinator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.”

This requirement satisfies both the posted Purpose of the SAR:

“To establish requirements for Real-time monitoring and analysis capabilities used by System Operators in support of reliable System operations,” and our suggested revision above.

Response: Thank you for your comment. The SDT agrees that the reliability objectives proposed in the SAR could be accomplished by modifying approved or proposed standards and has modified the SAR accordingly. The SDT believes the SAR Purpose section encompasses the project objectives as written. The recommendation for the purpose section will be considered as standard requirements are developed.

Ben Engelby - ACES Power Marketing - 6 -

Group Name: ACES Standards Collaborators - Real-time Project

| Group Member Name | Entity | Region | Segments |
|-------------------|---|--------|----------|
| Chip Koloini | Golden Spread Electric Cooperative, Inc. | SPP | 5 |
| Mark Ringhausen | Old Dominion Electric Cooperative | RFC | 3,4 |
| Ginger Mercier | Prairie Power, Inc. | SERC | 1,3 |
| Ellen Watkins | Sunflower Electric Power Corporation | SPP | 1 |
| Bob Solomon | Hoosier Energy Rural Electric Cooperative, Inc. | RFC | 1 |

Selected Answer: Yes

Answer Comment: We agree with the overall scope of the SAR. However, we do have a two concerns to address.

First, the SAR indicates that it will address all recommendations of the RTBPTF while the SAR Justification indicates that not all recommendations will be implemented. If by “addressing the recommendations” the SAR indicates that recommendation will considered based on its merits, we agree. Furthermore, we agree with the disposition of the vast majority of the recommendations as written in the SAR justification.

Second, if a “common understanding of *monitoring*” means a definition will be developed, we caution the drafting team to conduct a complete wholesale review of all NERC reliability standards to be sure the definition would not

change the meaning of other requirements or cause confusion on applicability of the definition.

Response: Thank you for your comment. The project will address those recommendations listed in Table 1 of the SAR Justification White Paper. The SDT acknowledges the potential impact that a definition can have on the body of standards.

Oshani Pathirane - Hydro One Networks, Inc. - 1,3 - NPCC

Selected Answer: Yes

Answer Comment:

Hydro One Networks Inc. would like to provide the following additional recommendations for the SDT’s consideration:

1. The effort required to capture activities/best practices the majority of entities have already employed may be of value;
2. The standard does not appear to deliver the intended future direction for system monitoring and ways to achieve this;
3. By the nature and competitiveness of the MS industry, providers will continue to develop and offer new functionalities that may or may not be desirable for every entity. The effort would be better suited to standardize requirements and allow for the industry to catch up to a common standard. In other words, this effort would provide minimal benefit for entities that already have a modern EMS and for others a large change to meet current requirements;
4. The goal should be to level-off the playing field and have all entities reach the same level of monitoring first.

Response: Thank you for your comments. The SDT believes these comments will be addressed through standards development.

Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP

Group Name: SPP Standards Review Group

| Group Member Name | Entity | Region | Segments |
|-------------------|--------------------------------|--------|----------|
| Shannon Mickens | Southwest Power Pool Inc. | SPP | 2 |
| John Allen | City Utilities of Springfield | SPP | 1,4 |
| Jason Smith | Southwest Power Pool Inc | SPP | 2 |
| Kevin Giles | Westar Energy, Inc. | SPP | 1,3,5,6 |
| Ron Gunderson | Nebraska Public Power District | MRO | 1,3,5 |

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|------------------|----------------------------------|-----|---------|
| Mike Kidwell | Empire District Electric Company | SPP | 1,3,5 |
| Jess Gray | Omaha Public Power District | MRO | 3 |
| James "Jim" Nail | City of Independence, Missouri | SPP | 3,5 |
| Sing Tay | Oklahoma Gas and Electric, Inc | SPP | 1,3,5,6 |
| Scott Williams | City Utilities of Springfield | SPP | 1,4 |

Selected Answer:

No

Answer Comment:

Our review team believes that the standards process has resulted in a mature set of Reliability Standards that already fully address FERC Order 693. With that being said, we feel that there is no need for continuing efforts on this project for the fear of redundancy. We have concerns that the scope of the SAR could result in requirements that are redundant to other existing Standards and inappropriately set minimum capabilities based on a list of best practices. The SAR scope seems to focus on quality of information for entities in carrying out their adherence to other Standards. Additionally, we feel that perhaps the documentation of the entities capabilities should be captured in either the Rules of Procedure or other certification or registration procedures rather than in a Reliability Standard. Another option would be to include descriptions or clarification of those capabilities within the supporting documentation of the other Standards.

Response: Thank you for your comments. The SAR addresses concerns with redundancy by mapping recommendations to specific requirements in the SAR Justification White Paper. The SDT believes the project's reliability objectives, which were derived from BES event reports, Order No. 693 directives, and the RTBPTF report, should be achieved through development of appropriate results-based requirements. The SDT agrees that these capabilities should be demonstrated at the organization certification stage, and should also be maintained on an ongoing basis through adherence to standards. Development of standards is also appropriate since, in general, organization certifications are based on the body of approved standards.

Rachel Coyne - Texas Reliability Entity, Inc. - 10 -

Selected Answer:

Yes

Answer Comment:

1. Texas RE noticed communicating results was not part of the SAR. Effective communications is part of situational awareness and can directly be related to the quality of information being provided as well as awareness of key monitoring and analysis capabilities. Monitoring and analysis capabilities should include communicating results to all entities requiring information. Is the SDT considering this type of communication? Texas RE is concerned the scope seems narrow. Has the SDT or NERC clearly identified all the recommendations and FERC directives have been thoroughly covered by the changes in all the relative Standards?

2. Texas RE acknowledges that FERC Order No. 693 mentioned that it did not wish to identify specific tools, but rather minimum capabilities. There are, however, standard industry tools for monitoring. Texas RE recommends the SDT consider making certain tools mandatory. Tools determine the status of reliability of the system. It seems as if the industry sees the need to call specific types of tools out but does not want the compliance aspects associated with the tools. State estimator and contingency analysis tool are extremely common utility practices to help ensure reliability. Is there a part of the BES that is not being monitored by a State Estimator or Contingency Analysis tool?

Response: Thank you for your comment.

1. The SDT will consider communication of quality and availability information in Project 2009-02. The scope of Project 2009-02 was developed through a comprehensive review as described in the SAR Justification White Paper.

2. Requirements developed for Project 2009-02 will not prescribe specific tools, consistent with NERC guidelines to develop Reliability Standards that are technology-neutral. Requirements are designed to specify performance outcomes and provide entities with flexibility for determining how to meet the reliability objectives.

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC

Selected Answer:

Yes

Answer Comment:

In general, BPA agrees with the scope of the SAR, and conceptually with the effort to tie performance based metrics to real time situational awareness. BPA also agrees with the SAR DT, that the scope of the Project 2009-02 should avoid prescriptive assumptions regarding the implementation of real time tools by a specific entity.

As noted in the SAR Justification, real time situational awareness is closely associated with the pending definition of Real-time Assessment. BPA suggests that the concept of providing operators with notification of Availability, as described by the SAR DT, is already implied by the pending requirements in proposed TOP-001-3 R13 and IRO-008-2 R4.

TOP-001-3 R13: Each Transmission Operator shall ensure that a Real-time Assessment is performed at least once every 30 minutes.

IRO-008-2 R4: Each Reliability Coordinator shall ensure that a Real-time Assessment is performed at least once every 30 minutes.

The process an entity develops to avoid a violation of these requirements will necessitate prompt notification any time the entity's ability to perform the Real Time Assessment is degraded. Additional requirements would therefore be either redundant or unnecessarily prescriptive.

BPA notes that a measurement of the **quality** of monitoring or analysis tools is likely to be closely dependent on the tools and processes implemented by the individual entity. However, BPA agrees with the SAR DT that ongoing assessment of the tools and processes implemented by an entity to perform Real-time Assessment is both necessary and a gap in the existing standards. It is important to avoid the pitfall of implicitly requiring a specific implementation for Real Time Assessment. Any new standards developed by Project 2009-02 must also allow the industry to continue developing and improving on the best practices described by the NERC Real Time Best Practice Task Force in 2008.

Therefore, BPA suggests that Project 2009-02 should only focus on developing requirements for entities to establish, based on their own local implementation, 1) procedures for evaluating the quality of their Real Time Assessment and the information needed to perform it, and 2) the processes for maintaining the quality of the required information to the performance thresholds the entity determines are necessary for performing the Real Time Assessment.

Response: Thank you for your comment. The SDT agrees that availability notification of Real-time Assessment capabilities is addressed in proposed TOP and IRO standards. The SAR has been modified accordingly.

2. Provide any additional comments for the Standard Drafting Team (SDT) to consider, if desired.

Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO

Group Name: MRO-NERC Standards Review Forum (NSRF)

| Group Member Name | Entity | Region | Segments |
|--------------------|-----------------------------------|--------|----------|
| Joe Depoorter | Madison Gas & Electric | MRO | 3,4,5,6 |
| Amy Casucelli | Xcel Energy | MRO | 1,3,5,6 |
| Chuck Lawrence | American Transmission Company | MRO | 1 |
| Chuck Wicklund | Otter Tail Power Company | MRO | 1,3,5 |
| Theresa Allard | Minnkota Power Cooperative, Inc | MRO | 1,3,5,6 |
| Dave Rudolph | Basin Electric Power Cooperative | MRO | 1,3,5,6 |
| Kayleigh Wilkerson | Lincoln Electric System | MRO | 1,3,5,6 |
| Jodi Jenson | Western Area Power Administration | MRO | 1,6 |
| Larry Heckert | Alliant Energy | MRO | 4 |
| Mahmood Safi | Omaha Public Utility District | MRO | 1,3,5,6 |
| Marie Knox | Midwest ISO Inc. | MRO | 2 |

| | | | |
|----------------|--------------------------------------|-----|---------|
| Mike Brytowski | Great River Energy | MRO | 1,3,5,6 |
| Randi Nyholm | Minnesota Power | MRO | 1,5 |
| Scott Nickels | Rochester Public Utilities | MRO | 4 |
| Terry Harbour | MidAmerican Energy Company | MRO | 1,3,5,6 |
| Tom Breene | Wisconsin Public Service Corporation | MRO | 3,4,5,6 |
| Tony Eddleman | Nebraska Public Power District | MRO | 1,3,5 |

Answer Comment:

The NSRF wishes to point out that our industry has recently approved TOP-001-3 and it is currently pending approval from FERC. Specifically, R8, R10, R10.1, R10.2, R11, R12, R13, and R19 addresses several blackout recommendations concerning knowing how your system is performing and how to communicate mitigating actions to others. Please take this into consideration when developing this Standard.

Response: Thank you for your comment.

John Fontenot - Bryan Texas Utilities - 1 -

Answer Comment: none

Oliver Burke - Entergy - Entergy Services, Inc. - 1 -

Answer Comment:

Entergy has the following additional comments: 1. When writing standards for issues that are technology driven, extreme care must be used to avoid arbitrarily increasing costs without commensurate increase in benefit to reliability. 2. Standards should be technology neutral to the extent possible. 3. Need a bright-line voltage level guidance for which these new requirements apply. Different entities have their own definition of what constitutes Transmission levels. There presently exists a range from 100 kV to 44 kV in our region. 4. Need a bright-line guidance regarding extent of external monitoring that needs to be performed. A specific number, for example 10% impact, on internal lines and transformers would be extremely helpful. Currently entities in our region monitor anywhere from 5% to 10% impact, if possible, or up to three buses away.

Response: Thank you for your comments. The scope for this project includes quality and availability of monitoring and analysis capabilities. Determination of what should be monitored is not in scope, but is addressed by the applicable entities in other reliability standards.

Amy Casascelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC,SPP**Answer Comment:**

Xcel Energy has questions about any new standards or proposed revisions to existing standards that would result from this project. How stringent are the requirements going to be? Will fully redundant systems be required? Can a TOP rely on the RC or other entity as a temporary backup? What about if the RC goes down?

Additionally, we have concerns about the level of detail that would be required. We believe that a requirement to analyze contingencies on neighboring systems could cause undue burden on smaller systems with larger neighbors.

Response: Thank you for your comment. Specific questions about requirements are not within scope of the SAR but will be addressed in standards development.

Lee Pedowicz - Northeast Power Coordinating Council - 10 - NPCC

Group Name: NPCC--Project 2009-02

| Group Member Name | Entity | Region | Segments |
|-------------------|---|--------|----------|
| Alan Adamson | New York State Reliability Council, LLC | NPCC | 10 |
| David Burke | Orange and Rockland Utilities Inc. | NPCC | 3 |
| Greg Campoli | New York Independent System Operator | NPCC | 2 |
| Sylvain Clermont | Hydro-Quebec TransEnergie | NPCC | 1 |
| Kelly Dash | Consolidated Edison Co. of New York, Inc. | NPCC | 1 |
| Gerry Dunbar | Northeast Power Coordinating Council | NPCC | 10 |
| Mark Kenny | Northeast Utilities | NPCC | 1 |
| Helen Lainis | Independent Electricity System Operator | NPCC | 2 |
| Rob Vance | New Brunswick Power Corporation | NPCC | 9 |
| Paul Malozewski | Hydro One Networks Inc. | NPCC | 1 |
| Bruce Metruck | New York Power Authority | NPCC | 6 |
| Lee Pedowicz | Northeast Power Coordinating Council | NPCC | 10 |
| Si Truc Phan | Hydro-Quebec TransEnergie | NPCC | 1 |
| David Ramkalawan | Ontario Power Generation, Inc. | NPCC | 5 |
| Brian Robinson | Utility Services | NPCC | 8 |
| Wayne Sipperly | New York Power Authority | NPCC | 5 |
| Edward Bedder | Orange and Rockland Utilities Inc. | NPCC | 1 |
| Peter Yost | Consolidated Edison Co. of New York, Inc. | NPCC | 3 |
| Michael Jones | National Grid | NPCC | 1 |
| Brian Shanahan | National Grid | NPCC | 1 |
| Michael Forte | Consolidated Edison Co. of New York, Inc. | NPCC | 1 |
| Glen Smith | Entergy Services, Inc. | NPCC | 5 |
| Brian O'Boyle | Consolidated Edison Co. of New York, Inc. | NPCC | 8 |
| RuiDa Shu | Northeast Power Coordinating Council | NPCC | 10 |
| Connie Lowe | Dominion Resources Services, Inc. | NPCC | 5 |
| Guy Zito | Northeast Power Coordinating Council | NPCC | 10 |

| | | | |
|------------------------|---------------------------------|------|---|
| Silvia Parada Mitchell | NextEra Energy, LLC | NPCC | 5 |
| Kathleen Goodman | ISO - New England | NPCC | 2 |
| Robert Pellegrini | The United Illuminating Company | NPCC | 1 |

Answer Comment:

Any revisions made must not address the specifics of what the situational awareness capabilities are, but must focus on the adequacy of the monitoring and analysis.

This proposed project should be considered for a guideline document as opposed to a standard. As written, the SAR appears to intend to write a “how” not “what” standard (i.e. it does appear to be a results-based standard). We believe that the existing Standards (i.e. IRO, TOP and BAL) sufficiently define what needs to be monitored by each entity without defining the tools (i.e. without defining the “how”), which is appropriate.

As an alternative, this could be considered a process to be used for certifying new entities for assurance that they have the ability to monitor appropriately in accordance with the Standard’s Requirements.

To avoid these issues in the future and to support communicating to FERC that a standard is not needed but another tool is more suitable, we suggest the future SARs be voted on by industry as to whether to proceed as a Standards project or use another means to achieve the ends.

Response: Thank you for your comment. The SDT believes that the recommendations from BES event reports and the RTBPTF Report that are referenced in the project SAR establish the need for development of reliability standards. Project 2009-02 has been scoped to include recommendations that have not been addressed in other standards. The SDT agrees that these capabilities should be demonstrated at the organization certification stage, and should also be maintained on an ongoing basis through adherence to standards. Development of standards is also appropriate since, in general, organization certifications are based on the body of approved standards.

Kathleen Black - DTE Energy - 3,4,5 - RFC

Answer Comment:

2009-02 Real-time monitoring and analysis capabilities-S15 (Page 18 & 19), S18 (Page 21 and 22) and S33 (Page 26) all list EOP-011-1. EOP-011-1 is not effective due to not being approved by FERC. Although EOP-011-1 was written to consolidate EOP-001-2.1b, EOP-002-3.1 and EOP-003-2, we question if this project should be listing EOP-011-1 rather than the other 3 standards which are effective and approved.

Response: Thank you for your comment. The SAR DT included board-adopted Reliability Standards in its review where appropriate. The SDT does not consider this to be premature at this stage.

Ben Engelby - ACES Power Marketing - 6 -**Group Name:**

ACES Standards Collaborators - Real-time Project

| Group Member Name | Entity | Region | Segments |
|-------------------|---|--------|----------|
| Chip Koloini | Golden Spread Electric Cooperative, Inc. | SPP | 5 |
| Mark Ringhausen | Old Dominion Electric Cooperative | RFC | 3,4 |
| Ginger Mercier | Prairie Power, Inc. | SERC | 1,3 |
| Ellen Watkins | Sunflower Electric Power Corporation | SPP | 1 |
| Bob Solomon | Hoosier Energy Rural Electric Cooperative, Inc. | RFC | 1 |

Answer Comment:

There are two minor issues in the SAR Justification. On page 11, the last paragraph refers to Table 1. Yet, there is no Table 1. We assume Table 2 is supposed to be Table 1.

On page 15 regarding recommendation S3, “Addresses” should be “Addressed.”

Response: Thank you for your comment. The sentence on page 11 refers to Table 1: Report Recommendations to Address in Project 2009-02, which is found on page 9. The correction has been made to recommendation S3 on page 15.

Rachel Coyne - Texas Reliability Entity, Inc. - 10 -**Answer Comment:**

Texas RE agrees with the RTBPTF report which states “Develop a new weather data requirement related to situational awareness and real-time operational capabilities.” The drafting team’s response, “EOP-010-1 covers space weather dissemination. The SAR DT views monitoring other weather information as common utility practice that does not require a reliability standard”, is concerning because registered entities might not monitor weather as they should. Weather is extremely pertinent to situational awareness and real-time operational capabilities. Weather has a significant impact and, too often, exacerbates reliability issues. If it is a common utility practice than successful compliance should not be an issue. Is the SDT considering a Guideline like what was done for the common utility practice of preparing a generator for winter operation?

Response: Thank you for your comment. The SDT agrees that weather information is important for situational awareness and Real-time operational capabilities. However, there was general agreement within the SDT and participants at the SAR development technical conference held in June 2015 that, since the time of the RTBPTF report, weather data usage by operators has become common practice and as a result a standard requirement would not provide reliability benefit. Development of a guideline for weather information is not in scope for this project.

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC**Answer Comment:**

N/A

End of Report