Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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2 The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	     The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	     The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	     – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
   - A generator or transmission outage will impact another RA
   - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:
Name: Richard J. Kafka Organization: Potomac Electric Power Company Industry Segment #: 3 Telephone: (301) 469-5274 E-mail: rjkafka@pepco.com	**1 – Trans. Owners** **2 – RTO's, ISO's, RRC's** **3 – LSE's** **4 – TDU's** **5 - Generators** 6 - Brokers, Aggregators, and Marketers **7 - Large Electricity End Users** **8 - Small Electricity Users** 9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Email:	Chair Phone:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☒ Yes

   ☐ No

   ☐ Comments:
   If identical procedures are included in multiple Standards, it will simply lead to increasing coordination requirements**.**

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☒ No – the two requirements would be the same to the operations personnel

   ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☒ Yes

   ☐ No

   ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☒ Keep the sharing of outage data embedded in other requirements.

   ☐ Move the sharing of outage data to a separate requirement.

   ☐ Comments:
   Note that reference given in this form (Notifications and Data Exchange) is really Notifications and Information Exchange

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☐ Yes

    ☒ No

    ☐ Comments:
    While I understand the concerns about the limitations of the Scope, does this seem realistic – Do we not need something, then, that requires the RA to coordinate to operating entities within its area?

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☐ Yes

    ☒ No

    ☐ Comments:

    What makes (1) different from (3)? – (3) seems to be a restatement and enlargement of (1). (2) could be incorporated into (3) by inclusion of one phrase; "operating scenarios." This seems to be an editorial oversight and is troubling in a document that has gone through a review process. Should (1) and (2) be eliminated?

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:
    Agree with the general process considering the apparent overlap among (1) (i), (ii) and (iii), similar to what is described in "measures," above.

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

    ☐ Yes

    ☒ No

    ☐ Comments:

I am willing to accept these high levels of non-compliance (10% bands, etc.) given that there may be a small number of documents such that 1 or 2 constitutes 10%, but it begs the issue of why even this should be permitted.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

   ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

   ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

   ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

   – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
   – Resolution of energy and capacity shortages
   – Exchange of planned or unplanned outage information
   – System restoration
   – Voltage control
   – Coordination of information exchange to support reliability assessments

   ☒ The list of activities is sufficient as presented in the draft standard

   ☐ Each of the items in the list should have more detail on what is needed

   ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes

   ☒ No

   ☐ Comments:
   Such a list would in all probability be incomplete and provide a false sense of security.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

   ☒ Requiring a Document Change Control procedure is appropriate

   ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

   ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

   ☐ Yes, include a minimum list of elements.

   ☒ No, do not include a minimum list of elements.

   ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

   ☐ Comments: Document Change Control should be obvious to RAs

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☒ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

Routine email contact should be sufficient for RAs to arrange needed conference calls. Daily conference calls could lead to complacency.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☒ Yes

    ☐ No

    ☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☐ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

    ☐ Comments:

    Does the compliance process create a Compliance Monitor? If this is adequately addressed, I would agree with the process.

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

☐ Yes

☒ No

☐ Comments:
> In general, the allowed levels of non-compliance seem high. I would need good reasons to accept these levels.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☐ Comments:

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<table>
<tr><td>

Commenter Information (For Individual Commenters)

Name: Karl Kohlrus

Organization: City Water, Light & Power

Industry Segment #: 5

Telephone: (217)-321-1391

E-mail: kkohlrus@cwlp.com

</td><td>

Key to Industry Segment #'s:

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

</td></tr>
</table>

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☒ Yes

   ☐ No

   ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☒ No – the two requirements would be the same to the operations personnel

   ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☒ Yes

   ☐ No

   ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☒ Keep the sharing of outage data embedded in other requirements.

   ☐ Move the sharing of outage data to a separate requirement.

   ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☒ Comments: Coordination between RAs and other entities can be treated in a separate standard.

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

    ☒ Yes

    ☐ No

    ☒ Comments: When the definitions are moved to a separate master definitions document, defined terms should be underlined with active references to their definitions.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☒ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☒ Yes

    ☐ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☒ Requiring a Document Change Control procedure is appropriate

    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

    ☒ Comments: Maybe there should be a reference document or appendix that describes these procedures in more detail with examples.

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

    ☒ Yes, include a minimum list of elements.

    ☐ No, do not include a minimum list of elements.

    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control
Procedure, please check all of the elements you feel should be required:

☒ Review cycle of at least once every three years, regardless of whether changes have been
actively identified.

☒ Methodology for distribution

☒ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☒ Comments: Date of last revised; distribution list.

18. If you feel that the standard should require the RA to have a Document Change Control
Procedure, do you think there should be a measure that the RA have evidence it followed its
Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change
Control Procedure.

☒ No, the standard shouldn't require the RA to have evidence it followed its Document Change
Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other
communication forums with other RAs. Should this requirement be more stringent and require
that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have
several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would
be required to participate in several conference calls each day.)

☐ The RA should be required to participate in 'agreed upon' conference calls and other
communication forums

☒ The RA should be required to participate in a conference call with each of its adjacent RAs
every day.

☒ Comments: Several RAs could conference together simultaneously reducing the number of
calls.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent
RAs, what do you recommend as an appropriate method of measuring compliance with this
requirement?

☒ Suggestions: This should be self-policing as a NERC representative should participate in at
least some of these calls.

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with
adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☒ All RAs within an Interconnection on a single call

    ☒ Other (Please be as specific as possible.)

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☒ Comments: Either way has advantages and disadvantages, experience will show the best way. It may be good to have one Interconnection-wide call and other calls with subsets of RAs.

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☒ Allow each RA to assign any position to participate in the call

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☐ Yes

    ☒ No

    ☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

    ☒ Comments: There appears to be errors in (e)(1) and (e)(2)

    (ii) All events did **not** have evidence…

(iii) Each event that involved conflicting system status or studies **did not have** documented results…

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

☐ Yes

☐ No

☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☐ Comments:

<u>Note</u> – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

| Analyze Maintenance Outages (real time to 12 months ahead)

• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective | The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:

    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations

The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.

    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.

The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:

    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.

    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective. |
| Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current | The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared |

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems) • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages. • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	with others. The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits. The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits. Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways. − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement. − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement. Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.
Communicate with other impacted RAs to share information: • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as: - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group: Transmission Subcommittee	**Group Chair:** Bob Reed (610) 666-8862	**Chair Phone:** **Chair Email:** reed@pjm.com
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**
Bob Reed	**PJM Interconnection**	
Fran Halpin	**Bonneville Power Administraiton**	
Dan Cooper	**Michigan Public Power Agency**	
Ken Donohoo	**ERCOT**	
Tom Mallinger	**Midwest ISO**	
Darrick Moe	**Western Area Power Administration**	
Scott Moore	**American Elecric Power**	
Thomas Stuchlik	**Westar Energy**	
Joseph R. Stylinger	**Southern Wholesale Energy**	
David Thorne	**D.H. Thorne Consultants**	
Robert Waldele	**New York ISO**	
Susan Morris	**Southeast Electric Reliability Council**	
Ed Pfeiffer	**Ameren**	
Tom Vandervort	**NERC**	
Ray Palmeiri	**ECAR**	
Roman Carter	Southern Company	
Mark Wignall	Michigan Public Power Agency	

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

☒ Yes

☐ No

☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

☒ Yes

☐ No

☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes - the two requirements would be different   to the operations personnel

☒ No – the two requirements would be the same to the operations personnel

☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

☒ Yes

☐ No

☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

☒ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☒ Comments: The subcommittee believes the location of the "Exchange of planned or unplanned outage information" is properly placed in this draft standard and does not recommend a separate requirement within this standard. Outage information does not merit greater or less focus or emphasis than other system status information captured within Standard 101.

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☒ Comments: The Transmission Subcommittee recommends the definition of Operating Scenario as "An operating condition, event, or contingency that if left untended, could have an adverse impact that extends beyond the boundaries of a single Reliability Authority Area."

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☐ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☒ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    ☒ No

    ☒ Comments: The subcommittee believes that the requirements are generic requirements. The details (list of identified normal and emergency system conditions) do not need to be included in the requirement.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☐ Requiring a Document Change Control procedure is appropriate

    ☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

    ☐ Yes, include a minimum list of elements.

    ☐ No, do not include a minimum list of elements.

    ☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☒ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☒ Comments: RAs only need to have conference calls on an "as needed" basis.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☒ Yes

    ☐ No

    ☐ Comments The subcommittee believes the standard should require a dedicated "Primary" method of communications is necessary and a dedicated back-up "Secondary" method of communications is necessary. The actual communications systems do not need to be spelled out in the standard.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☐ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☐ Comments:

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	
	Prepare for and Respond to Blackout and Island Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	
	    Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	
	    Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	
	    Process/procedure in place for collecting transmission owners' equipment ratings.
	
	    Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	     The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	     The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	     − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
    - A generator or transmission outage will impact another RA
    - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:
Name: John Horakh – Feb. 23, 2004	**1 – Trans. Owners**
	2 – RTO's, ISO's, RRC's
Organization: MAAC	**3 – LSE's**
	4 – TDU's
Industry Segment #: 2	**5 - Generators**
	6 - Brokers, Aggregators, and Marketers
Telephone: 609-625-6014	**7 - Large Electricity End Users**
	8 - Small Electricity Users
E-mail: john.horakh@conectiv.com	9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    X☐ Yes

    ☐ No

    X☐ Comments: But my concern is that somehow we have to be sure that those procedures remain in those final approved Standards, and are not "lost".

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    X☐ Yes

    ☐ No

    X☐ Comments: Question should refer to RA Certification SAR, not Criteria

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    X☐ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    X☐ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    X☐ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    X☐ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    X☐ No

    X☐ Comments: Operating Plan: in the first sentence, insert the word "operating" between "some" and "goal". Operating Scenario: a rather vague definition; is this actually used anywhere?

Requirement 101 - Procedures

8. Do you agree with the requirement?

    X☐ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    X☐ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    X☐ Yes

    ☐ No

    ☐ Comments:

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

    X☐ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    X☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    X☐ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    X☐ No

    X☐ Comments: Having such a list can lead to a false sense of security, if the RA assumes these are the only system conditions that affect reliability.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    X☐ Requiring a Document Change Control procedure is appropriate

    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

    X☐ Yes, include a minimum list of elements.

    ☐ No, do not include a minimum list of elements.

    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    X☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☐ Methodology for distribution

    X☐ Summary or identification of changes made to the document.

    ☐ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable

    ☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    X☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ☐ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    X☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions:

    X☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    X☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    X☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☐ Yes

    X☐ No

    X☐ Comments Too much "how"

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    X☐ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    X☐ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    X☐ Yes

    ☐ No

    ☐ Comments:

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

    X ☐ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☐ Comments:

Background:
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entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	
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Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.

Process/procedure and tools in place to develop real-time operating reliability limits.

Process/procedure in place that define the actions to be taken for maintaining reliability.

Process/procedure and tools in place for compliance with all applicable NERC reliability standards.

Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.

Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.

Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.

This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.

Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

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Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
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	    The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	    − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
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Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
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	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
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Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:

Commenter Information (For Individual Commenters)

Name:A. Ralph Rufrano

Organization: NYPA

Industry Segment #:1

Telephone: (914)681-6265

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Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☐ Yes

☒ No

☐ Comments: We feel that all the requirements of the Coordinate Operations Function should be included in this standard and the RA Certification Standard when written should require that the RA has the capability to be responsible for those RA listed requirements.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

☒ Yes

☐ No

☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes - the two requirements would be different to the operations personnel

☒ No – the two requirements would be the same to the operations personnel

☐ Comments: We are concerned that the Certification Standard, IROL Standard and the Coordinate Operations Standard are being developed independently and there may be a lack of coordination with what the RA does. We are concerned that there may be duplicative requirements or worse, missing requirement(s) between Standards and a potential for inconsistency.

We don't believe that the IROL should be added to this standard.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

☒ Yes

☐ No

☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

☒ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

   ☒ Yes

   ☐ No

   ☐ Comments:

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

   ☐ Yes

   ☒ No

   ☐ Comments: Operating Procedure Definition may result in limiting Operator action and not be consistent with company definitions. We will be commenting on this definition during the posting of the NERC Definitions Document noted in the Standard.

Requirement 101 - Procedures

8. Do you agree with the requirement?

   ☒ Yes

   ☐ No

   ☐ Comments:

9. Do you agree with the measures?

   ☒ Yes

   ☐ No

   ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

    ☒ Comments: The Item (4) timing seems to be off somewhat and needs clarification.

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

    ☐ Yes

    ☒ No

    ☒ Comments: With the existing wording, "…it has developed or received from other Reliability Authorities…", we are not sure that first and second references to (iii) & (iv) make sense. For example, you would not have evidence of a document being updated through a Change Control Procedure if it was obtained from another RA; also, you would not have evidence of its distribution given the same situation. There is also an inconsistency in numbering and multiple references to either (A), (B), (C)…or (i), (ii), (iii) under one non-compliance level makes the non-

compliance section very confusing. We would like the drafting team to clarify the non-compliance levels and address practical measurability.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs

    – Resolution of energy and capacity shortages

    – Exchange of planned or unplanned outage information

    – System restoration

    – Voltage control

    – Coordination of information exchange to support reliability assessments

    ☐ The list of activities is sufficient as presented in the draft standard

    ☒ Each of the items in the list should have more detail on what is needed

    ☐ Comments:
Add Weather advisory

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    ☒ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☐ Requiring a Document Change Control procedure is appropriate

    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

    ☐ Yes, include a minimum list of elements.

    ☐ No, do not include a minimum list of elements.

    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments: I think this, though it may be a good idea, is out-of-scope of this Standard.

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments: .

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions: Perhaps require use of a conferencing center that does a role call and monitors participation.

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments: Should leave this decision up to the individual RAs

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☐ Yes

☒ No

☒ Comments: Although I am aware of the need and the complexity of attempting to develop measures that can appropriately certify compliance, it seems the measures as proposed are too detailed, time-consuming and may distract from taking actions as opposed to logging the actions that should be taken.

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☒ Comments: The first Item (2) timing seems to be off somewhat. Numbering needs to be fixed. See comment above re. Item (3) compliance monitoring.

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

    ☐ Yes

    ☒ No

    ☒ Comments: See comment to question #25.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☒ Comments: The Standards in general appear to reference a particular version of the Functional Model in the Applicability section. Given the "evolution" of the Model, is this appropriate?

    There is an issue with the concept of a monetary sanction matrix and what its implications are. ISO-NE, as well as NPCC, has expressed concern over its inclusion and maintains that the use of market mechanisms where possible, as well as, letters of increasing degrees of severity and notifications to regulatory agencies are more effective in ensuring compliance. Failure of NERC to gain authority through reliability legislation could result in NERC pursuing actions to implement "Plan B," a "voluntary" approach affording NERC the authority to perform these types of monetary sanctions. ISO-NE has indicated that any posted Standard, with such a matrix, will not be supported by ISO-NE. There are, however, proceedings at NERC by the Compliance Certification Committee (CCC) to address alternative sanction proposals and ISO-NE will continue to work to oppose monetary sanctions.

    We also have concerns with the associated implementation plan that typically is developed and released with the Standard. We would like to note that there may be new and additional requirements and compliance metrics that are approved with this standard. These new requirements may require considerable time to implement them and the Implementation Plan must recognize this.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

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Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	   The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	   The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	   − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	   − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
   - A generator or transmission outage will impact another RA
 	
   - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

<table>
<tr><td>

 Commenter Information (For Individual Commenters)

Name: William F. Pope

Organization: Gulf Power Company

Industry Segment #: 3

Telephone: (850) 444-6449

E-mail: wfpope@southernco.com

</td><td>

Key to Industry Segment #'s:

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

</td></tr>
</table>

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☐ Yes

   ☒ No

   ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☒ No – the two requirements would be the same to the operations personnel

   ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☐ Yes

   ☐ No

   ☐ Comments: No Position at this time.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☐ Keep the sharing of outage data embedded in other requirements.

   ☒ Move the sharing of outage data to a separate requirement.

   ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

   ☒ Yes

   ☐ No

   ☐ Comments:

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

   ☒ Yes

   ☐ No

   ☐ Comments:

Requirement 101 - Procedures

8. Do you agree with the requirement?

   ☒ Yes

   ☐ No

   ☐ Comments:

9. Do you agree with the measures?

   ☒ Yes

   ☐ No

   ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☐ Comments: There is room to tighten them up a bit.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☒ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☒ Yes

    ☐ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☒ Requiring a Document Change Control procedure is appropriate

    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

    ☐ Yes, include a minimum list of elements.

    ☐ No, do not include a minimum list of elements.

    ☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☐ Methodology for distribution

    ☒ Summary or identification of changes made to the document.

    ☒ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable

    ☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ☐ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☒ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions:

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?
    ☐ All RAs within an Interconnection on a single call
    ☐ Other (Please be as specific as possible.)
    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs
    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.
    ☐ Limit participation to System Operators
    ☐ Allow each RA to assign any position to participate in the call
    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs
    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?
    ☒ Yes
    ☐ No
    ☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

⊠ Yes

☐ No

☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☐ Comments:

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Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

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| entities that are expected to take action or that may be impacted as a result of this procedure. | require plan to be shared.)

Prepare for and Respond to Blackout and Island Conditions SAR:

Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.

Prepare for and Respond to Abnormal or Emergency Conditions SAR:

Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.

Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.

The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:

Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.

Process/procedure in place to receive interchange transaction information from the Interchange Authority.

Process/procedure in place for collecting transmission owners' equipment ratings.

Process/procedure and tools in place to perform real-time and contingency reliability analyses.

Process/procedure and tools in place to coordinate and approve transmission outages from a reliability |
|---|---|

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	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

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| Analyze Maintenance Outages (real time to 12 months ahead)
 • Analyze the impact of generation outages from a reliability perspective
 • Analyze the impact of transmission outages from a reliability perspective | The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:

 An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations

 The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.

 The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.

 The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:

 Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.

 Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective. |
| Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current | The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared |

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

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and next day and for its impact on other systems) • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages. • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	with others. 　The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits. 　The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits. Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways. 　－ If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement. 　－ If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement. Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
  - A generator or transmission outage will impact another RA
  - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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<tr><td colspan="2">

Commenter Information (For Individual Commenters)

Name: George Bartlett

Organization: Entergy Services Inc

Industry Segment #: 1

Telephone: 501-310-5801

E-mail: gbartle@entergy.com

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Key to Industry Segment #'s:

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

</td></tr>
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STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

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Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☐ Yes

   ☒ No

   ☐ Comments:

   We disagree with the SDT. This is the standard for coordination of operations between RAs and this standard should contain the specification of all the requirements for an entity to "perform" that function. The Certification Standard should contain the requirements for an entity being "certified" as a RA. These are two very different activities. However double jeopardy should be avoided. If there is non-compliance the RA should not be penalized twice or more times if the same requirement is included in other standards.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☒ No – the two requirements would be the same to the operations personnel

   ☐ Comments:

   The requirement that RAs conduct Operational Planning Analyses is contained in two standards and should not be repeated here: Standard 600 — Determine Facility Ratings, System Operating Limits, and Transfer Capabilities, and Standard 200 - Operate Within Interconnected Reliability Operating Limits Standard. Real-Time Assessments should also be contained in the two Standards and should not be repeated here. Coordination of the standards and the requirements contained therein needs to be accomplished among the several Standard Development Teams.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☒ Yes

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☐ No

☐ Comments:

This is a requirement for the RA to perform and is specified in the Standard 600 — Determine Facility Ratings, System Operating Limits, and Transfer Capabilities and should be included here and not be repeated in other standards.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

☒ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☐ Comments:

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6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☐ Yes

    ☒ No

    ☐ Comments:

    As discussed in our comments to the SAR development team we do not agree that the standard should be limited to RA to RA coordination. We also stated that if this standard is that limited in scope then there must be additional standards developed requiring the coordination among all users of the electric power system.

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

    ☐ Yes

    ☒ No

    ☐ Comments:

    The definition of Operating Procedure contains the terms "operating positions" and "positions". Please define these terms as used in this standard.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☐ Yes

    ☒ No

    ☐ Comments:

    We disagree and recommend the deletion of Requirement 101(a)(2) which states that "Each Reliability Authority's Operating Procedures, Processes or Plans shall be approved by all the Reliability authorities". We agree that RAs should develop, discuss, and coordinate Operating Procedures, Processes or Plans with neighboring RAs and neighboring RAs should comment on those Operating Procedures, Processes or Plans. However, neighboring RAs should not have "approval" rights over those Operating Procedures, Processes or Plans unless neighboring RAs have to take real time action as provided in the procedure.

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

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10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☒ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    ☒ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☐ Requiring a Document Change Control procedure is appropriate

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☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☒ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

Entergy does not support that RA should be required to have a Document Control Procedure, in case the standard includes this requirement, the standard should include a minimum list of elements.

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17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☒ Methodology for distribution

☒ Summary or identification of changes made to the document.

☒ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments:

Entergy does not support that RA should be required to have a Document Control Procedure, in case the standard includes this requirement, the standard should include elements checked above.

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Entergy does not support that RA should be required to have a Document Control Procedure, in case the standard includes this requirement, the standard should include a measure that that RA has evidence that it followed its Document Change Control Procedure.

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☒ Suggestions:

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Operator log indicating that RA participated in the daily conference call.

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

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21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☒ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☒ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☒ Yes

☐ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

☒ Yes

☐ No

☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☐ Comments:

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<u>Note</u> – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

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	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
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	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
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	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
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	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
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	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
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	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
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and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	    − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	    − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
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  - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)
Name: William J. Smith
Organization: Allegheny Power
Industry Segment #: 1
Telephone: (724) 838-6552
E-mail: wsmith1@alleghenypower.com

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group:	**Group Chair:** **Chair Phone:** **Chair Email:**	
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☒ Yes

    ☐ No

    ☒ Comments: The location of procedures that address the requirements listed in the SAR but are not included in this Standard should be referenced in this Standard.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☒ Yes

    ☐ No

    ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    ☒ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☒ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☒ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☒ Comments: Allegheny Power can understand the thinking of the SDT in limiting the scope to RA-to-RA coordination. We are however, concerned that these RA to other entity procedures are not included in other SARs. If there are no plans to include the RA to other procedures in other Standards, then they must be included in this Standard.

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

    ☒ Yes

    ☐ No

    ☒ Comments: Allegheny Power agrees with the definitions, but disagrees with the term "Operating Scenario". The word "scenario" usually referrers to a "what if?" or hypothetical situation. We suggest that "Scenario" be replaced with "Situation".

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

☒ The list of activities is sufficient as presented in the draft standard

☐ Each of the items in the list should have more detail on what is needed

☒ Comments: Each group of RAs should be permitted to determine the specific information needed to be exchanged.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☒ Yes

☐ No

☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☒ Requiring a Document Change Control procedure is appropriate

☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☒ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☒ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☒ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☒ Suggestions: Compliance Monitors should check attendance reports maintained by each RA.

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☒ Other (Please be as specific as possible.)

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☒ Comments: Calls should be held in groups that share critical interfaces.

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☒ Allow each RA to assign any position to participate in the call

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☒ Yes

    ☐ No

    ☒ Comments: RAs in an interconnection should have an agreed upon agenda and means of communication.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☒ Comments: We are not aware of any Regional or Interconnection Differences.

29. Do you have any other comments on the standard?

    ☒ Comments: We have no other comments.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems) • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages. • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	with others. The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits. The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits. Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways. – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement. – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement. Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.
Communicate with other impacted RAs to share information: • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as: - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group: Operating Reliability Working Group – Southwest Power Pool	**Group Chair: Scott Moore** **Chair Phone: 614-716-6600** **Chair Email: spmoore@aep.com**	
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**
Gerry Burrows	**KCP&L**	**1**
Bob Cochran	**SPS**	**1**
Mike Gammon	**KCP&L**	**1**
Steve Hillman	**WPEK**	**1**
Allen Klassen	**Westar**	**1**
Brian McAdam	**Accenture**	
Robert Rhodes	**SPP**	**2**
John Wagemaker	**American Superconductor**	

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

☐ Yes

X   No

☐ Comments:

The SDT should recall that the RA Certification SAR simply sets minimum standards for what is required to become an RA and relies on other standards for performance requirements. This comment applies to most of the remaining questions in the Background section.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☐ Yes

    X   No

    ☐ Comments:

    Until the RA Certification Criteria are approved there is no certainty that those requirements will be in the standard.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    X Yes - the two requirements would be different   to the operations personnel

    ☐ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

    Assessments should go beyond the analyses of identified IROLs. The second statement requires a much broader scope of studies to be conducted.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☐ Yes

    X   No

    ☐ Comments:

    Until the RA Certification Criteria and the Operate Within IROLs Standard are approved there is no certainty that those requirements will be in the standard.   Additionally, we have concerns that the approval of generation outages is not included in this standard as is the required approval of transmission outages.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    X   Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    X Yes

    ☐ No

    ☐ Comments:

    If the intent of this standard is only for RA to RA coordination, then title of the standard should be changed to Coordinate RA Operations.

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

    ☐ Yes

    X No

    ☐ Comments:

    We would suggest changing the definition of Operating Scenario to "An operating _condition_ that if left…"

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☐ Yes

    X No

    ☐ Comments:

    While we understand the need to coordinate operating procedures with all involved parties, requiring their approval may be asking too much. What would happen if all involved parties did not agree to the procedure, is there an arbitration process?

    We suggest adding the word "credible" in front of operating scenarios in Requirement (3)(ii).

9. Do you agree with the measures?

    X Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    X Yes

    ☐ No

    ☐ Comments:

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

    X Yes

    ☐ No

☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

X Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

 – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
 – Resolution of energy and capacity shortages
 – Exchange of planned or unplanned outage information
 – System restoration
 – Voltage control
 – Coordination of information exchange to support reliability assessments

X The list of activities is sufficient as presented in the draft standard

☐ Each of the items in the list should have more detail on what is needed

☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

X No

☐ Comments:

This requirement should be incorporated in the RA Certification Standard.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

X Requiring a Document Change Control procedure is appropriate

☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

X No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

X Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

X Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

X The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

X Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

X Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

X Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☐ Yes

X No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

X Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

X Yes

☐ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

X Yes

☐ No

☐ Comments:

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

    X Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

    No.

29. Do you have any other comments on the standard?

    ☐ Comments:

<u>Note</u> – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

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Background:

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Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	
	Prepare for and Respond to Blackout and Island Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	
	    Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	
	    Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	
	    Process/procedure in place for collecting transmission owners' equipment ratings.
	
	    Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

---

[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	    The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	    The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	    − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	    − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
    - A generator or transmission outage will impact another RA
    - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group: Southern Co. Generation & Energy Marketing (SCGEM)	**Group Chair:** Roman Carter **Chair Phone:** 205.257.6027 **Chair Email:** jrcarter@southernco.com	
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**
Roman Carter, et. al.	**SCGEM**	**5, 6**

<u>Background</u>

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   X Yes

   ☐ No

   ☐ Comments: I agree that the detailed requirements portion of many RC tasks properly belongs in other standards. However, the **Coordination** requirements properly belong in this standard. The detailed requirement should refer to the Coordinate Operations Standard for RC

Coordination requirements. The Coordination requirements of this Standard should "stand alone" and not rely on other standards.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☐ Yes

   X No

   ☐ Comments: The actual **Coordination requirements** between RCs should be included in this standard. Also, the specific requirement for one RA to have <u>authority</u> to assist in resolving problems **outside** of its reliability area does not currently exist.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☒ No – the two requirements would be the same to the operations personnel

   ☐ Comments: The detailed requirements for analyses and assessments should be defined in the OWL standard, but the **Coordination requirements** should be included in this standard and referenced by the OWL standard.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☐ Yes

   ☒ No

   ☐ Comments: It is not a good plan to use certification requirements to set standards. If something is sufficiently important to require a standard, then it should be presented as such and not simply be defined in the certification requirements. And again, even if the detailed technical requirements are defined elsewhere, the **Coordination requirements** should be included in this standard and referenced by the other standard.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☐ Keep the sharing of outage data embedded in other requirements.

   ☒ Move the sharing of outage data to a separate requirement.

   ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

   ☒ Yes

   ☐ No

   ☐ Comments:

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

   ☐ Yes

   ☒ No

   ☒ Comments:Please look at the recommended changes in bold type..

   Operating Procedure – A document that identifies specific steps or tasks that must be taken by one or more specific operating **entities** to achieve a single specific operating goal. The steps in an Operating Procedure must be followed in the order in which they are presented, and must be performed by the **entities** identified. A document that lists the specific steps to take in removing a specific transmission line from service is an example of an Operating Procedure.

   Operating Plan- **A document designed to achieve some operational goal utilizing a specific set of coordinated activities.** An Operating Plan may contain Operating Procedures and Operating Processes. A company-specific system restoration plan that includes an Operating Procedure for black-starting units, Operating Processes for communicating restoration progress with other entities, etc., is an example of an Operating Plan.

   Operating Scenario – **A detailed model of operating conditions, including contingency conditions that, if left untended, may have an adverse impact that extends beyond the boundaries of a single Reliability Authority Area. The RC analyses multiple Operating Scenarios to determine under what condition an adverse impact will take place. {Note, an Operating Scenario itself does not imply an adverse impact will take place. It is simply a specific set of conditions that the RC analyses to determine if an adverse impact will take place.}**

Requirement 101 - Procedures

8. Do you agree with the requirement?

   ☒ Yes

   ☐ No

   ☒ Comments:

9. Do you agree with the measures?

   ☒ Yes

   ☐ No

☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☒ Comments: Confusing and disorganized. Concept may be OK, but needs to be organized into tables or other graphical format that is readily accessible.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☒ Comments I'd suggest adding some reference "good utility practice" or something like it somewhere. I know it's not "crisp," but it does alert the RC that there may be other requirements that no one has thought of yet.

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☐ The list of activities is sufficient as presented in the draft standard

    X Each of the items in the list should have more detail on what is needed

    ☐ Comments: Except for the first activity.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    X No

    ☐ Comments: Analyses of real-time system are too dynamic to require a static list.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☒ Requiring a Document Change Control procedure is appropriate

☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments: I would say it is critical to make sure everyone is actually talking about the same thing at the same time.

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☒ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☒ Comments: I suggest a recommended or suggested list instead.

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☒ Summary or identification of changes made to the document.

☒ Version control and archival period

☒ Other (Please be as specific as possible.) Verification of receipt of changes.

☐ Not Applicable

☐ Comments: This is suggested for a "recommended list".

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

X The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☒ Comments: Not sure what the proper periodicity is, but do think that "required" calls are needed. I am concerned that the "agreed upon" calls will fade away to zero during periods with no troubles and the skills needed to get everyone together and communicate effectively during a crisis will not be developed or maintained so that they will be available when needed.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☒ Suggestions: Log participation (preferably automatically) and set up compliance requirements that call for a high level of participation (90% or above on a monthly basis) to avoid non-compliance. I'm not convinced it should be daily but something frequent is good.

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☒ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☒ Comments: Probably need to set up regional or supra-regional groups also with longer periodicity and, perhaps, lower priority.

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☒ Limit participation to System Operators 24 x 7 people so that skill set will be available any time needed, day or night

    ☐ Allow each RA to assign any position to participate in the call

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☐ Yes

    ☒ No

    ☒ Comments: NERC hotline should suffice

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☐ Yes

    ☒ No

    ☒ Comments: Appears to check information exchanged during identified coordination events, it does not appear to check that each appropriate coordination event was identified and resulted in an information exchange. Probably need to require RAs to keep a list of events requiring coordination and compare lists between neighboring RAs to check compliance this way. Then you can check that proper information was exchanged.

26. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

☒ Comments: See comments in No. 25 above. Should probably use list from randomly chose adjacent RA to cross check.

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

☐ Yes

☒ No

☒ Comments: See notes on Nos. 25 and 26 above.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☐ Comments:

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entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
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	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
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	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
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	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
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Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	     The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	     The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	     − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
   - A generator or transmission outage will impact another RA
 	
   - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)
Name: Peter Burke [on behalf of ATC's Jason Shaver]
Organization: American Transmission Company
Industry Segment #: 1
Telephone: 262-506-6863
E-mail: PBurke@atcllc.com

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group:	**Group Chair:** **Chair Email:**	**Chair Phone:**
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☒ Yes

    ☐ No

    ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☒ Yes

☐ No

☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    ☒ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☒ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☒ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☐ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments: There seems to be a slight discrepancy between number (1) and number (6). The following is a suggestion on how the discrepancy could be corrected.

    Delete only "(ii) Activities that require coordination between Reliability Authorities:" under (6).

    The way it is currently written, those items listed under (ii) do not have to be the latest versions.

    Lastly, the group should also include in the list under (6) a statement similar to that under (2), a section dealing with company specific versions.

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

    ☒ Yes

    ☐ No

    ☐ Comments: Please see comments listed under #10.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs

    – Resolution of energy and capacity shortages

    – Exchange of planned or unplanned outage information

    – System restoration

    – Voltage control

    – Coordination of information exchange to support reliability assessments

    ☐ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    ☐ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☐ Requiring a Document Change Control procedure is appropriate

    ☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

    ☐ Yes, include a minimum list of elements.

    ☐ No, do not include a minimum list of elements.

    ☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☒ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☐ Yes

    ☐ No

    ☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☒ Comments: Under Standard 102 Measures

Numbers (2) and (3)(ii) seem to be the same.

Suggested changes to Standard 102

Requirements:

Delete (1)(i).

Measure:

(1)The Reliability Authority shall have evidence it has followed its Operating Procedures, Processes or Plans for making notification and exchanging reliability-related information with other Reliability Authorities.

(3)When questioned by its Compliance Monitor, each Reliability Authority shall identify other Reliability Authorities that they have:

    (i)Notified of conditions in their area that may impact the notifying RAs area.

    (ii)Delete

    (iii)Provided with requested reliability-related information

Compliance Monitoring:

(1)"…information according to approved Operating Procedures, Processes or Plans."

(3)The Reliability Authority shall have the following available upon the request of its Compliance Monitor:

    (i)remains

    (ii)Evidence to show that notifications and exchanging reliability-related information was followed per its operating procedures, processes or plans.

    (iii)Evidence to show that requested reliability-related information was provided to the requesting RA.

Levels of noncompliance:

(2)Level two: There shall be a level two noncompliance if any of the following conditions are present:

(i)One or more of the Reliability Authorities interviewed by the Compliance Monitor indicated that the Reliability Authority being audited and the audited Reliability Authority was unable to show otherwise:

(A)On one occasion, did not provide notification or exchange reliability-related information as provided in the agreed too Operating Procedures, Processes or Plans.

(B)On one occasion, did not provide reliability-related information, as requested

These changes should also apply to Level three and four.

In the original SAR under the title "Description" the following was stated.

The following sections of the Operating Policies should be retired when this standard is implemented:

Policy 4. C (all elements)

Policy 9. A (all elements)

Policy 9.B.1

Policy 9.B.4

Policy 9.C.2

Appendix 9.D.B.1.5

Appendix 9.D.B.1.6

Appendix 9.D.B.1.7

Could the SDT identify, to the best of its ability, which current standards will be retired when this standard is approved, which current standards will be retired by other standards now or soon to be pending approval, and which current standards are not addressed by any proposed new standards.

Observation

Policy 4. C

#1-4. Partially covered in this Standard

Policy 9.A

#1. Falls under the IROL Standard

#1.1 Not address in any current standard

#1.2 Falls under the IROL Standard

#2. Partially falls under this standard.

#3. Falls under this standard

#4. Its questionable if it falls under this standard.

Policy B.1

Falls under RA Certification potentially.

Policy B.4

It seems that it should fall under this standard. A suggestion would be to add Frequency to the list in section 101.

Policy C.2

Falls under this Standard.

Appendix 9D. B.1.5

Falls under this Standard

Appendix 9D. B 1.6

Please see previous comments about frequency under Policy B.4.

Appendix 9D B 1.7

Partially falls under this standard. This standard deals with only RA to RA communication.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	
	Prepare for and Respond to Blackout and Island Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	
	    Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	
	    Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	
	    Process/procedure in place for collecting transmission owners' equipment ratings.
	
	    Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

		perspective.
		Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
		Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
		Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
		Process/procedure and tools in place to develop real-time operating reliability limits.
		Process/procedure in place that define the actions to be taken for maintaining reliability.
		Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
		Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
		Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
		Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.	
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.	

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	   – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	   – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
   - A generator or transmission outage will impact another RA
   - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group: CenterPoint Energy	**Group Chair:** Don Chandler **Chair Phone:** 713-207-2785 **Chair Email:** don.chandler@centerpointenergy.com	
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**
Richard Sikes	**CenterPoint Energy**	**1**
Don Chandler	**CenterPoint Energy**	**1**

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☒ Yes

    ☐ No

    ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

☒ Yes

☐ No

☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☒ Yes - the two requirements would be different   to the operations personnel

   ☐ No – the two requirements would be the same to the operations personnel

   ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☐ Yes

   ☒ No

   ☒ Comments: Any maintenance outage plans should include coordination of all affected parties and not be exclusive to the Reliability Authorities. -RTS

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☐ Keep the sharing of outage data embedded in other requirements.

   ☒ Move the sharing of outage data to a separate requirement.

   ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

☐ Yes

☒ No

☒ Comments: My concern is, if it is not covered here, then it will not be covered. There appears to be a prevailing opinion that Reliability Authorities will operate the system independently of others. We believe that operations of the system should involve all concerned parties for reliability. In some areas, the Reliability Authority does no real operations and is only the administrator or oversight. Without a plan encompassing the operational interfaces, it is doomed for great obstacles. -RTS

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

☒ Yes

☐ No

☐ Comments:

Requirement 101 - Procedures

8. Do you agree with the requirement?

☐ Yes

☒ No

☒ Comments: Any plan addressing reliability of the system without including all entities responsible for reliability is like having no plan. -RTS

9. Do you agree with the measures?

☐ Yes

☒ No

☒ Comments: The measures only address RA to RA plans and do not address coordination with others. There may be some feeling that this will be accomplished through agreements. It is our feeling that this will place a burden on other entities effected by actions of the Reliability Authority without coordination and the end result will be adversary relationships and conflicting efforts. -RTS

10. Do you agree with the compliance monitoring process?

☒ Yes

☐ No

☒ Comments: If it includes a plan to coordinate with all involved parties. -RTS

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

☒ Yes

☐ No

☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

   – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
   – Resolution of energy and capacity shortages
   – Exchange of planned or unplanned outage information
   – System restoration
   – Voltage control
   – Coordination of information exchange to support reliability assessments

☒ The list of activities is sufficient as presented in the draft standard

☐ Each of the items in the list should have more detail on what is needed

☒ Comments: Provided they include all involved parties. -RTS

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☒ Yes

☐ No

☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☒ Requiring a Document Change Control procedure is appropriate

☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☒ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☒ Methodology for distribution

    ☒ Summary or identification of changes made to the document.

    ☒ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable

    ☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ☐ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?
    ☐ Suggestions:

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☒ Comments: Coordinate operations should be that with all operating entities. -RTS

25. Do you agree with the measures?

☐ Yes

☒ No

☒ Comments: The measures as they currently are, do not address all operating entities. -RTS

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☒ Comments: It does not monitor the coordination of operations, only the communication between RA's. -RTS

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☐ Comments:

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)

Prepare for and Respond to Blackout and Island Conditions SAR:

Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.

Prepare for and Respond to Abnormal or Emergency Conditions SAR:

Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.

Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.

The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:

  Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.

  Process/procedure in place to receive interchange transaction information from the Interchange Authority.

  Process/procedure in place for collecting transmission owners' equipment ratings.

  Process/procedure and tools in place to perform real-time and contingency reliability analyses.

  Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

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perspective.

Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.

Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.

Process/procedure and tools in place to develop real-time operating reliability limits.

Process/procedure in place that define the actions to be taken for maintaining reliability.

Process/procedure and tools in place for compliance with all applicable NERC reliability standards.

Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.

Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.

Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.

This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.

Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

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| Analyze Maintenance Outages (real time to 12 months ahead)

 • Analyze the impact of generation outages from a reliability perspective
 • Analyze the impact of transmission outages from a reliability perspective | The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:

 An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations

 The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.

 The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.

 The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:

 Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.

 Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective. |
| Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current | The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared |

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	    The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	    The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	    – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	    – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
   - A generator or transmission outage will impact another RA
   - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group: SERC Operations Planning Subcommittee	**Group Chair:** Don Reichenbach **Chair Phone:** 704-382-3146 **Chair Email:** dereiche@duke-energy.com	
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**
Carter Edge	*Southeastern Power Administration*	*4 & 5*
Roger Brand	*Municipal Electric Authority of Georgia*	*1*
Ken Skrobak	*Alabama Electric Cooperative*	*1*
Gene Delk	*South Carolina Electric and Gas*	*1*
Randy Hunt	*Dominion Virginia Power*	*1*
Larry Goins	*Tennessee Valley Authority*	*1*
Don Reichenbach	*Duke Power*	*1*
Lynna Estep	*SERC*	*2*

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☒ Yes

   ☐ No

   ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

☐ Yes

☒ No

☒ Comments: Although the RA Certification SAR mentions that an RAs authority must be documented, the specific requirement for one RA to have authority to assist in resolving problems outside of his/her reliability area does not currently exist. This would seem to be a specific requirement of the agreement required in the RA Certification SAR.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    ☐ No – the two requirements would be the same to the operations personnel

    ☒ Comments: It is unfortunate that this SAR/Standard is limited to RAs. This limits the time frame of the coordination efforts being measured by this standard to real-time and day-ahead. There are numerous operational coordination activities that occur outside of this timeframe and with entities other than just the RAs.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☒ Yes

    ☐ No

    ☒ Comments: The RA Certification SAR does not cover the actual coordination. It requires processes and tools be in place. The Operate within IROLs standard does address analyzing maintenance outages adequately given that the timeframe covered by Standard 100 is only real-time to day-ahead. It seems that there is a need for this SAR's timeframe to be expanded or another SAR developed to cover other timeframes for coordinating operations. We feel that the best solution would be to expand this SAR/Standard's timeframe so that the entire outage coordination process can be covered in one standard rather than split between two.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☐ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☒ Comments: We had difficulty seeing where sharing outage data was required in section 103 - Coordinate. (Although date and time of information exchanges is required to be documented, information exchanges do not automatically imply sharing outages specifically.) It appears adequate to cover sharing outages only in section 102 since this section seems to cover the entire timeframe of this standard. However, if the requirement does exist in both places and we have misread section 103, the requirements need careful review to ensure that non-compliance double-jeopardy is avoided.

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☐ Yes

    ☐ No

    ☒ Comments: As noted above, it seems that there is a need for this SAR's timeframe to be expanded or another SAR developed to cover other timeframes for coordinating operations. There are definitely operations coordination activities that are not getting covered. The coordination among the various functions is vitally important to the reliability of the system.

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

    ☐ Yes

    ☒ No

    ☒ Comments: Operating Scenario is defined as "an operating contingency that…" Scenario should not be limited to contingencies. As used in the main body of the document, scenarios should consider system configurations, which include possible contingencies as well as other things. Scenarios should include but are not limited to elements in service, status of var devices, generation output, load, and transfers.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☒ Comments: We are unsure how much improvement to reliability is gained from operators just having access to the procedures in the absence of a training requirement.

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☐ No

    ☒ Comments: Does item 3 imply annual on-site audits (spot checks)? Should audit frequencies be dictated in the standard? While it is appropriate to prescribe compliance review/assessment frequency, setting on-site audit frequency is very different due to things such as costs and availability of audit team participants.

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

    ☐ Yes

    ☐ No

    ☒ Comments: The levels of non-compliance are difficult to follow due to the large number of OR statements. We would be interested to know how the SDT arrived at the % levels for the different levels of non-compliances.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☒ Comments: For many areas (and the number is increasing) the manner in which operators identify and deal with stability issues is very important.

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information

       –   System restoration
       –   Voltage control
       –   Coordination of information exchange to support reliability assessments

☐ The list of activities is sufficient as presented in the draft standard

☒ Each of the items in the list should have more detail on what is needed

☒ Comments: The first item in the list seems to provide sufficient detail. Other items in the list would benefit from further clarifications on expectations like the first item contains. However, all items may not need this additional detail.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    ☒ No

    ☒ Comments: Analyses of the real-time system are too dynamic to require a static list. However, operators should be cognizant of pre-identified weak points in the system in order to focus the operator on possible problem spots. We read the standard to say that the RA must have written procedures, processes, or plans that indicate what the operator must do if a situation occurs where interconnection reliability is or may be compromised. We do not read the standard to say that there are certain lists that must be a part of the processes, procedures, or plans. This would be prescribing the "how."

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?
    ☒ Requiring a Document Change Control procedure is appropriate
    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.
    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?
    ☐ Yes, include a minimum list of elements.
    ☒ No, do not include a minimum list of elements.
    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.
    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:
    ☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.
    ☐ Methodology for distribution
    ☐ Summary or identification of changes made to the document.
    ☐ Version control and archival period
    ☐ Other (Please be as specific as possible.)
    ☒ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

   ☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.
   ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.
   ☐ Not Applicable
   ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions:

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☒ Yes

    ☐ No

    ☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☐ Yes

    ☐ No

    ☒ Comments: What is required in measure 3 to verify the actions of other RAs? This measure needs to either be clarified as to what is expected of RAs regarding verifying the actions of other RAs or it needs to be removed.

26. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☐ No

    ☒ Comments: The issue of an annual audit is contained in this requirement as well. Also, item 1 includes an interview of other RAs by the Compliance Monitor to verify self-certifications. As mentioned above, there are no guidelines on what documentation is necessary for this activity.

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☒ Comments: We feel that the SAR, and therefore, the standard are too narrowly focused on the coordination necessary among RAs. There are other entities and wider timeframes that need to be covered under the name of "Coordinate Operations." If this cannot be accomplished, then this standard should be renamed to reflect the focus of RA Operations Coordination AND another SAR should be developed to cover the other areas of coordinate operations.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

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E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.) **Prepare for and Respond to Blackout and Island Conditions SAR:** Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc. **Prepare for and Respond to Abnormal or Emergency Conditions SAR:** Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc. Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans. **The RA Certification SAR** includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following: Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority. Process/procedure in place to receive interchange transaction information from the Interchange Authority. Process/procedure in place for collecting transmission owners' equipment ratings. Process/procedure and tools in place to perform real-time and contingency reliability analyses. Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems) • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages. • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	with others. The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits. The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits. Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways. − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement. − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement. Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.
Communicate with other impacted RAs to share information: • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as: - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

<table>
<tr><td colspan="2">

Commenter Information (For Individual Commenters)

Name:

Organization:

Industry Segment #:

Telephone:

E-mail:
</td><td>

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group: BPA Transmission	**Group Chair:** Don Gold **Chair Phone:** 360 418 2284 **Chair Email:** dlgold@bpa.gov

List of Group Participants that Support These Comments:

Name	**Company**	**Industry Segment #**
Warren McReynolds	**BPA**	**1 + Control Area**
Paul Arnold	**BPA**	**1 + Conrol Area**
Mike Fenimore	**Pacific Northwest security Coordinator (PNSC)**	**2**
Dick Schwarz	**PNSC**	**2**
Dick Spence	**BPA**	**1 + Control Area**

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    X☐ Yes

    ☐ No

    ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☐ Yes

    X☐ No

    X☐ Comments: The RA Standard is still under development. Therefore it is unknown what it will contain at this time. The RA Certification SAR does not require this authority.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    X☐ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☐ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☐ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

   X☐ Yes

   ☐ No

   ☐ Comments:

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

   ☐ Yes

   X☐ No

   X☐ Comments: An Operating Scenario does not require a contingency.

   Outage – I generally do not think of a Transmission line as "equipment". Definition should be "...transmission line or equipment..."

Requirement 101 - Procedures

8. Do you agree with the requirement?

   ☐ Yes

   X☐ No

   X☐ Comments: What happens if "all" the RAs do not approve the plan? There are times when something occurs and a solution developed but not all RAs agree. Should the situation be ignored until all the political problems are worked out and all parties finally agree, or should the plan be put in place while the agreement is reached. It happens where entities can not agree to a plan that the separate dispatch offices actually follow as there is no other choice.

   This standard needs to deal with coordination, which does not imply approval. The standard should focus on a process for notification and coordination, meaning advanced notification of procedures that impact other RAs and an opportunity to comment. Each Region should have procedures for coordination among RAs for those procedures that are deemed to be critical and impact multiple RAs.

9. Do you agree with the measures?

   ☐ Yes

   X☐ No

   X☐ Comments: Why should the system operator have a copy of a plan for automatic exchange of information or data? (b1)

   Daily communication is not necessary. All that is necessary is that all impacted RAs have the information that they need to assess the system. This is accomplished through outage reporting (both planned outages and real time outages).

   The RA is not responsible for the resolution of energy and capacity shortages. The RA ensures the real-time operating relaibility of the interconnected bulk electric transmission system.

   The RA may not have any procedures that require notification or coordination between RAs for voltage control (at least at the system operators level). There may be joint procedures for voltage problems, such as voltage collapse.

10. Do you agree with the compliance monitoring process?

   ☐ Yes

   X☐ No

   X☐ Comments: Self certification annually is a lot of busy work. Once every 3 to 5 years, as determined by the Region (Compliance Monitor) is adequate.

   d.3 indicates that the Compliance Monitor shall use an ANNUAL spot check. There is no need for an annual spot check unless the RA has been reported to be deficient or through the self certification has indicated a deficiency. Then the RA should be checked as often as necessary in order to come up to compliance.

   d.5 indicates the reset period. What is the occurrence period? Also the RA shall keep documentation for the prior year – What documentation is to be kept and how. The system operator should not have to keep superceded procedures whereby he/she could get confussed. Only the current procedure should be available to the system operators.

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

   ☐ Yes

   X☐ No

   X☐ Comments: Not all RAs have need for the topics listed. Therefore, in order to not be santioned, procedures will have to be developed that are a waste of effort and time and could lead to confusion. The other measures are a lot of work with very little gain.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

   ☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

   ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

   X☐ Comments: The minimum list includes topics that may not be required. If a minimum list is necessary it should be developed by the Region and/or the compliance monitor specifically for each RA.

   Daily communication between each RA is not necessary.

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

   – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
   – Resolution of energy and capacity shortages
   – Exchange of planned or unplanned outage information
   – System restoration
   – Voltage control
   – Coordination of information exchange to support reliability assessments

   ☐ The list of activities is sufficient as presented in the draft standard

   ☐ Each of the items in the list should have more detail on what is needed

X☐ Comments: See 12.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

X☐ No

X☐ Comments: It seems inappropriate for NERC to require a list. NERC should be more interested in everyone knowing and doing in order to maintain a reliable system.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☐ Requiring a Document Change Control procedure is appropriate

X☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

X☐ Comments: Same as 14. The results are the important thing, not how the results are obtained.

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

X☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☐ Methodology for distribution

    ☐ Summary or identification of changes made to the document.

    ☐ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    X☐ Not Applicable

    ☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    X☐ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    X☐ Comments: The RA should communicate. How the communication is accomplished should be immaterial to NERC.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions:

    X☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    X☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    X☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    X☐ Yes

    ☐ No

    ☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☐ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☐ Yes

    X☐ No

    X☐ Comments: Keeping a list is a lot of busy work and should only be necessary as a last resort. If the other RAs in the interconnection verify (state) that the coordinationis being done that should be adequate. If the other RAs state that coordination is not being done then they should also provide specific dates and times so the situation can be investigated and level of non-compliance determined.

26. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☐ No

    X☐ Comments: An annual spot check is to frequent. A random spot check seems appropriate.

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

    ☐ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    X☐ Comments: Section 102 does not have any questions on the Compliance Monitoring or levels of non-compliance. The following comments are offered for 102 – Notifications and Information Exchange:

    102.e (2)(i)(A) & (B): "On one occasion ... may impact ...". How and Who is going to measure this and if it only "MAY" impact, it seems subjective and extremely hard to measure and/or judge. Also "On one occasion ... as requested" – same comment plus what was the situation where the information was not provided? Did the request come from a marketer where the RA is not allowed to provide the information or did an RA that was not impacted request the information while the RAs that were impacted were still working on the problem?

    Same comments on the other levels.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

| Analyze Maintenance Outages (real time to 12 months ahead)
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective | The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:

An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations

The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.

The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.

The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:

Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.

Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective. |
| Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current | The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared |

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	 The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	 The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	     − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
     - A generator or transmission outage will impact another RA
     - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

<table>
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Commenter Information (For Individual Commenters)

Name: H. Steven Myers

Organization: ERCOT

Industry Segment #:2

Telephone: 512-248-3077

E-mail: smyers@ercot.com

</td><td colspan="2">

Key to Industry Segment #'s:

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

</td></tr>
<tr><td colspan="4">

STD Commenter Information (For Groups Submitting Group Comments)

</td></tr>
<tr><td>**Name of Group:**</td><td>**Group Chair:**
Chair Email:</td><td colspan="2">**Chair Phone:**</td></tr>
<tr><td colspan="4">**List of Group Participants that Support These Comments:**</td></tr>
<tr><td>**Name**</td><td colspan="2">**Company**</td><td>**Industry Segment #**</td></tr>
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Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☐ Yes

    ☐ No

    ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☐ Yes

    ☐ No

    ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    ☐ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☐ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☐ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

   ☐ Yes

   ☐ No

   ☐ Comments:

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

   ☐ Yes

   ☐ No

   ☐ Comments:

Requirement 101 - Procedures

8. Do you agree with the requirement?

   ☐ Yes

   ☐ No

   ☐ Comments:

9. Do you agree with the measures?

   ☐ Yes

   ☐ No

   ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☐ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    ☐ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?
    ☐ Requiring a Document Change Control procedure is appropriate
    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.
    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?
    ☐ Yes, include a minimum list of elements.
    ☐ No, do not include a minimum list of elements.
    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.
    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☐ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☐ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☐ Yes

☐ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

☐ Yes

☐ No

☐ Comments:

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

    ☐ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☒ Comments: Since ERCOT is interconnected with other systems only through the DC Ties, the language regarding the requirement to coordinate and share ratings/limits with other RAs should reflect only the requirement to share ratings/limits for the interconnecting facilities (in this case, DC Ties).

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems) • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages. • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	with others. The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits. The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits. Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways. – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement. – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement. Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.
Communicate with other impacted RAs to share information: • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as: - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)

Name: Blaine Keener

Organization: Public Service Commission of Maryland

Industry Segment #: 9

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E-mail: bkeener@psc.state.md.us

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	**Group Chair:** **Chair Email:**	**Chair Phone:**

List of Group Participants that Support These Comments:

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

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☒ Yes

    ☐ No

    ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☒ Yes

    ☐ No

    ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    ☒ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☒ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☐ Keep the sharing of outage data embedded in other requirements.

    ☒ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☐ Yes

    ☒ No

    ☐ Comments: The proposed Standard does not address the issue that with the same NERC reliability criteria the Reliability coordinators and control areas have adopted differing interpretation of the functions, responsibilities, authorities, and capabilities needed to operate a reliable power system. The procedure that requires each Reliability authority's Operating Procedure, Processes or Plans to be approved by other reliability authorities is unrealistic without a method to resolve the differences in interpretation.

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

    ☐ Comments: The existing process for monitoring and assuring compliance with NERC and regional reliability standards was shown to be inadequate to identify and resolve specific compliance violation before those violations led to a cascading blackout. The proposed Compliance Monitoring Process does

not resolve this problem and is not effective in case of disagreement between
different Reliability authorities.

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

    ☒ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures,
    processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify
    what other topics should be added to this requirement.

    ☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related
    information with other RAs or coordinating actions between RAs and requires that these topics be
    addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the
    following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one
      RA notifies other RAs; the process to follow in making those notifications; and the data and
      information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☐ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency
    system conditions involving its RA Area that may affect interconnection reliability?

    ☒ Yes

    ☐ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control
    Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective
    of maintaining its procedures?

    ☒ Requiring a Document Change Control procedure is appropriate

    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its
      performance objective.

    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☒ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☐ Methodology for distribution

    ☐ Summary or identification of changes made to the document.

    ☐ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable

    ☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ☐ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☒ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments: The RA should be required to initiate a conference call with other RA's with whom a coordination issue has been identified. The other RA's shall participate in the call.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions:

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☐ Yes

☒ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☐ Comments: The existing process for monitoring and assuring compliance with NERC and regional reliability standards was shown to be inadequate to identify and resolve specific compliance violation before those violations led to a cascading blackout. The proposed Compliance Monitoring Process does

not resolve this problem and is not effective in case of disagreement between different Reliability authorities.

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

⊠ Yes

☐ No

☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

⊠ Comments: 101(d)(4) and 103(d)(2) is repetition, in general a lot of repetition between 101 Procedures and 103 Coordination. Could be just references.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard **(COORD_OPERATONS_05_01)** is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

Interconnection shall be developed, and distributed to all entities that are expected to take action or that may be impacted as a result of this procedure.	its interconnection reliability operating limits. (Measures require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.

	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

Transmission Facilities) (For current and next day and for its impact on other systems) • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages. • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	with others. The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits. The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits. Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways. – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement. – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement. Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
  - A generator or transmission outage will impact another RA
  - Outages of information
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

technology (IT) systems (telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Comment Form for 1st Posting of Coordinate Operations Standard

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SAR Commenter Information (For comment from individual entities)
Name   Patti Metro on behalf of FRCC members
Organization   Florida Reliability Coordinating Council (FRCC)
Industry Segment #
Telephone   813-289-5644
E-mail   pmetro@frcc.com

Key to Industry Segment #'s:

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

FRCC Comments 02/27/04

Comment Form for 1st Posting of Coordinate Operations Standard

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group: FRCC	**Group Chair:** **Chair Phone:** **Chair Email:**	
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**
Patti Metro	*FRCC*	*2*
Linda Campbell	*FRCC*	*2*
Steve Wallace	*Seminole Electric Cooperative*	*4*
Roger Westphal	*Gainesville Regional Utilities*	*3*
Richard Gilbert	*Lakeland Electric*	*3*
Ted Hobson	*JEA*	*1*
Tom Washburn	*OUC*	*3*

Background

FRCC overall comment for questions 1-6: Since so many of the original SAR requirements are being addressed in other standards under development, it is important to remember to include the list of standards in the implementation plan that would be developed for the Coordinate Operations Standard. There could be some coordination issues that will need to be addressed for reliability that might need to be done on an interim basis if all the standards are not implemented within the same timeframe.

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

■ Yes

☐ No

☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

☐ Yes

■ No

■ Comments: The RA Certification Criteria a is a one-time certification with no compliance monitoring included to make sure that conscious authority is maintained on an ongoing basis.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes - the two requirements would be different to the operations personnel

■ No – the two requirements would be the same to the operations personnel

☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

■ Yes

☐ No

☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

■ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

   ☐ Yes

   ■ No

   ■ Comments: We do not agree that this standard should be limited to RA to RA coordination as FRCC expressed in SAR comments on 3/17/03. Would it make more sense to cover all coordination of operations for all reliability functions?

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

   ☐ Yes

   ■ No

   ■ Comments: The definition of Operating Procedure is circular. When developing a definition, the word that is being defined should not be used in the definition.

Requirement 101 - Procedures

8. Do you agree with the requirement?

   ☐ Yes

   ■ No

   ■ Comments: Is a "document change control procedure " really necessary? A Reliability Authority is obligated to notify other Reliability Authorities if a change can jeopardize reliability.

9. Do you agree with the measures?

   ■ Yes

   ☐ No

   ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ■ No

    ■ Comments: See attached red-line version with suggested FRCC changes.

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

    ☐ Yes

    ■ No

    ■ Comments: The levels of non-compliance for Requirement 101 are unclear. How is the % measured and what is it a % of? In addition for Level Two, "There shall be a level two noncompliance if either of the following conditions exist:" The word "either" implies that only two conditions are being compared, where there are actually three conditions being compared. This section should be consistent with the remainder of the standard and the word "either" should be replaced with the word "any".

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ■ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ■ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ■ Yes

    ☐ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☐ Requiring a Document Change Control procedure is appropriate

    ■ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

    ☐ Yes, include a minimum list of elements.

    ☐ No, do not include a minimum list of elements.

    ■ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☐ Methodology for distribution

    ☐ Summary or identification of changes made to the document.

    ☐ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    ■ Not Applicable

    ☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ■ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

There was no area for compliance monitoring comments provided for this requirement see attached redline version with suggested FRCC changes. In addition, FRCC conducts reliability related conference calls with included coordination of outages and has found this type of communication to be very helpful in conducting business in a reliable manner.

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ■ Comments: This question is confusing. The requirement states "agreed upon daily conference call". Doesn't that mean everyday?

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ■ Suggestions: The standard is already written with levels to include % participation in daily conference calls.

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ■ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ■ Allow each RA to assign any position to participate in the call

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ■ Yes

    ☐ No

    ☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ■ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ■ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☐ Yes

███No

███Comments: See attached red-line version with suggested FRCC changes.

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

███Yes

☐ No

☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

███Comments: We are not aware of any Regional or Interconnection Differences that should be added to this standard.

29. Do you have any other comments on the standard?
███Comments: Throughout the standard the phrases " Operating Procedure, Process, or/and/of Plan" and " Operating Procedures, Processes, or/and/of and Plans" are used. The document should be consistent and **OR** should be the only conjunction used in this context.

The following are in red-line format for the Compliance Monitoring portion of the standard.

101 Procedures

(d)Compliance Monitoring Process

    (1) The Reliability Authority shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually.

    (i) The self-certification shall include a list of the latest approved version of documents distributed to other Reliability Authorities that address the following:

    (i) (A)Identified normal and emergency system conditions that require making notifications to other Reliability Authorities, exchanging information with other Reliability Authorities or the coordination of actions with other Reliability Authorities.

    (ii)(B)Identified operating scenarios within one Reliability Authority Area that could have an adverse impact on another Reliability Authority's Area.

    (iii)(C)Daily communications and real time notifications, including the conditions under which one Reliability Authority notifies other Reliability Authorities; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Authorities.

    (iv)(D) Resolution of energy and capacity shortages.

    (v)(E)Exchange of planned or unplanned outage information.

    (vi)(F)System restoration.

(vii)(G)Voltage control.

(viii)(H)Coordination of information exchange to support reliability assessments.

(2ii) The self-certification shall also include a list of the latest version of company-   specific Operating Procedures, Processes or Plans developed to support a source Operating Procedure, Process of or Plan received from another Reliability Authority.

(32) The Compliance Monitor shall also use an annual spot check with 3 business days' notice, or sufficient time to comply with the control center's security access procedure. As part of the spot check, the Compliance Monitor shall interview other Reliability Authorities to:

> (i)   Verify that the Document Change Control Procedure has been followed.

> (ii)   Identify Operating Procedures, Processes or Plans that were distributed to the Reliability Authority being audited to verify that these documents are available for real-time use by the receiving Reliability Authority's system operators.

> (iii)   The results of the spot check shall be assessed and returned to the Reliability Authority within 30 days of the date of the spot check.

(43) The Compliance Monitor shall conduct an investigation upon a complaint that is received within 30 days of the alleged infraction's discovery date. The Compliance Monitor shall complete the investigation and report back to all involved Reliability Authorities (the Reliability Authority that complained as well as the Reliability Authority that was investigated) within 45 days after the start of the investigation. The results of the spot check shall be assessed and returned to the Reliability Authority within 30 days of the date of the spot check.

(54) The performance-reset period shall be one calendar year. The reliability Reliability authority Authority shall keep documentation for prior year and current calendar year. The Compliance Monitor shall keep compliance data for a minimum of 3 years or until the Reliability Authority has achieved full compliance — whichever is longer.

(65) The Reliability Authority shall have the following documents available for the Compliance Monitor's inspection:

> (i)   The latest version of its Operating Procedures, Processes or Plans that address the following:

> (A) Identified normal and emergency system conditions that require the exchange of information or the coordination of actions between Reliability Authorities.

> (B) Identified operating scenarios within one Reliability Authority Area that could have an adverse impact on another Reliability Authority's Area.

> (ii) Activities that require coordination between Reliability Authorities:

> (A) Daily communications and real-time notifications, including the conditions under which one Reliability Authority notifies other

Reliability Authorities; the process used for such notifications; and the data and information to be exchanged

(B) Resolution of energy and capacity shortages

(C) Exchange of planned or unplanned outage information

(D) System restoration

(E) Voltage control

(F) Coordination of information exchange to support reliability assessments

(iii) The latest copy of its Document Change Control Procedure

(iv) Evidence that its Operating Procedures, Processes or Plans were approved, updated and distributed in accordance with its Document Change Control Procedure.

102 Notifications and Information Exchange

Format for Compliance Monitoring should be the same as 101-general guideline and questions included below

(d)(a)   Compliance Monitoring

(1) The reliability authority shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually.

(2) The Compliance Monitor shall also use a scheduled on-site review at least once every three years. The Compliance Monitor shall interview other Reliability Authorities within the Interconnection and verify that the Reliability Authority being audited has been making notifications and exchanging reliability-related information according to approved procedures. Is the interview par of the on-sit visit or the spot check?

(3) Spot Check - What would the spot check include?

(4) The Compliance Monitor shall conduct an investigation upon a complaint that is received within 30 days of the alleged infraction's discovery date. The Compliance Monitor shall complete the investigation within 45 days after the start of the investigation. This should be re-written like the section for this in 101(d)

(2)(5)   The compliance-reset period shall be one calendar year. The reliability authority shall keep auditable documentation for a rolling 12 months. The Compliance Monitor shall keep compliance data for a minimum of 3 years or until the Reliability Authority has achieved full compliance — whichever is longer.

(3)(6)   The reliability authority shall have the following available upon the request of its Compliance Monitor:

(i) Evidence it has participated in agreed-upon daily conference calls or other communications forums.

(ii) Operating logs or other data sources that document notifications made to other Reliability Authorities.

103 Coordination

(d) Compliance Monitoring Process

(1) The Reliability Authority shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually. The self-certification shall include a list of the prior year's dates on which this Reliability Authority identified a potential, expected, or actual problem that adversely impacted the reliability of one or more other Reliability Authorities and the names of the Reliability Authorities that were contacted.

(2) The Compliance Monitor shall also use an annual spot check with 3 business days' notice, or sufficient time to comply with the control center's security access procedure; and investigations upon complaint, to assess performance. The Compliance Monitor shall interview other Reliability Authorities within the Interconnection and verify that the Reliability Authority being audited has been coordinating actions to prevent or resolve potential, expected or actual problems that adversely impact the Interconnection. The results of the spot check shall be assessed and returned to the Reliability Authority within 30 days of the date of the spot check

(3) The Compliance Monitor shall conduct an investigation upon a complaint that is received within 30 days of the alleged infraction's discovery date. The Compliance Monitor shall complete the investigation and report back to all involved Reliability Authorities (the Reliability Authority that complained as well as the Reliability Authority that was investigated) within 45 days after the start of the investigation. The results of the spot check shall be assessed and returned to the Reliability Authority within 30 days of the date of the spot check

(4) The compliance-reset period shall be one calendar year. The reliability authority shall keep auditable documentation for the prior year and current calendar year. The Compliance Monitor shall keep compliance data for a minimum of 3 years or until the Reliability Authority has achieved full compliance — whichever is longer.

(5) The Reliability Authority shall have the following available upon the request of its Compliance Monitor for:

(i) Operating logs or other data sources with the following information for each instance of coordination with another Reliability Authority to agree upon and resolve a potential, expected or actual problem that impacts more than one Reliability Authority Area:

(A) Date and time of information exchanges

(B) Reliability Authority(s) involved in discussion

(C) Description of the reported potential, expected or actual problem

(D) Note to indicate whether problem was agreed upon

(E) Solution identified and agreed upon or a note indicating no solution was agreed upon

    (F) Date and time actions taken

    (G) Description of actions taken

    (H) List of notifications made

            (I) Results of any investigation into conflicting system status or studies

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	    The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	    The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	    – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	    – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
   - A generator or transmission outage will impact another RA
 	
   - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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Commenter Information (For Individual Commenters)

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Key to Industry Segment #'s:

</td></tr>
</table>

Commenter Information (For Individual Commenters)

Name: Rick Stegehuis

Organization: Wisconsin Electric Power Co.

Industry Segment #: 3,4,5

Telephone: 262-544-7132

E-mail: rick.stegehuis@we-energies.com

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☒ Yes

   ☐ No

   ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☒ No – the two requirements would be the same to the operations personnel

   ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☒ Yes

   ☐ No

   ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☒ Keep the sharing of outage data embedded in other requirements.

   ☐ Move the sharing of outage data to a separate requirement.

   ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☒ Comments: Change definition of "Operating Scenario". The term itself and its usage within the document are acceptable. However, it should be defined as any hypothetical operating state, not just one that could have wide area impacts. The usage of "operating scenario" in the document is consistent with this broader definition.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☐ Yes

    ☒ No

    ☒ Comments: A measure should be added for operator training. Operators should be trained in procedures, not just have them available, and the training should be documented.

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☒ Comments: Include audit of training documentation as noted in 9.

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

    ☐ Yes

    ☒ No

    ☒ Comments: The percentage measures may be difficult to determine in practice and are too lenient. Suggest using fixed number criteria.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

☒ The list of activities is sufficient as presented in the draft standard

☐ Each of the items in the list should have more detail on what is needed

☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☒ Yes

☐ No

☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☒ Requiring a Document Change Control procedure is appropriate

☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☒ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☒ Comments: Including such a list would provide consistency between RA's.

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☒ Summary or identification of changes made to the document.

☒ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☐ Yes

    ☒ No

    ☒ Comments: This is implicit in the other requirements.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

     ☒ Yes

     ☐ No

     ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

     ☐ Comments:

29. Do you have any other comments on the standard?

     ☐ Comments:

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Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
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Commenter Information (For Individual Commenters)
Name:
Organization:
Industry Segment #:
Telephone:
E-mail:

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	**Group Chair:** **Chair Phone:** **Chair Email:**

List of Group Participants that Support These Comments:

Name	**Company**	**Industry Segment #**
Albert DiCaprio	**PJM**	**2**
Joseph Willson	**PJM**	**2**
Bruce Balmat	**PJM**	**2**
Mark Kuras	**PJM**	**2**

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☒ Yes

   ☐ No

   ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☒ Comments:
   An entity's authority must be assigned **prior to** it being certified as an RA. The relationships between RAs and other functional entities are defined in the Functional Model.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different to the operations personnel

   ☐ No – the two requirements would be the same to the operations personnel

   ☒ Comments:

   Standards are written to functional entities RA/BAs/ et al; they are not written for "Operating Personnel". Therefore this question is not clear in reference to NERC Standards.

   In any case, the two conditions in Item #3 are different sides of the same issue. The Ratings standard and the Operate within Limits standards respectively require that all conditions be evaluated and all limits be operated to.

   The Ratings Standard mandates RAs to compute SOLs by looking at current (normal?) and alternative (contingency and emergency?) conditions. The Operate within limits standard mandates the RAs respect those SOLs that are IROLs.

   Therefore if the SDT is asking if all situations are covered then the answer is YES they are covered in other Standards.

If on the other hand the SDT is asking whether or not NERC must mandate RAs to follow its own internal limits, then the SDT has an obligation to be clearer in what it is asking. If the SDT is expanding the scope to include mandates that RAs follow their own local limits, then the SDT must post the alternatives to read:

NERC should limit this standard to RA-to-RA events and leave internal operations to its own regional requirements. (Y/N)

NERC should expand standard to include both external and internal RA affects (such as complying with all internal thermal limits all of the time). (Y/N)

The two answers that SDT provided do not address the above two questions. Of course the RAs must assess local (i.e. internal) reliability. The question is "Does the industry need a NERC Standard to enforce that need?"

If this NERC standard is to address "NOT how" entities act, but rather to address how entities interact, then the answer should be NO NERC standard is required to mandate how an RA operates its own area. If this requirement were expanded, then all RAs would be responsible for reporting violations of thermal limits on every line no matter how trivial the consequence.

The SDT should not go beyond its original scope and stay with RA-to-RA coordination.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

☒ Yes

☐ No

☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

☒ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☒ Comments:
Standard 600 (Ratings) requires that outage data be provided to the RA, so that the RA can compute SOLs. Therefore the data sharing should and is "embedded in other Standards/requirements"

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☒ Comments:

    Operating Scenarios should be omitted. There is no need for NERC to define what must be used in RA evaluations. Also, Operating Scenarios do not have to be contingency events; they could be as simple as Peak and valley load conditions.

    Outages should be omitted: is there a real need for this definition? Taking out a mill would constitute "the removal of equipment from service" but hopefully would not be subject to this standard (unless of course the loss of the mill would "take the system down."

    Does it really add anything to understanding the object of the Standard? If not then it should be removed.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☒ Comments:

    Delete first line of Requirement 101 (a) 4. (The rest of the requirement is OK) The term "may develop" means that it is NOT REQUIRED. All such explanatory material belongs in Technical documents not in the Standard itself.

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☐ No

    ☐ Comments:

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

☐ Yes

☒ No

☒ Comments:

Need more specificity. It is not clear what the % is of. Does one add the number of documents plus the number of oral agreements plus the numbers of procedures used in say switching jointly owned facilities?

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☒ Comments:

Operators must have procedures for handling the reliability consequences of all conditions whether or not they are on such a list. Punishing an RA for not having an Energy Shortage Plan is not as important as having a plan to handle instability or handling adverse voltage conditions or IROL conditions.

Such list is not relevant. In an open market it is not possible to order coal conservation. A supplier has no obligation to adjust its fuel reserves on the bases of shortages in another supplier's fuel.

It is possible to order load shedding or tie flow adjustments. It is possible to require emergency procedures. But all those procedures would be shared among RAs anyway.

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

– Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs

– Resolution of energy and capacity shortages

– Exchange of planned or unplanned outage information

– System restoration

– Voltage control

– Coordination of information exchange to support reliability assessments

☒ The list of activities is sufficient as presented in the draft standard

☐ Each of the items in the list should have more detail on what is needed

☒ Comments:

Any 'clarifying' statements will only cause more problems. Defining what must and must not be in a Conference Call will lead to a data exchange rather than an INFORMATION exchange. What is important one day may be a time-waster on another day.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

☒ No

☒ Comments:
Having lists do not ensure reliability. The idea that lists equate to reliability is incorrect. The list may be helpful, but in and of themselves the lists do nothing. NERC standards are compliance standards not checklists.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☐ Requiring a Document Change Control procedure is appropriate

☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☒ Comments:
A document control procedure is not a replacement for trained operators who know what to do whether or not a copy of some procedure has the correct date on it. Good practices are not supposed to be part of a NERC Standard.

Having the 'latest' procedure does not replace having the 'right' procedure. As written this standard only focuses on having the latest procedure.

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☒ Comments

The SDT has proposed too many "how tos" in the above questions. The proposals have entered into the area of ideal vs. pragmatic. Having communication methodologies is a good idea. It also should be in the CERTIFICATION requirements rather than in this standard.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☒ Comments:

In requirement 103 (a) (1) (i) B – the term "affected Reliability Authorities" has been added. This term is too vague. As written all RAs in an interconnection can be "affected" by every procedure. Dropping the term "affected" does not alter the objective but does alter the scope of the requirement.

25. Do you agree with the measures?

☒ Yes

☐ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

☒ Yes

☐ No

☐ Comments:

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

   ☒ Yes

   ☐ No

   ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

   ☒ Comments:

   No.

29. Do you have any other comments on the standard?

   ☒ Comments:

   This standard being proposed by the SDT does not directly address the issue of reliability. As written, the Standard proposes good practices but misses the opportunity to respond to current NERC Standard shortcomings.

   Having **a Change Control process** or an operator "having" the latest version of an Operating procedure are good ideas – but having such a process or having the latest version is no replacement for reacting properly in adverse situations.

   The SDT proposes to punish an RA that doesn't have verification that its neighbors have the latest version of a procedure. But, as the standard is now written, if a properly trained operator of that RA responded correctly (without referring to a document) that would not count, in fact that RA would be in violation of the standard if the operator did NOT follow a procedure as written (even if that procedure were in error).

   NERC currently does not have a policy or standard that requires entities to monitor, coordinate, mitigate and/or correct IROL conditions identified within other entities areas. There is no backstop among areas. The US-Canada Interim Report states a cause of the blackout was:

   > *"PJM and MISO lacked joint procedures or guidelines on when and how to coordinate a security limit violation observed by one of them in the other's area due to a contingency near their common boundary."*

   PJM recommends that the SDT ask the Industry whether or not it wants to continue to write standards that merely document procedures, or to write standards that will protect reliability.

Such reliability standards could be simple and direct:

Each RA shall monitor all of their adjacent control Areas' Reliability Areas.

Each RA shall immediately inform their neighbors of any actual or forecasted contingency violation of an IROL limit.

Each RA shall immediately respond to all IROL violation inquiries from their neighboring RAs either by:

Verifying discrepancies in monitoring, and/or

Agreeing to a correction procedure, and/or

Implementing agreed to procedures, or

Both operating to the most restrictive condition posited be either RA.

The above explicitly requires RAs to have sufficient monitoring to cover its neighbors' entire areas. This requirement would eliminate the need to define wide-area. If an RA has the ability to monitor all of its neighbors, then it is big enough to be an RA.

The PJM proposal eliminates paper work, and requires specific agreements - whether or not those agreements are in some database.

An "Abnormal" situation is a situation that RAs are not prepared for, which means they wouldn't have the specific procedures they need to use anyway. And any procedures they did have, would be for common well-known situations and likely not apply to the situation at hand.

The PJM proposal also eliminates a requirement of blind adherence to procedures (do we want operators that only follow procedures or do we want operators that are free to respond to the conditions they face) and opens the standards up to what many in the Industry want – effective common sense standards.

The PJM proposal requires that RAs have on-going communications capabilities with its neighbors- without mandating daily conference calls or ad hoc protocols.

The SDT standard would be better served by focusing on the core issues. To deal with conflicts the SDT proposed standard requires each RA to work on its (even if its actions counter the actions of the other RAs) . The PJM proposal eliminates the conflict by using the most restrictive limit. Having the right version of a procedure is not as valuable as having the right solution.

The SDT is requested to ask the industry what the industry wants as a measure of good operation – a checklist? or does the industry want black and white (level 4 non-compliance) requirements that: when informed of an real or potential transmission integrity threat the RAs will operate to the most limiting process, procedure or limit defined by involved RAs?

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
Please note that the Certification Standard will be a one-time measurement and will not measure the implementation of the required processes or procedures!	**The RA Certification SAR** includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

| Analyze Maintenance Outages (real time to 12 months ahead)

 • Analyze the impact of generation outages from a reliability perspective
 • Analyze the impact of transmission outages from a reliability perspective | The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:

 An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations

 The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.

 The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.

 The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:

 Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.

 Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective. |
| Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current | The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared |

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	     The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	     The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	     − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
     - A generator or transmission outage will impact another RA
     - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:
Name: Alan Boesch Organization: Nebraska Public Power District Industry Segment #: 1 Telephone: 402-845-5210 E-mail: agboesc@nppd.com	**1 – Trans. Owners** **2 – RTO's, ISO's, RRC's** **3 – LSE's** **4 – TDU's** **5 - Generators** 6 - Brokers, Aggregators, and Marketers **7 - Large Electricity End Users** **8 - Small Electricity Users** 9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	**Group Chair:** **Chair Phone:** **Chair Email:**

List of Group Participants that Support These Comments:

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

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☐ Yes

   ☒ No

   ☐ Comments: The RA Certification standard is a one-time process to gain certification. To the extent that the requirements in the certification standard are related to coordination issues they should be required and measured in this standard. This standard should be measuring the implementation of the procedures when required.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☒ No – the two requirements would be the same to the operations personnel

   ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☐ Yes

   ☒ No

   ☐ Comments: The requirement to coordinate and approve outages in the Certification Standard is a check for having a procedure, process or tool to accomplish the task and is a one time measurement. This standard should address implementation of the procedure or process.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☐ Keep the sharing of outage data embedded in other requirements.

   ☒ Move the sharing of outage data to a separate requirement.

☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☐ Yes

    ☒ No

    ☐ Comments: Coordination with other entities needs to be included in this standard.

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

    ☐ Yes

    ☒ No

    ☐ Comments: I do not think they match the definitions that are being provided in the Certification Standards. This may be a sign of a larger problem where different standards have different definitions for the same term. That could lead to confusion in the industry and should be addressed by NERC. Please forward this comment to the NERC compliance/standards office.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☐ Yes

    ☒ No

    ☐ Comments:

    i)   It is unreasonable to expect that RAs will <u>approve</u> each others plan. Distribution to the RA with requirement for review seems more appropriate.

    ii) Coordination of Capacity shortages should also be with the associated BA

    iii) Coordination of Voltage should also be with the associated TOP

    iv) Coordination of system restoration should also be with the associated BAs.

    v)   Requirement 4 says "may".   It must not be a requirement if it says "may".

9. Do you agree with the measures?

    ☐ Yes

    ☒ No

    ☐ Comments:

    ➢ Requirement 1 is not measured. It appears that requirement 3 contains the details of requirement 1. If so combine them.

    ➢ There should be a requirement to implement processes, procedures and plans as written. Simply having the processes, procedures and plans does not assure reliability.

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

☐ Comments: The compliance monitoring process should provide a review of implementation of the processes, procedures and plans as written. The compliance could be measured when an incident occurs that would require the use of the process, procedure or plan. The compliance monitor could check for proper implementation of the process, procedure or plan using investigation techniques such as questionnaires sent to other entities involved.

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

☐ Yes

☒ No

☐ Comments: Why do you have a level of non-compliance for a process, procedure or plan that "may" be required?

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☒ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments: There should be a list of items that are coordinated with BAs and TOPs.

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

   – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
   – Resolution of energy and capacity shortages
   – Exchange of planned or unplanned outage information
   – System restoration
   – Voltage control
   – Coordination of information exchange to support reliability assessments

☐ The list of activities is sufficient as presented in the draft standard

☒ Each of the items in the list should have more detail on what is needed

☐ Comments: The coordination and monitoring these items with BAs and TOPs should be included and added as measurements.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

☒ No

☐ Comments: I am not sure a "list" is required but it should certainly know the conditions and be able to respond to the conditions.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☐ Requiring a Document Change Control procedure is appropriate

☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☒ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☒ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☒ The RA should be required to ~~participate in a conference~~ call ~~with each of its~~ adjacent RAs ~~every day~~ as required by system conditions.

☐ Comments: I hope you do not mind that I changed the wording in the choice of answers. The requirement to participate in daily conference calls is a good industry practice and should be encouraged. I do not believe a RA should be fined for failure to participate in daily conference calls. He should be required to communicate with his neighboring RA's when required by system conditions. It might be a good idea to require joint emergency response training secessions. There is nothing like a little face to face contact to get to know your neighbor and feel comfortable with him when there is a problem on the system.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☒ Yes

    ☐ No

    ☐ Comments: RAs should be able to communicate with all adjacent RA's. Even those within another interconnection (if they are connected by a DC tie). When transactions cross interconnection boundaries coordination of changes of the transaction will require communication of the adjacent RA. An example would be the TLR process that is used today on the Eastern Interconnection and not on the Western Interconnection. The RA on the East side needs to communicate with the RA on the West side to coordinate reliability changes in transactions.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☐ Yes

    ☒ No

    ☐ Comments:

    > ➢ If the RAs cannot agree what action to take they shall jointly take the most conservative action immediately. They can make adjustments later. Note: This was an identified problem during the August 14th, 2003 blackout.

    > ➢ It is just as important for the RA to coordinate with the BAs, IAs and TOPs in its reliability area and it should be added to this standard.

25. Do you agree with the measures?

    ☐ Yes

    ☒ No

    ☐ Comments: The measure should require a log of coordinated events with RAs, BAs, IAs and TOPs. I do not agree with measure 3. The contents of the log is not a reliability issue. Measures

should focus on results and should check if the response is consistent with approved processes, procedures and plans.

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☐ Comments: I am not sure that item 3 is part of the process it sounds a lot like a requirement. What is the required storage length for logs? One year?

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

☐ Yes

☒ No

☐ Comments: Non-compliance focuses on have information as opposed to implementing processes, procedures and plans to get good results.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☒ Comments:

    1.   Reviewing this standard is extremely difficult because the requirements of the Reliability Authority are spread out in several other standards.

    2.   There are three items that are in the functional model and not contained in this or any other standard:

        ➢   reactive requirements determination (item 8 in RA tasks and item 4 in Transmission Operator relationships)

        ➢   redispatch adjustments to mitigate congestion within the Reliability Authority Area (item 3 of RA relationships with other entities)

        ➢   Reliability mitigation of equipment overloads as requested by the TOP (requirement 12 of TOP relationship with other entities).

    All of these items are coordination issues and should be included in this standard.

    3.   All of the requirements in the Certification Standard are one time requirements for certification. The standard does not contain any periodic monitoring.   To the extent that the requirements in the certification standard are related to coordination issues they should be required and measured in this standard.

    4.   This standard should focus on implementation and not the existence of procedures. The existence of procedures, processes and plans will be a requirement of certification and can be measured during the certification process.

    5.   This item may not be an issue that is specific to this standard. When this standard was supplied to one of out operators he said that he had a hard time reviewing the standard because of the format. Somehow the NERC community needs to organize the requirements and measures in a format that is useful to system operators. System operators do not need to be concerned with the method for measuring compliance or the levels of

non-compliance. System operators will be responsible for implementing these standards. The standards need to be organized and present to the operators in a format that is easy to read and understand. Please forward this comment to the NERC compliance/standards office.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	
	Prepare for and Respond to Blackout and Island Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	
	    Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	
	    Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	
	    Process/procedure in place for collecting transmission owners' equipment ratings.
	
	    Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	    The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	    The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	    – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	    – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
  - A generator or transmission outage will impact another RA
  - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group: NPCC, CP9-Reliability Standards Working Group	**Group Chair: Guy V. Zito, NPCC, Mgr. Planning** **Chair Phone: 212-840-1070** **Chair Email: gzito@npcc.org**	
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**
Roger Champagne	*Hydro-Quebec TransEnergie* (Quebec)	*1*
Ralph Rufrano	*New York Power Authority (NYPA)*	*1*
Kathleen Goodman	*ISO-New England (ISO-NE)*	*2*
Barry Gee	*National Grid USA*	*1*
Dan Stosick	*ISO-New England (ISO-NE)*	*2*
Greg Campoli	*New York ISO (NYISO)*	*2*
Al Adamson	*New York State Reliability Council (NYSRC)*	*2*
Guy Zito	*Northeast Power Coordinating Council(NPCC)*	*2*
John Mosier	*Northeast Power Coordinating Council(NPCC)*	*2*
David Kiguel	*Hydro One Networks* (Ontario)	*1*

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☐ Yes

    ☒ No

    ☐ Comments: We feel that all the requirements of the Coordinate Operations Function should be included in this standard and the RA Certification Standard when written should require that the RA has the capability to be responsible for those RA listed requirements.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

☒ Yes

☐ No

☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes - the two requirements would be different to the operations personnel

☒ No – the two requirements would be the same to the operations personnel

☐ Comments: We are concerned that the Certification Standard, IROL Standard and the Coordinate Operations Standard are being developed independently and there may be a lack of coordination with what the RA does. We are concerned that there may be duplicative requirements or worse, missing requirement(s) between Standards and a potential for inconsistency.

We don't believe that the IROL should be added to this standard.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

☒ Yes

☐ No

☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

☒ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☐ Comments: Operating Procedure Definition may result in limiting Operator action and not be consistent with company definitions. We will be commenting on this definition during the posting of the NERC Definitions Document noted in the Standard.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

    ☒ Comments: The Item (4) timing seems to be off somewhat and needs clarification.

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

    ☐ Yes

    ☒ No

    ☒ Comments: With the existing wording, "…it has developed or received from other Reliability Authorities…", we are not sure that first and second references to (iii) & (iv) make sense. For example, you would not have evidence of a document being updated through a Change Control Procedure if it was obtained from another RA; also, you would not have evidence of its distribution given the same situation. There is also an inconsistency in numbering and multiple references to either (A), (B), (C)…or (i), (ii), (iii) under one non-compliance level makes the non-

compliance section very confusing. We would like the drafting team to clarify the non-compliance levels and address practical measurability.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

☐ The list of activities is sufficient as presented in the draft standard

☒ Each of the items in the list should have more detail on what is needed

☐ Comments:
Add Weather advisory

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

☒ No

☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☐ Requiring a Document Change Control procedure is appropriate

☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments: I think this, though it may be a good idea, is out-of-scope of this Standard.

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☐ Methodology for distribution

    ☐ Summary or identification of changes made to the document.

    ☐ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable

    ☐ Comments: .

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ☐ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions: Perhaps require use of a conferencing center that does a role call and monitors participation.

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments: Should leave this decision up to the individual RAs

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☐ Yes

☒ No

☒ Comments: Although I am aware of the need and the complexity of attempting to develop measures that can appropriately certify compliance, it seems the measures as proposed are too detailed, time-consuming and may distract from taking actions as opposed to logging the actions that should be taken.

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☒ Comments: The first Item (2) timing seems to be off somewhat. Numbering needs to be fixed. See comment above re. Item (3) compliance monitoring.

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

☐ Yes

☒ No

☒ Comments: See comment to question #25.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☒ Comments: The Standards in general appear to reference a particular version of the Functional Model in the Applicability section. Given the "evolution" of the Model, is this appropriate?

There is an issue with the concept of a monetary sanction matrix and what its implications are. ISO-NE, as well as NPCC, has expressed concern over its inclusion and maintains that the use of market mechanisms where possible, as well as, letters of increasing degrees of severity and notifications to regulatory agencies are more effective in ensuring compliance. Failure of NERC to gain authority through reliability legislation could result in NERC pursuing actions to implement "Plan B," a "voluntary" approach affording NERC the authority to perform these types of monetary sanctions. ISO-NE has indicated that any posted Standard, with such a matrix, will not be supported by ISO-NE. There are, however, proceedings at NERC by the Compliance Certification Committee (CCC) to address alternative sanction proposals and ISO-NE will continue to work to oppose monetary sanctions.

We also have concerns with the associated implementation plan that typically is developed and released with the Standard. We would like to note that there may be new and additional requirements and compliance metrics that are approved with this standard. These new requirements may require considerable time to implement them and the Implementation Plan must recognize this.

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

---

[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

         January 15, 2004

and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	    The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	    The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	   − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	   − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
  - A generator or transmission outage will impact another RA
  - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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Commenter Information (For Individual Commenters)

Name: Gerald Rheault

Organization: Manitoba Hydro

Industry Segment #:1,3,5,6

Telephone:204-487-5423

E-mail:gnrheault@hydro.mb.ca

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Key to Industry Segment #'s:

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

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STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☐ Yes

   ■ No

   ☐ Comments: This Standard should address all procedures listed in the approved versions of the SAR. If there is overlap between this Standard and others, this one should address **all coordination issues** and the other Standard be modified to address only other issues.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☐ Yes

   ■ No

   ☐ Comments: The Certification Standards have not yet been posted for initial review by the industry. It is therefore pure speculation by the SDT that the issue referenced above is properly addressed by that Standard and expect the industry to be able to make a appraisal on the information presently available. Also the comment contained in comment 1 above also applies here.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☐ No – the two requirements would be the same to the operations personnel

   ☐ Comments: The Operate Within IROLs Standard defines the requirement to conduct Operational Planning Analyses and Real Time Assessment. The Coordinate Operations Standard should address the requirements for how all RAs involved in any joint interface will coordinated their activities to ensure that coordinates monitoring and actions are in place to protect the interface and the RAs physical systems.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☐ Yes

   ■ No

   ☐ Comments: The same comment as was provided in question 2 applies here.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

■ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ■ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ■ No

    ☐ Comments: Manitoba Hydro agrees with definitions 1,2,3,and 5. Definition 4 is not very clear and is too restrictive. A better definition would be: " A document that identifies a sequence of events which occurs for a specific operating contingency".

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ■ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ■ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ■ Yes

    ☐ No

    ☐ Comments:

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

    ■ Yes

    ☐ No

    ☐ Comments: These levels appear to be fair; however administering this process may be quite complicated for the compliance monitor.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ■ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments: To ensure that the complete set of required topics in 101.a.3 is addressed, the wording in the requirements could be modified to the following; "Reliability Authority Operating Procedures, Processes or Plans shall collectively address all critical topics required to ensure reliability including but not limited to the following:"

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ■ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ■ Yes

    ☐ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?
    ■ Requiring a Document Change Control procedure is appropriate
    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.
    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?
    ☐ Yes, include a minimum list of elements.
    ■ No, do not include a minimum list of elements.
    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.
    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

■ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

■ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

■ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

■ Comments: The RAs should decide among themselves how frequently they have to participate in conference calls to exchange information. Requirements may vary from Region to Region and depending on the complexity of the system being operated.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

■ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

■ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

■ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

■ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

■ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

■ Yes

☐ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

■ Yes

☐ No

☐ Comments:

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

    ■ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ■ Comments: Manitoba Hydro is not aware of any Regional Differences that should be added to this standard

29. Do you have any other comments on the standard?

    ☐ Comments:

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

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Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.

Process/procedure and tools in place to develop real-time operating reliability limits.

Process/procedure in place that define the actions to be taken for maintaining reliability.

Process/procedure and tools in place for compliance with all applicable NERC reliability standards.

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	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

Comment Form for 1st Posting of Coordinate Operations Standard

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)		
Name of Group: *Southern Company Services, Inc*	**Group Chair:** *Marc Butts* **Chair Phone: 205-257-4839** **Chair Email: mmbutts@southernco.com**	
List of Group Participants that Support These Comments:		
Name	**Company**	**Industry Segment #**
Marc Butts	*Southern Company Services*	*1*
Raymond Vice	*Southern Company Services*	*1*
Dan Baisden	*Southern Company Services*	*1*
Jim Griffith	*Southern Company Services*	*1*
Phil Winston	*Georgia Power Company*	*3*
Jim Viikinsalo	*Southern Company Services*	*1*
Mike Miller	*Southern Company Services*	*1*
Monroe Landrum	*Southern Company Services*	*1*
Gwen Frazier	*Southern Company Services*	*1*
Steve Williamson	*Southern Company Services*	*1*

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    X Yes

    ☐ No

    ☐ Comments:

    We agree that the detailed requirements portion of many RC tasks properly belongs in other standards. However, the **Coordination** requirements properly belong in this standard. The detailed

requirement should refer to the Coordinate Operations Standard for RC Coordination requirements. The Coordination requirements of this Standard should "stand alone" and not rely on other standards.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☐ Yes

    X   No

    ☐ Comments: The actual **Coordination requirements** between RCs should be included in this standard. Also, the specific requirement for one RA to have <u>authority</u> to assist in resolving problems **outside** of its reliability area does not currently exist.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different to the operations personnel

    X   No – the two requirements would be the same to the operations personnel

    ☐ Comments: The detailed requirements for analyses and assessments should be defined in the OWL standard, but the **Coordination requirements** should be included in this standard and referenced by the OWL standard.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☐ Yes

    X   No

    ☐ Comments: It is not a good plan to use certification requirements to set standards. If something is sufficiently important to require a standard, then it should be presented as such and not simply be defined in the certification requirements. And again, even if the detailed technical requirements are defined elsewhere, the **Coordination requirements** should be included in this standard and referenced by the other standard.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☐ Keep the sharing of outage data embedded in other requirements.

    X Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    X   Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    X No

    X Comments:

    Operating Procedure – A document that identifies specific steps or tasks that must be taken by one or more specific operating **entities** to achieve a single specific operating goal. The steps in an Operating Procedure must be followed in the order in which they are presented, and must be performed by the **entities** identified. A document that lists the specific steps to take in removing a specific transmission line from service is an example of an Operating Procedure.

    Operating Plan- **A document designed to achieve some operational goal utilizing a specific set of coordinated activities.** An Operating Plan may contain Operating Procedures and Operating Processes. A company-specific system restoration plan that includes an Operating Procedure for black-starting units, Operating Processes for communicating restoration progress with other entities, etc., is an example of an Operating Plan.

    Operating Scenario – **A detailed model of operating conditions, including contingency conditions that, if left untended, may have an adverse impact that extends beyond the boundaries of a single Reliability Authority Area. The RC analyzes multiple Operating Scenarios to determine under what condition an adverse impact will take place. {Note: an Operating Scenario itself does not imply an adverse impact will take place. It is simply a specific set of conditions that the RC analyses to determine if an adverse impact will take place.}**

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☐ Yes

    X No

    X Comments:

    In 101 (a) (1) if you are saying that the RA should develop procedures, then we disagree. Our feeling is that the transmission owners and operators should develop all procedures and supply those to the RA for implementation and oversight. If this wasn't what you meant, please clarify.

Section 101 (a) (2) needs to be re-written to make the intent clear. It is a very long, rambling sentence that is hard to understand. Many may misinterpret it.

The SDT may want to consider adding Policy or Standard references to each sub-bullet in 101.1.3, since most, if not all, are covered by detailed requirements in one or the other.

9. Do you agree with the measures?

    X   Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    X   Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    X   No

    ☐ Comments: Confusing and disorganized. Concept may be OK, but needs to be organized into tables or other graphical format that is readily accessible.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    X Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    X Comments:

    We would suggest adding some reference to "good utility practice" or something like it somewhere. We know it's not "crisp," but it does alert the RC that there may be other requirements that no one has thought of yet.

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control

    –   Coordination of information exchange to support reliability assessments

☐ The list of activities is sufficient as presented in the draft standard

X   Each of the items in the list should have more detail on what is needed

X Comments: Except for the first activity.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   X Yes

   ☐ No

   ☐ Comments: Looks as though a standard critical contingencies list is going to be required in a number of different areas. We suspect it will simplify communications if everyone can refer to a pre-defined contingency number in most situations. Flexibility should still be allowed for those contingencies that no one has identified in advance, of course. We realize that the real-time system analysis makes a 'static-list' only a reference list and would not include every contingency.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

   X   Requiring a Document Change Control procedure is appropriate

   ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

   ☐ Comments: We would say it is critical to make sure everyone is actually talking about the same thing at the same time.

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

   ☐ Yes, include a minimum list of elements.

   X   No, do not include a minimum list of elements.

   ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

   X Comments: We suggest a recommended or suggested list instead

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

   X   Review cycle of at least once every three years, regardless of whether changes have been actively identified.

   ☐ Methodology for distribution

   X Summary or identification of changes made to the document.

   X Version control and archival period

   X Other (Please be as specific as possible.)   Verification of receipt of changes.

   ☐ Not Applicable

   ☐ Comments: This may serve as the "recommended list".

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

   X Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

   ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

   ☐ Not Applicable

   ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

   X The RA should be required to participate in 'agreed upon' conference calls and other communication forums

   ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

   ☐ Comments: Not sure what the proper periodicity is, but do think that "required" calls are needed. We are concerned that the "agreed upon" calls will fade away to zero during periods with no troubles and the skills needed to get everyone together and communicate effectively during a crisis will not be developed or maintained so that they will be available when needed.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

   X Suggestions: Log participation (preferably automatically) and set up compliance requirements that call for a high level of participation (90% or above on a monthly basis) to avoid non-compliance. We're not convinced it should be daily but something frequent is good.

   ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

   X　All RAs within an Interconnection on a single call

   ☐ Other (Please be as specific as possible.)

   ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

   X　Comments:　Probably need to set up regional or supra-regional groups also with longer periodicity and, perhaps, lower priority.

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

   X　Limit participation to System Operators - 24 x 7 people so that skill set will be available any time needed, day or night

   ☐ Allow each RA to assign any position to participate in the call

   ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

   ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

   ☐ Yes

   X No

   X Comments - NERC hotline should suffice

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

   X Yes

   ☐ No

   ☐ Comments:

25. Do you agree with the measures?

   ☐ Yes

   X　No

   X　Comments:　Appears to check information exchanged during identified coordination events, it does not appear to check that each appropriate coordination event was identified and resulted in an information exchange. Probably need to require RAs to keep a list of events requiring coordination and compare lists between neighboring RAs to check compliance this way. Then you can check that proper information was exchanged.

26. Do you agree with the compliance monitoring process?

   ☐ Yes

X No

X Comments: See comments in No. 25 above. Should probably use lists from randomly chosen adjacent RA to cross check.

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

☐ Yes

X No

X Comments: See notes on Nos. 25 and 26 above.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☐ Comments:

<u>Note</u> – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems) • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages. • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	with others. The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits. The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits. Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways. − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement. − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement. Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.
Communicate with other impacted RAs to share information: • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as: - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

<table>
<tr><td>**Commenter Information (For Individual Commenters)**

Name: P. D. Henderson / Khaqan Khan

Organization: Independent Electricity Market Operator (IMO)

Industry Segment #: 2

Telephone: 905-855-6258 / 905-855-6288

E-mail: Peter.Henderson@theIMO.com /Khaqan.Khan@theIMO.com</td><td>Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☐ Yes

    ☐ No

    ☒ Comments: There should be an assessment that the requirements are outlined in the appropriate document, however, the duplications should be minimized.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☒ Yes

    ☐ No

    ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different to the operations personnel

    ☒ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☒ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☒ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☒ Comments: As long as it is clear that the data to be shared includes outage data

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

   ☐ Yes

   ☒ No

   ☒ Comments: We support the sharing of RA documents with other RA's.

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

   ☐ Yes

   ☒ No

   ☒ Comments: (i) More clarity is needed between an Operating Procedure, an Operating Process and Operating Plan. An Operating Plan looks like a collection of specific Operating Procedures and Operating Processes to achieve a specific goal.

   (ii) The term "Operating Scenario" does not sufficiently convey the seriousness of the situation as described by the definition. The term could be called such as "potential wide area contingency"

Requirement 101 - Procedures

8. Do you agree with the requirement?

   ☒ Yes

   ☐ No

   ☐ Comments: The IMO strongly agrees with this requirement.

9. Do you agree with the measures?

   ☒ Yes

   ☐ No

   ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☒ Comments: In section d (3), the clause pertaining to "3 business days notice" for annual spot check may be removed. We feel that the clause mentioned in the same section i.e. "sufficient time to comply with control center's security access procedure" for annual spot check is appropriate and sufficient in itself.

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

    ☒ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☒ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☒ Yes

    ☐ No

    ☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☒ Requiring a Document Change Control procedure is appropriate

    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

    ☒ Comments: It is expected that there shall be a mutual agreement between RA's on the timelines for submission of revised documents, i.e. weekly, monthly …

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

    ☒ Yes, include a minimum list of elements.

    ☐ No, do not include a minimum list of elements.

    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☒ Methodology for distribution

    ☒ Summary or identification of changes made to the document.

    ☒ Version control and archival period

    ☒ Other (Please be as specific as possible.)

    ☐ Not Applicable

    ☒ Comments: A signature page should also be a requirement.

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ☐ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions:

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

    ☐ All RAs within an Interconnection on a single call

    ☐ Other (Please be as specific as possible.)

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

    ☐ Limit participation to System Operators

    ☐ Allow each RA to assign any position to participate in the call

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

    ☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

    ☒ Yes

    ☐ No

    ☒ Comments An effective use of proper communication protocols such as where using "the current NERC hotline" shall be useful.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

    ☒ Yes

    ☐ No

    ☐ Comments:

25. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

26. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☒ Comments: In section d (1), the clause pertaining to "3 business days notice" for annual spot check may be removed. We feel that the clause mentioned in the same section i.e. "sufficient time to comply with control center's security access procedure" for annual spot check is appropriate and sufficient in itself

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

☐ Yes

☒ No

☒ Comments: Reference Section e) (I) & (2): It would be appropriate if a %-age of threshold is used as a criteria for assessing non-compliance levels rather than absolute counts of number of events, e.g. instead of saying "Less than five events (identified through self-certification ….)", the criteria may say "Upto 10% of total events (identified through self-certification……). Such a philosophy would more adequately address the non-compliance measure for all entities on equal proportion basis.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☒ Comments: No.

29. Do you have any other comments on the standard?

☐ Comments:

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

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Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	
	Prepare for and Respond to Blackout and Island Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	
	    Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	
	    Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	
	    Process/procedure in place for collecting transmission owners' equipment ratings.
	
	    Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	
	    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

| Analyze Maintenance Outages (real time to 12 months ahead)

• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective | The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:

An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations

The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.

The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.

The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:

Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.

Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective. |
| Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current | The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared |

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems) • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages. • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	with others. The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits. The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits. Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways. − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement. − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement. Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.
Communicate with other impacted RAs to share information: • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as: - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:
Name: Stuart Goza Organization: TVA Industry Segment #: 1 Telephone: 423-697-4191 E-mail: slgoza@tva.gov	1 – **Trans. Owners** 2 – **RTO's, ISO's, RRC's** 3 – **LSE's** 4 – **TDU's** **5 - Generators** 6 - Brokers, Aggregators, and Marketers **7 - Large Electricity End Users** **8 - Small Electricity Users** 9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:	

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #
MARK A. CREECH	**TVA**	

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☒ Yes

    ☐ No

    ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☒ Yes

    ☐ No

    ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    ☒ No – the two requirements would be the same to the operations personnel

    ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☒ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☒ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☒ The list of activities is sufficient as presented in the draft standard

    ☐ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☒ Yes

    ☐ No

    ☐ Comments: This "list" is dynamic and may change upon each execution of real-time security analysis.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?
    ☒ Requiring a Document Change Control procedure is appropriate
    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.
    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?
    ☒ Yes, include a minimum list of elements.
    ☐ No, do not include a minimum list of elements.
    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.
    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☒ Methodology for distribution

☒ Summary or identification of changes made to the document.

☒ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☒ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☒ Suggestions: Documentation in daily log of participation.

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☒ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☒ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☒ Yes

☐ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

☒ Yes

☐ No

☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☐ Comments:

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Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.) **Prepare for and Respond to Blackout and Island Conditions SAR:** Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc. **Prepare for and Respond to Abnormal or Emergency Conditions SAR:** Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc. Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans. **The RA Certification SAR** includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following: Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority. Process/procedure in place to receive interchange transaction information from the Interchange Authority. Process/procedure in place for collecting transmission owners' equipment ratings. Process/procedure and tools in place to perform real-time and contingency reliability analyses. Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
 • Analyze the impact of generation outages from a reliability perspective
 • Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	     An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	 The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	     The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	 The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
	     Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.
	
	     Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.

Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	    The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	    The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	   − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	   − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
  - A generator or transmission outage will impact another RA
  - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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Commenter Information (For Individual Commenters)

Name: Susan Morris

Organization: SERC

Industry Segment #: 2

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Key to Industry Segment #'s:

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

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STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair: Chair Phone: Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☒ Yes

    ☐ No

    ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☐ Yes

    ☒ No

    ☒ Comments: Although the RA Certification SAR mentions that an RAs authority must be documented, the specific requirement for one RA to have authority to assist in resolving problems outside of its reliability area does not currently exist.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☒ Yes - the two requirements would be different   to the operations personnel

    ☐ No – the two requirements would be the same to the operations personnel

    ☒ Comments: This is an example of where Regional differences exist. For some Regions, entities that perform Reliability Authority functions have two distinct "groups" of personnel to address real-time assessments and operational planning analysis. In other Regions, entities that perform Reliability Authority functions assign both real-time and operational planning assessments/analysis, respectively to the same personnel. Given that the NERC Reliability Functional Model Version 2 does not explicitly state that the Reliability Authority is responsible for performing operational planning analysis, it should be assumed because the Planning Authority generally covers one year and beyond. Therefore, it is suggested that the operational planning horizon be defined as all analysis for day 2 through 1 year. This would warrant the need for two distinct requirements: 1) Real-Time Assessments (current hour through day 2) and 2) Operational Planning Analysis (day 2 through 1 year). This would ensure that there is no gap between the responsibilities of the Reliability and Planning Authorities, in fact, the line between horizons should be subject to overlap if a reliability concern is evident.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☐ Yes

    ☒ No

    ☒ Comments: First of all, the RA Certification SAR is not a Standard, it is a requirements list. The only reason it was initiated through the SAR process was to take advantage of the formal due process. Therefore, the SDT should not omit requirements listed in the RA Certification requirements from

actual draft Standards. It would seem that the RA Certification requirements could reflect requirements that exist in Reliability Standards, not the other way around.

Second, the Maintenance Outage Plan should cover the entire real-time operations and operational planning horizons (current hour through 1 year). Of course, depending on the outage request timeframe, the type and frequency of analysis would differ.

5.   Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

☐ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☒ Comments: We had difficulty seeing where sharing outage data was required in section 103 - Coordinate. (Although date and time of information exchanges is required to be documented, information exchanges do not automatically imply sharing outages specifically.) It appears adequate to cover sharing outages only in section 102 since this section seems to cover the entire timeframe of this standard. However, if the requirement does exist in both places and we have misread section 103, the requirements need careful review to ensure that non-compliance double-jeopardy is avoided.

6.   Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

☒ Yes

☐ No

☒ Comments: It is important to have specific requirements for Reliability Authorities to share information with each other, especially its Operating 3P's (Procedures, Processes, and/or Plans); however, Reliability Authorities should not operate in a vacuum from the rest of the industry. This is another reason why the Reliability Authority should be actively involved with the entire operational planning horizon (day 2 through 1 year) because if the only thing a Reliability Authority focuses on is the current hour to next day, then there is no way to incorporate lessons learned or continuous improvement to the Operating 3P's. This potential to promote "RA tunnel vision" could result in less reliable operations.

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

☐ Yes

☒ No

☒ Comments: Operating Scenario is defined as "an operating contingency that…" Scenario should not be limited to contingencies. As used in the main body of the document, scenarios should consider system configurations, which include an operating condition, event, or contingency that if left untended, could have an adverse impact that extends beyond the boundaries of a single Reliability Authority Area." Scenarios should include but are not limited to elements in service, status of var devices, generation output, load, and transfers.

Requirement 101 - Procedures

8. Do you agree with the requirement?

   ☒ Yes

   ☐ No

   ☐ Comments:

9. Do you agree with the measures?

   ☒ Yes

   ☐ No

   ☒ Comments: However, real-time lessons learned should be documented and incorporated in the Operating 3P's (Procedures, Processes, and Plans) as appropriate. We are unsure how much improvement to reliability is gained from operators just having access to the procedures in the absence of a training requirement. The Reliability Authorities should encourage operators to be engaged in the goal to achieve reliable operations.

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☒ Comments: Add the word "reviewed" to 101 (d) Compliance Monitoring Process, Item (6)(iv) as follows:

    Evidence that its Operating Procedures, Processes or Plans were approved, updated, distributed and reviewed in accordance with its Document Change Control Procedure.

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

    ☐ Yes

    ☐ No

    ☒ Comments: The levels of non-compliance are difficult to follow due to the large number of "OR" statements.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☒ Comments: However, for many areas (and the number is increasing) the manner in which operators identify and deal with stability issues is very important.

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?

- – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
- – Resolution of energy and capacity shortages
- – Exchange of planned or unplanned outage information
- – System restoration
- – Voltage control
- – Coordination of information exchange to support reliability assessments

☐ The list of activities is sufficient as presented in the draft standard

☒ Each of the items in the list should have more detail on what is needed

☒ Comments: The first item in the list seems to provide sufficient detail. Other items in the list would benefit from further clarifications on expectations like the first item contains, such as exchange of planned or unplanned outage information. However, all items may not need this additional detail.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

☒ No

☒ Comments: Analyses of the real-time system are too dynamic to require a static list. However, operators should be cognizant of pre-identified weak points in the system in order to focus the operator on possible problem spots. We read the standard to say that the RA must have written procedures, processes, or plans that indicate what the operator must do if a situation occurs where interconnection reliability is or may be compromised. We do not read the standard to say that there are certain lists that must be a part of the processes, procedures, or plans. This would be prescribing the "how."

This goes back to the comments listed in question 9: The Reliability Authorities should encourage operators to be engaged in the goal to achieve reliable operations.

Please avoid trying to promote "cookbook type lists" to manage the very complex task of operating a reliable system.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☒ Requiring a Document Change Control procedure is appropriate

☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☒ Comments: The document change control procedure should include a review process for the Operating 3 P's.

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☒ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☒ Comments: However, Reliability Authorities should be encouraged to work together to promote consistency among their respective procedures. If an RA fails to develop an adequate document change control procedure, then this should be flagged either through the yearly self-certifications, audits, or by reports from neighboring RA(s).

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☒ Not Applicable

☒ Comments: The following should be sufficient in promoting a list of elements in the document change control procedure:

101 (d) **Compliance Monitoring Process**, Item (6)(iv) as follows:

Evidence that its Operating Procedures, Processes or Plans were approved, updated, distributed and reviewed in accordance with its Document Change Control Procedure.

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☒ Comments: The standard should require a dedicated "Primary" method of communications is necessary and a dedicated back-up "Secondary" method of communications is necessary. The actual communications systems do not need to be spelled out in the standard.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☐ Yes

☐ No

☒ Comments: What is required in measure 3 to verify the actions of other RAs? This measure needs to either be clarified as to what is expected of RAs regarding verifying the actions of other RAs or it needs to be removed.

26. Do you agree with the compliance monitoring process?

  ☐ Yes

  ☒ No

  ☒ Comments: The following is an excerpt from 103 Coordination, (d) Compliance Monitoring Process, Item (1):

  .…The self-certification shall include a list of the prior year's dates on which this Reliability Authority identified a potential, expected, or actual problem that adversely impacted the reliability of one or more other Reliability Authorities and the names of the Reliability Authorities that were contacted…..

  This statement is so inclusive that the "list of prior year's dates" could be all dates (every day). The nature of the system and current boundaries can always have the existence of an identified potential, expected, or actual problem that can adversely impact the reliability of one or more other Reliability Authority Areas. If this statement cannot be changed to narrow the scope to newly identified situations, then it is suggested that instead of a list, that the compliance monitoring process request a database of these situations. This would also result in RAs developing/using some type of communication system that automatically logs such interactions with the required info.

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

  ☒ Yes

  ☐ No

  ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

  ☒ Comments: This is not necessarily a defined Regional difference, but it may be appropriate to repeat as stated in question 3 above:

  For some Regions, entities that perform Reliability Authority functions have two distinct "groups" of personnel to address real-time assessments and operational planning analysis. In other Regions, entities that perform Reliability Authority functions assign both real-time and operational planning assessments/analysis, respectively to the same personnel. Given that the NERC Reliability Functional Model Version 2 does not explicitly state that the Reliability Authority is responsible for performing operational planning analysis, it should be assumed because the Planning Authority generally covers one year and beyond. Therefore, it is suggested that the operational planning horizon be defined as all analysis for day 2 through 1 year. This would warrant the need for two distinct requirements: 1) Real-Time Assessments (current hour through day 2) and 2) Operational Planning Analysis (day 2 through 1 year). This would ensure that there is no gap between the responsibilities of the Reliability and Planning Authorities, in fact, the line between horizons should be subject to overlap if a reliability concern is evident.

29. Do you have any other comments on the standard?

  ☒ Comments: Since this SAR only focuses on coordination necessary among RAs, will another SAR be developed to cover the other areas of coordinate operations?

It is important to have specific requirements for Reliability Authorities to share information with each other, especially its Operating 3P's (Procedures, Processes, and/or Plans); however, Reliability Authorities should not operate in a vacuum from the rest of the industry. This is another reason why the Reliability Authority should be actively involved with the entire operational planning horizon (day 2 through 1 year) because if the only thing a Reliability Authority focuses on is the current hour to next day, then there is no way to incorporate lessons learned or continuous improvement to the Operating 3P's. This potential to promote "RA tunnel vision" could result in less reliable operations.

<u>Note</u> – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

| Analyze Maintenance Outages (real time to 12 months ahead)

• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective | The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:

    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations

The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.

    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.

The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:

    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.

    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective. |
| Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current | The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared |

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	 The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	 The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	     – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
 	
     - A generator or transmission outage will impact another RA
 	
     - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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Commenter Information (For Individual Commenters)

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Key to Industry Segment #'s:

</td></tr>
</table>

Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:
Name: Kathleen Goodman Organization: ISO New England Inc. Industry Segment #: 2 Telephone: (413) 535-4111 E-mail: kgoodman@iso-ne.com	**1 – Trans. Owners** **2 – RTO's, ISO's, RRC's** **3 – LSE's** **4 – TDU's** **5 - Generators** 6 - Brokers, Aggregators, and Marketers **7 - Large Electricity End Users** **8 - Small Electricity Users** 9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	**Group Chair:** **Chair Phone:** **Chair Email:**

List of Group Participants that Support These Comments:

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

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☐ Yes

    ☒ No

    ☐ Comments: ISO-NE believes that all the requirements of the Coordinate Operations Function should be included in this standard and the RA Certification Standard when written should require that the RA has the capability to be responsible for those RA listed requirements.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☒ Yes

    ☐ No

    ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different to the operations personnel

    ☒ No – the two requirements would be the same to the operations personnel

    ☐ Comments: ISO-NE is concerned that the Certification Standard, IROL Standard and the Coordinate Operations Standard are being developed independently and there may be a lack of coordination with what the RA does. We are concerned that there may be duplicative requirements or worse, missing requirement(s) between Standards and a potential for inconsistency.

    We don't believe that the IROL should be added to this standard.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☒ Yes

    ☐ No

    ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☒ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☐ Comments: Operating Procedure Definition may result in limiting Operator action and not be consistent with company definitions. We will be commenting on this definition during the posting of the NERC Definitions Document noted in the Standard.

    "Operating Scenario," is this Standard, implies something significant but this term is used for everyday training events. Suggest changing the terminology so as not to confuse the industry.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

    ☒ Comments: The Item (4) timing seems to be off somewhat and needs clarification. This entire area needs clarity.

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

    ☐ Yes

    ☒ No

    ☒ Comments: With the existing wording, "…it has developed or received from other Reliability Authorities…", we are not sure that first and second references to (iii) & (iv) make

sense. For example, you would not have evidence of a document being updated through a Change Control Procedure if it was obtained from another RA; also, you would not have evidence of its distribution given the same situation. There is also an inconsistency in numbering and multiple references to either (A), (B), (C)…or (i), (ii), (iii) under one non-compliance level makes the non-compliance section very confusing. We would like the drafting team to clarify the non-compliance levels and address practical measurability.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

☐ The list of activities is sufficient as presented in the draft standard

☒ Each of the items in the list should have more detail on what is needed

☒ Comments: Add Weather advisory

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

☒ No

☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☒ Requiring a Document Change Control procedure is appropriate

☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☒ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☒ Methodology for distribution

☒ Summary or identification of changes made to the document.

☒ Version control and archival period

☒ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☒ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☒ Suggestions: Perhaps require use of a conferencing center that does a role call and monitors participation.

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☒ Comments: Should leave this decision up to the individual RAs

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☒ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☐ Yes

☒ No

☒ Comments: Although we are aware of the need and the complexity of attempting to develop measures that can appropriately certify compliance, it seems the measures as proposed are too detailed, time-consuming and may distract from taking actions as opposed to logging the actions that should be taken.

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☒ Comments: The first Item (2) timing seems to be off somewhat. Numbering needs to be fixed. See comment above re. Item (3) compliance monitoring.

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

    ☐ Yes

    ☒ No

    ☒ Comments: See comment to question #25.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☒ Comments: The Standards in general appear to reference a particular version of the Functional Model in the Applicability section. Given the "evolution" of the Model, is this appropriate?

    Throughout the Standards there should be recognition of timing required for training and implementation. For example, if we receive a new Procedure and need three weeks to train our operators before implementing the Procedure, technically, we could be found non-compliant before we "formally" implement the Procedure. Perhaps this is something that could be addressed through the Document Change Control Procedure.

    The Levels of Non-Compliance on all requirements should be revisited for measurability, practicality, and timing.

    There is an issue with the concept of a monetary sanction matrix and what its implications are. ISO-NE, as well as NPCC, has expressed concern over its inclusion and maintains that the use of market mechanisms where possible, as well as, letters of increasing degrees of severity and notifications to regulatory agencies are more effective in ensuring compliance. Failure of NERC to gain authority through reliability legislation could result in NERC pursuing actions to implement "Plan B," a "voluntary" approach affording NERC the authority to perform these types of monetary sanctions. ISO-NE has indicated that any posted Standard, with such a matrix, will not be supported by ISO-NE. There are, however, proceedings at NERC by the Compliance Certification Committee (CCC) to address alternative sanction proposals and ISO-NE will continue to work to oppose monetary sanctions.

    We also have concerns with the associated implementation plan that typically is developed and released with the Standard. We would like to note that there may be new and additional requirements and compliance metrics that are approved with this standard. These new requirements may require considerable time to implement them and the Implementation Plan must recognize this.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.) **Prepare for and Respond to Blackout and Island Conditions SAR:** Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc. **Prepare for and Respond to Abnormal or Emergency Conditions SAR:** Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc. Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans. **The RA Certification SAR** includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following: Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority. Process/procedure in place to receive interchange transaction information from the Interchange Authority. Process/procedure in place for collecting transmission owners' equipment ratings. Process/procedure and tools in place to perform real-time and contingency reliability analyses. Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

| Analyze Maintenance Outages (real time to 12 months ahead)

• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective | The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:

    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations

The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.

    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.

The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:

    Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.

    Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective. |
| Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current | The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared |

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	 The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	 The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	    – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	    – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
 	
    - A generator or transmission outage will impact another RA
 	
    - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:
Name: Joseph C. Fleury Organization: New York State Reliability Council Industry Segment #2 Telephone: 607-762-4698 E-mail: jcfleury@nyseg.com	**1 – Trans. Owners** **2 – RTO's, ISO's, RRC's** **3 – LSE's** **4 – TDU's** **5 - Generators** 6 - Brokers, Aggregators, and Marketers **7 - Large Electricity End Users** **8 - Small Electricity Users** 9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	**Group Chair:** **Chair Email:**	**Chair Phone:**

List of Group Participants that Support These Comments:

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

Background

1. Do you agree with the SDT that the procedures addressed in this Standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☒ Yes

   ☐ No

   ☒ Comments: The NYSRC agrees that duplication should be avoided. This Standard should define the requirements; and the RA Certification Standard should require that this Standard be applied.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☐ Yes

   ☒ No

   ☒ Comments: The entity causing the problem(s) should have the primary responsibility for resolving the problem(s) that it caused.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☒ No – the two requirements would be the same to the operations personnel

   ☒ Comments: The requirement(s) should be consistent across all standards applicable to reliable operation of the interconnected system.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☐ Yes

   ☒ No

   ☒ Comments: The phrase "exchange planned or unplanned outage information" is used repetitively throughout the document, but there are no similar prominent reference(s) to "analyze planned outages"?

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☒ Keep the sharing of outage data embedded in other requirements.

   ☐ Move the sharing of outage data to a separate requirement.

⊠ Comments: Outage information should not be considered any more (or less) important than the exchange of other system status information (capacity, load forecast, unusual conditions, etc.).

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

☐ Yes

⊠ No

⊠ Comments: There is a need for coordination and cooperation among **all entities** involved directly in system operation.

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

☐ Yes

⊠ No

⊠ Comments: The operating scenario should be expanded to include "operating condition or event" rather than only a "contingency."

Requirement 101 - Procedures

8. Do you agree with the requirement?

☐ Yes

⊠ No

⊠ Comments: The Standard is risking creating an administratively burdensome process.

System restoration is an unusual (and unlikely) event that doesn't belong with the routine of normal operation. Restoration has unique requirements that are beyond normal coordination of operations. Has the SDT considered a separate section to address coordination of restoration?

9. Do you agree with the measures?

☐ Yes

☐ No

⊠ Comments: (same as #8 above)

10. Do you agree with the compliance monitoring process?

☐ Yes

 X No

⊠ Comments: The Item 4 timing seems to be off somewhat, and needs clarification. Also, consistent throughout the document is the fact that the requirements and measures take about one page each, while compliance monitoring and levels of non-compliance take up to five pages.

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

☐ Yes

☐ No

☒ Comments: (same as #10 above)

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☒ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☒ Comments: Restoration does NOT belong on the list. Market-based procedures that are used by operations, or affect operations, may need to be documented (and exchanged with neighboring entities?).

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    - System restoration
    - Voltage control
    – Coordination of information exchange to support reliability assessment

    ☐ The list of activities is sufficient as presented in the draft standard

    ☒ Each of the items in the list should have more detail on what is needed

    ☒ Comments: We recommend to <u>remove</u> system restoration, and <u>add</u> load forecast, weather advisory, and unusual system conditions. There is adequate detail contained in the "Overview" at the beginning of this comment form. That should be considered for inclusion in the Standard.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    ☒ No

    ☒ Comments: It should be sufficient that each RA has documented criteria for determining normal and emergency criteria contingencies and system conditions (states).

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?
    ☐ Requiring a Document Change Control procedure is appropriate
    ☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.
    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☒ Comments: Compliance should be measured by the result, rather than the means.

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☒ Summary or identification of changes made to the document.

☒ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☒ Comments: These should be listed as generalized guidelines, rather than a rigorous procedure.

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☒ Not Applicable

☒ Comments: An RA does not need a DCCP; it only needs to have adequate means to assure revision control and distribution.

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☒ Comments: Daily calls are unnecessarily time consuming and may be counter-productive. RAs should have conference calls on an "as needed" basis.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – The NYSRC doesn't agree with the requirement of participating in daily conference calls with adjacent RAs.

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☒ Not Applicable – The NYSRC doesn't agree with the requirement of participating in daily conference calls with adjacent RAs.

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☒ Not Applicable – We don't agree with the requirement of participating in daily conference calls with adjacent RAs.

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☒ Comments: This is OK provided that the requirements lead to an excessive number of routine conference calls involving too many participants, rather than having the necessary parties communicating at the appropriate time(s). The Standard should not require conference calls just for the sake of having them.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☒ Comments: When a "conflict" arises, the time required to study should not compromise the ability of the RA experiencing the problem from taking the necessary action(s) to resolve the problem and avoid further adverse impact on system reliability.

25. Do you agree with the measures?

☐ Yes

☒ No

☐ Comments: Administrative requirements in this Standard are potentially excessive and may distract from overall intent of monitoring and logging actions taken; that is, the reliability function gets lost in the compliance reporting details.

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☒ Comments: What if the problem was not "agreed on"? This presents a possible "Catch-22" situation if the RAs cannot agree that there is a problem.

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

☐ Yes

☒ No

☐ Comments: See comment to question #25.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

X Comments: The NYSRC Reliability Rules are not inconsistent with or less stringent than the proposed NERC Standard, and the NYSRC has elected not to propose that NYSRC Reliability Rules be made part of this Reliability Standard.

29. Do you have any other comments on the standard?

☒ Comments:

1. This draft Standard places too much emphasis on the compliance measurement and levels of non-compliance, and not enough on the details of the requirements. There is considerable explanatory detail contained in the "Overview" at the beginning of the Comment form. The drafting team should consider including this within the Standard and make it more self-explanatory. The reader should not have to refer to multiple sources for explanations, and the detail should be part of the approved document.

2. The NYSRC is opposed to monetary sanctions as the only option for dealing with noncompliance as applied in this and other proposed NERC Standards. Unfortunately, direct monetary sanctions invite "gaming the system", and encourage "business" decisions based on potential profits or savings versus potential penalties. Instead of monetary sanctions, the NYSRC prefers that NERC have the authority to issue letters of increasing degrees of severity to communicate noncompliance of mandatory standards. The NYSRC and NPCC now rely on a more stringent and mandatory process than monetary sanctions to assure compliance with reliability standards. Compliance is now mandatory through the contractual agreements and

tariffs that all participants need in order to conduct business. The use by the NYSRC and NPCC of letters to regulatory agencies and other oversight bodies for reporting noncompliance has demonstrated that letter sanctions are a more effective tool for ensuring adherence to standards. Such letters establish the basis for liability in the event of a subsequent criterion violation, and in the case of market participant noncompliance, threaten the violator's ability to do business with or through an ISO or RTO. Moreover, letters that communicate noncompliance best allow focus on the "root cause" of a violation, as well as its reliability impact.

Therefore, the NYSRC recommends that this and other NERC Standards expressly provide that letter sanctions be used in addition to or instead of monetary sanctions under circumstances in which they would be an equally or more effective enforcement mechanism.

3. The NYSRC also has concerns with the associated implementation plan that typically is developed and released with the Standard. The NYSRC would like to note that there may be new and additional requirements and compliance metrics that are approved with this standard. These new requirements may require considerable time to implement them and the Implementation Plan must recognize this.

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Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)	with others.
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.	The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)	The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	− If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	− If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.
Communicate with other impacted RAs to share information:	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:	
- A generator or transmission outage will impact another RA	
- Outages of information technology (IT) systems	

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

	Key to Industry Segment #'s:

Commenter Information (For Individual Commenters)

Name: Roger Champagne

Organization: Hydro-Québec TransÉnergie

Industry Segment #: 1

Telephone: 514-289-2211, ext. 2766

E-mail: champagne.roger.2@hydro.qc.ca

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair:
	Chair Phone:
	Chair Email:

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☐ Yes

   ☒ No

   ☐ Comments: We feel that all the requirements of the Coordinate Operations Function should be included in this standard and the RA Certification Standard when written should require that the RA has the capability to be responsible for those RA listed requirements.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☒ Yes - the two requirements would be different to the operations personnel

   ☐ No – the two requirements would be the same to the operations personnel

   ☒ Comments:

   Reliability is not just IROL concern. Coordinate Operations should include adequacy assessments too.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☒ Yes

   ☐ No

   ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☒ Keep the sharing of outage data embedded in other requirements.

   ☐ Move the sharing of outage data to a separate requirement.

   ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☐ Comments: Operating Procedure and Operating Process definitions may result in limiting Operator action and not be consistent with company definitions. We will be commenting on this definition during the posting of the NERC Definitions Document noted in the Standard.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☒ Comments: Could such Operating Procedures, Process or Plans developed at a Regional Council level (i.e. NPCC, etc.) be acceptable if approved by the RA in that Council?

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☐ Yes

    ☒ No

    ☒ Comments: The Item (4) timing seems to be off somewhat and needs clarification.

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

    ☐ Yes

    ☒ No

    ☒ Comments: With the existing wording, "…it has developed or received from other Reliability Authorities…", we are not sure that first and second references to (iii) & (iv) make sense. For example, you would not have evidence of a document being updated through a Change Control Procedure if it was obtained from another RA; also, you would not have evidence of its distribution given the same situation. There is also an inconsistency in numbering and multiple references to either (A), (B), (C)…or (i), (ii), (iii) under one non-compliance level makes the non-

compliance section very confusing. We would like the drafting team to clarify the non-compliance levels and address practical measurability.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☒ No, the minimum list of topics is not sufficient as presented in the draft standard.

☒ Comments: Add weather advisory

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

☒ The list of activities is sufficient as presented in the draft standard

☐ Each of the items in the list should have more detail on what is needed

☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

☒ No

☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☐ Requiring a Document Change Control procedure is appropriate

☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☐ Methodology for distribution

    ☐ Summary or identification of changes made to the document.

    ☐ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    ☒ Not Applicable

    ☐ Comments: .

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ☒ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions: Perhaps require use of a conferencing center that does a role call and monitors participation.

    ☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

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☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☒ Comments: Could you elaborate on how or through which Standards the RA would identify scenarios "that could have adverse impact on another RA Area".

If the "Prepare for and Respond to Abnormal or Emergency Conditions (STD 1000)" is to permit action without notification in case of extreme emergency, shouldn't this standard have a provision for that situation?

25. Do you agree with the measures?

☐ Yes

☒ No

☒ Comments: It seems the measures as proposed are too detailed, time-consuming and may distract from taking actions as opposed to logging the actions that should be taken.

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☒ Comments: The first Item (2) timing seems to be off somewhat. Numbering needs to be fixed. See comment above re. Item (3) compliance monitoring.

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

   ☐ Yes

   ☒ No

   ☒ Comments: See comment to question #25.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

   ☐ Comments:

29. Do you have any other comments on the standard?

   ☒ Comments: The Standards in general appear to reference a particular version of the Functional Model in the Applicability section. Given the "evolution" of the Model, is this appropriate?

   There is an issue with the concept of a monetary sanction matrix and what its implications are. Hydro-Québec TransÉnergie is in agreement with NPCC which has expressed concern over its inclusion and maintains that the use of market mechanisms where possible, as well as, letters of increasing degrees of severity and notifications to regulatory agencies are more effective in ensuring compliance. Failure of NERC to gain authority through reliability legislation could result in NERC pursuing actions to implement "Plan B," a "voluntary" approach affording NERC the authority to perform these types of monetary sanctions.
   Hydro-Québec TransÉnergie will not support such a matrix. There are, however, proceedings at NERC by the Compliance Certification Committee (CCC) to address alternative sanction proposals and Hydro-Québec TransÉnergie will continue to work to oppose monetary sanctions.

   Could E-tag system and Interchange Distribution Calculator (IDC) be tools that can provide information to be used by this Standard?

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
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	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: > An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. > The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: > Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. > Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

---

[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	     The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	     The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	     – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
     - A generator or transmission outage will impact another RA
 	
     - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

<table>
<tr><td colspan="2">**Commenter Information (For Individual Commenters)**</td><td colspan="2" rowspan="2">Key to Industry Segment #'s:

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

Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:
Name: Tom Pruitt	1 – **Trans. Owners**
Organization: Duke Power Company	2 – **RTO's, ISO's, RRC's**
Industry Segment #: 1	3 – **LSE's**
	4 – **TDU's**
Telephone: 704 382-4676	5 - **Generators**
	6 - Brokers, Aggregators, and Marketers
E-mail: tvpruitt@duke-energy.com	7 - **Large Electricity End Users**
	8 - **Small Electricity Users**
	9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group: Duke Power – Grid Operations	**Group Chair:** Tom Pruitt **Chair Phone:** 704 382-4676 **Chair Email:** tvpruitt@duke-energy.com

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #
Tom Pruitt	**Duke Power Company**	**1**
Sam Holeman	**Duke Power Company**	**1**

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☒ Yes

   ☐ No

   ☐ Comments:

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☐ Yes

   ☐ No

   ☐ Comments:

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☐ Yes - the two requirements would be different   to the operations personnel

   ☐ No – the two requirements would be the same to the operations personnel

   ☐ Comments:

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☐ Yes

   ☐ No

   ☐ Comments:

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☒ Keep the sharing of outage data embedded in other requirements.

   ☐ Move the sharing of outage data to a separate requirement.

   ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☐ No

    ☐ Comments:

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

    ☐ Comments:The rules for each level are too complicated. See overall comments at the end of this form.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

☒ The list of activities is sufficient as presented in the draft standard

☐ Each of the items in the list should have more detail on what is needed

☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☒ Yes

☐ No

☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?
    ☒ Requiring a Document Change Control procedure is appropriate
    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.
    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?
    ☒ Yes, include a minimum list of elements.
    ☐ No, do not include a minimum list of elements.
    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.
    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

    ☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

    ☐ Methodology for distribution

    ☐ Summary or identification of changes made to the document.

    ☐ Version control and archival period

    ☐ Other (Please be as specific as possible.)

    ☐ Not Applicable

    ☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

    ☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

    ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

    ☐ Not Applicable

    ☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

    ☐ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

    ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

    ☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

    ☐ Suggestions:

    ☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☐ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☒ Yes

☐ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

☒ Yes

☐ No

☐ Comments:

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

☐ Yes

☒ No

☐ Comments: The rules for each level are too complicated. See overall comments at the end of this form.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☒ Comments: The levels of non-compliance for each requirement (especially 101) should be simplified. The question of compliance should come to this: Did the RA meet the requirements? Yes/No. Levels 1-4 violation should be based on the number of times this has occurred in the last 12 month period. For example,

To simplify compliance measurement, but also employ graduated corrective action, please consider the following:

Level 1 -- first violation (of any kind) in previous 12 months, audit after 180 days;

Level 2 -- second violation in previous 12 months, audit after 90 days;

Level 3 -- third violation in previous 12 months, audit after 90 days and 180 days;

Level 4 -- fourth (or more) violation(s) in previous 12 months, audit every 90 days until 4 consecutive audits with no violations;

This approach still keeps the focus on the right standard (100% compliance), but allows for the reality that errors may occur. Repeated errors will become increasingly expensive for the violator, however, so the violator will be incented to change.

<u>Note</u> – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
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	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead)
 	
• Analyze the impact of generation outages from a reliability perspective
• Analyze the impact of transmission outages from a reliability perspective
	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language:
	
	    An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations
	
	The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead.
	
	    The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority.
	
	The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following:
	
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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	     The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	     The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     − If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	     − If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
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 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
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Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

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

Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group: ISO/RTO Council-Standards Review Committee	**Group Chair:** Karl Tammar **Chair Phone:** 518-356-6205 **Chair Email:** ktammar@nyiso.com

List of Group Participants that Support These Comments:

Name	**Company**	**Industry Segment #**
Dale McMaster	**AESO**	**2**
Ed Riley	**CAISO**	**2**
Sam Jones	**ERCOT**	**2**
Don Tench	**IMO**	**2**
Dave LaPlante	**ISO-NE**	**2**
Bill Phillips	**MISO**	**2**
Karl Tammar	**NYISO**	**2**
Bruce Balmat	**PJM**	**2**
Carl Monroe	**SPP**	**2**

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

   ☐ Yes

   ☒ No

   ☒ Comments: The ISO/RTOs agree that duplication should be avoided. This standard, by its nature, should define the requirements, while the RA Certification Standard should require that this standard be applied.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

   ☒ Yes

   ☐ No

   ☐ Comments: The Authority issue is best covered in RA Certification rather than the standard that defines the 'what' of coordinating ops. It is logical to require documenting authority, by whatever means, as part of certification

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

   Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

   ☒ Yes - the two requirements would be different   to the operations personnel

   ☐ No – the two requirements would be the same to the operations personnel

   ☒ Comments: We recommend a clearer definition of the intent of the requirements between the two standards (IROL and CO). There is a risk for omission as well as duplication.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

   ☒ Yes

   ☐ No

   ☒ Comments: The requirement should be defined solely in the IROL Standard, not split between certification and the IROL Standard.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

   ☒ Keep the sharing of outage data embedded in other requirements.

   ☐ Move the sharing of outage data to a separate requirement.

☒ Comments: The relevant requirements should also specify what type of data should be shared to ensure consistency.

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☒ Comments: The scope of the standard should define that this is limited to RA to RA coordination. We recognize that this may be adequately covered in the Purpose section where it states that the purpose of the standard is "To ensure that each Reliability Authority's operations are coordinated …"

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

    ☐ Yes

    ☒ No

    ☒ Comments: The definitions for Procedures and Processes are too rigid and may cause conflicts with local definitions. We recommend changing the word 'contingency' to 'condition' in the definition for Operating Scenario.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☒ Comments: Whereas we agree with the intent of the requirement, we are concerned with the prospect of creating a burdensome bureaucracy to administer the process. Requirement (2) for approving standards goes too far as written. RA to RA procedures need to be agreed to by all parties involved.

    We recommend that Requirement 3ii be modified to state "Identified credible operating scenarios."

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☐ Yes

    ☒ No

☒ Comments: The intent of the 'associated source document' is unclear as written.

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

☒ The list of activities is sufficient as presented in the draft standard

☐ Each of the items in the list should have more detail on what is needed

☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

☐ Yes

☒ No

☐ Comments:

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

☐ Requiring a Document Change Control procedure is appropriate

☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

☐ Yes, include a minimum list of elements.

☐ No, do not include a minimum list of elements.

☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☐ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☐ Methodology for distribution

☐ Summary or identification of changes made to the document.

☐ Version control and archival period

☐ Other (Please be as specific as possible.)

☒ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☒ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☐ Yes

☒ No

☒ Comments: These measures require overburdening administration. These risk distracting attention from reliability monitoring to logging actions taken.

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☐ Comments: See comments to Question 25.

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

☐ Yes

☒ No

☐ Comments: See comments to Question 25.

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☒ Comments:

Level 4 non-compliance should be reserved for an actual or continuous exposure to actions that genuinely harm reliability.

The standard will be more effective by simplifying the compliance monitoring to the extent practicable through web postings and other automation.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:
The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures • Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
• The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
• The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	    The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	    The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	    – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	    – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
• The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
 	
  - A generator or transmission outage will impact another RA
 	
  - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

Commenter Information (For Individual Commenters)	Key to Industry Segment #'s:
Name: Robert W Waldele Organization: New York Independent System Operator, Inc Industry Segment #:2 Telephone: 518-356-6231 E-mail: rwaldele@nyiso.com	**1 – Trans. Owners** **2 – RTO's, ISO's, RRC's** **3 – LSE's** **4 – TDU's** **5 - Generators** 6 - Brokers, Aggregators, and Marketers **7 - Large Electricity End Users** **8 - Small Electricity Users** 9 - Federal, State, and Provincial Regulatory or other Govt. Entities

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	**Group Chair:** **Chair Email:**	**Chair Phone:**

List of Group Participants that Support These Comments:

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

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☒ Yes

    ☐ No

    ☒ Comments: We agree that duplication should be avoided. This standard, should define the requirements, and the RA Certification Standard should require that this standard be applied.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☐ Yes

    ☒ No

    ☒ Comments: The entity causing the problem should have the primary responsibility for resolving the problem(s) that it caused.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different   to the operations personnel

    ☒ No – the two requirements would be the same to the operations personnel

    ☒ Comments: The requirement(s) should be consistent across Standards applicable to reliable operation of the interconnected system. Independent development of the Certification, Coordinate (Operations, Interchange, etc.), IROL, and DFR various standards raises the concern that there will not be consistency among the standards leading to conflicting or duplicated requirements and/or confusion.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☐ Yes

    ☒ No

    ☒ Comments: The phrase "exchange planned or unplanned outage information" is used repetitively throughout the document, but there are no similar prominent reference(s) to "analyze planned outages"?

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☒ Keep the sharing of outage data embedded in other requirements.

☐ Move the sharing of outage data to a separate requirement.

☒ Comments: Outage information should not be considered any more (or less) important than the exchange of other system status information (capacity, load forecast, unusual conditions, etc.).

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

☐ Yes

☒ No

☒ Comments: Need coordination/cooperation among **all entities** involved directly in system operation.

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

☐ Yes

☒ No

☒ Comments: Operating Scenario should be expanded to include "operating condition or event" rather than only a "contingency."

"Operating Procedure" may result in limiting operator action and not be consistent with existing definitions at transmission owner/operator or Control Area operator level.

Requirement 101 - Procedures

8. Do you agree with the requirement?

☐ Yes

☒ No

☒ Comments: The Standard is risking creating a administratively burdensome process.

System Restoration is an unusual (and unlikely) event that doesn't belong with the routine of normal operation. Restoration has unique requirements that are beyond normal coordination of operations. Has the SDT considered a separate section to address coordination of restoration?

9. Do you agree with the measures?

☐ Yes

☐ No

☒ Comments: (same as #8 above)

10. Do you agree with the compliance monitoring process?

☐ Yes

☐ No

☒ Comments: consistent throughout the document is the fact that the requirements and measures take about one page each, but the compliance monitoring and levels of non-compliance takes up to FIVE pages.

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

    ☐ Yes

    ☐ No

    ☒ Comments: (same as #10 above)

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☐ Yes, the minimum list of topics is sufficient as presented in the draft standard.

    ☒ No, the minimum list of topics is not sufficient as presented in the draft standard.

    ☒ Comments: Restoration does NOT belong in the list. Market-based procedures that are used by operations, or affect operations may need to be documented (and exchanged with neighboring entities?).

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – ~~System restoration~~
    – Voltage control
    – Coordination of information exchange to support reliability assessments
    – Load forecast
    – Unusual System Conditions

    ☐ The list of activities is sufficient as presented in the draft standard

    ☒ Each of the items in the list should have more detail on what is needed

    ☒ Comments: Remove system restoration, add load forecast and unusual system conditions. There is adequate detail contained in the "Overview" at the beginning of this comment form. That should be considered for inclusion in the Standard.

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes

    ☒ No

    ☒ Comments: It should be sufficient that each RA has a documented criteria for determining normal and emergency criteria contingencies and system conditions (states).

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?

    ☐ Requiring a Document Change Control procedure is appropriate

    ☒ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.

☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?

   ☐ Yes, include a minimum list of elements.

   ☐ No, do not include a minimum list of elements.

   ☒ Not Applicable – The standard shouldn't require a Document Change Control Procedure.

   ☒ Comments: Compliance should be measured by the result rather than the means.

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

   ☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

   ☐ Methodology for distribution

   ☒ Summary or identification of changes made to the document.

   ☒ Version control and archival period

   ☐ Other (Please be as specific as possible.)

   ☐ Not Applicable

   ☒ Comments: These should be listed as generalized guidelines rather than a rigorous procedure.

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

   ☐ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

   ☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

   ☒ Not Applicable

   ☒ Comments: RA does not need a DCCP, only needs to have adequate means to assure revision control and distribution.

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

   ☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

   ☐ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

   ☒ Comments: Daily calls are unnecessarily time consuming and may be counter-productive. RAs should have conference calls on an "as needed" basis.

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☐ Other (Please be as specific as possible.)

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Comments:

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☐ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☒ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☒ Comments Provided that the requirements lead to an excessive number of routine conference calls involving too many participants, rather than having the necessary parties communicating at the appropriate time(s). The standard should not require conference calls just for the sake of having conference calls.

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☒ Comments: When a "conflict" arises, the time required to study should not compromise the ability of the RA experiencing the problem from taking the necessary action(s) to resolve the problem and avoid further adverse impact on system reliability.

25. Do you agree with the measures?

☐ Yes

☒ No

☐ Comments: Administrative requirements are potentially excessive and may distract from overall intent of monitoring and logging actions taken – that is the reliability function gets lost in the compliance reporting details.

26. Do you agree with the compliance monitoring process?

☐ Yes

☒ No

☒ Comments: what if the problem was not "agreed on"? This presents a possible "catch-22" situation if the RAs cannot agree that there is a problem.l

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

☐ Yes

☒ No

☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

☐ Comments:

29. Do you have any other comments on the standard?

☒ Comments: This draft of the Standard places too much emphasis on the compliance measurement and levels of non-compliance, and not enough on the details of the requirements. There is considerable explanatory detail contained in the "Overview" at the beginning of the Comment form, the drafting team should consider including this within the Standard and make it more self-explanatory. The reader should not have to refer to multiple sources for explanations, and the detail should be part of the approved document.

Note – This form is to comment on version 1 of the Coordinate Operations Standard.

The latest version of this Standard (**COORD_OPERATONS_05_01**) is posted on the Standards web site at: http://www.nerc.com/~filez/sar-approved.html

E-mail this form between January 16 – March 1, 2004 to: sarcomm@nerc.com with "Comments" in the subject line.

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

Background:

The Coordinate Operations Standard Drafting Team produced this first draft of the Coordinate Operations Standard without including all of the requirements originally identified in the associated SAR. As shown in the following table, several of the areas originally identified for inclusion in the Coordinate Operations Standard have been addressed by other SARs or Standards. To avoid a situation where there may be two requirements addressing the same performance, the Coordinate Operations Standard Drafting Team has highlighted areas where a topic has been dropped from the draft standard, and asks for industry feedback on the appropriateness of this action. The following table provides an overview.

Topics in Coordinate Operations SAR	How Topic is Addressed in Coordinate Operations Standard or Other Documents
Document the RA's authority to assist in resolving problems that its caused to another system	The **RA Certification SAR** contains the following requirement that the RA's authority be documented: **Agreements.** Agreements[1] must be in place defining the responsibilities and authority of the RELIABILITY AUTHORITY with respect to all Balancing Authorities, Interchange Authorities, Transmission Operators, Transmission Service Provider and all other applicable functional entities within the reliability area and with other Reliability Authorities. Agreements shall address both normal and emergency operations.
Develop, Maintain and Share Operating Procedures Operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all	This requirement is at least partially addressed elsewhere, in several different SARs and Standards, including: **Operate within Interconnection Reliability Operating Limits Standard** contains the following requirement: The reliability authority shall have an action plan that identifies actions it shall take or actions it shall direct others to take, to prevent or mitigate instances of exceeding its interconnection reliability operating limits. (Measures

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[1] An agreement is defined as a contract or other document delineating an arrangement that expresses assent by two or more parties to the same object. This arrangement determines a course of action to be followed by all parties involved in the situation. The key components of the agreement must identify the ability, intent, and authority of the parties. **The requirement for these agreements can be satisfied in a variety of ways, including but not limited to: contracts, designation of authority documents, policies, procedures.**

entities that are expected to take action or that may be impacted as a result of this procedure.	require plan to be shared.)
	Prepare for and Respond to Blackout and Island Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable restoration plan to restore normal operation of the power system following blackout or island conditions. Plan requirements shall include items such as coordination among neighboring systems, black-start capability, resynchronization, transmission system restoration, load and generation restoration, etc.
	Prepare for and Respond to Abnormal or Emergency Conditions SAR:
	Requirements shall be established for the development, coordination, implementation, and maintenance of an executable operating plan to maintain safe and reliable operation of the power system given abnormal and/or emergency conditions such as the unexpected sudden outages of transmission, generation, or load facilities; capacity and energy shortages; failure of equipment such as communications facilities and control centers; etc. Plan requirements shall include items such as coordination among neighboring systems, load curtailments, notification requirements, restoration procedures, etc.
	Note: Requirements for the development of procedures that address specifically identified facility outages (e.g. loss of a specific line or transmission element) are not intended to be addressed by this standard and are expected to be covered elsewhere in standard operating procedures rather than by emergency plans.
	The RA Certification SAR includes a list of procedures that must be in place – however there is no requirement to share these procedures. The procedures include the following:
	Process/procedure in place to receive day-ahead hourly dispatch pattern from the Balancing Authority.
	Process/procedure in place to receive interchange transaction information from the Interchange Authority.
	Process/procedure in place for collecting transmission owners' equipment ratings.
	Process/procedure and tools in place to perform real-time and contingency reliability analyses.
	Process/procedure and tools in place to coordinate and approve transmission outages from a reliability

	perspective.
	Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
	Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.
	Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.
	Process/procedure and tools in place to develop real-time operating reliability limits.
	Process/procedure in place that define the actions to be taken for maintaining reliability.
	Process/procedure and tools in place for compliance with all applicable NERC reliability standards.
	Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.
	Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.
	Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.
	This Coordinate Operations Standard does include a requirement that the RA have operating procedures, processes or plans for identified normal and emergency system conditions that require coordination between RAs.
	Note that the SDT did **not** include a requirement that documents be shared with all involved entities, just with involved RAs. The requirement to share documents with all involved entities seemed to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Analyze Maintenance Outages (real time to 12 months ahead) • Analyze the impact of generation outages from a reliability perspective • Analyze the impact of transmission outages from a reliability perspective	The **Operate Within IROLs Standard** includes the analysis of maintenance outages and generation resource availability as part of the day-ahead operational planning analysis. The definition of 'operational planning analysis' includes the following language: > An analysis of the expected system conditions, given the load forecast(s), and known system constraints some examples being transmission facility outages, generator outages and equipment limitations The **Operate Within IROLs Standard** requires that the RA develop a data specification to identify what data it needs to conduct real time monitoring, operational planning analyses and real-time assessments. The Operate Within IROLs Standard has a very short planning horizon – no further than a day ahead. > The reliability authority shall specify and collect the data it needs to support real-time monitoring, operational planning analyses and real-time assessments conducted relative to operating within its reliability area's interconnection reliability operating limits. The reliability authority shall collect this data from the entities performing functions that have facilities monitored by the reliability authority, and from entities that provide facility status to the reliability authority. The section of the Coordinate Operations SAR does indicate a need to analyze outages, but doesn't address sharing the results of these analyses. The exchange of data from these analyses is addressed under the Coordinate Operations requirement called, "Notifications and Data Exchange." Note that the **RA Certification SAR** includes a requirement that procedures be in place for the following: > Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective. > Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.
Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current	The **Operate Within IROLs Standard** requires the RA to perform Operational Planning Analyses and Real-time Assessments but does not require that these be shared

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[2] The conditions referenced are those that, if left unattended, could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system.

and next day and for its impact on other systems)
 	
 • The RA shall coordinate the development of its reliability analyses with other RAs. These analyses shall consider known generation and transmission outages.
 	
 • The RA shall share the results of its system analyses, when conditions[2] warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements)
	with others.
	
	     The reliability authority shall perform operational planning analyses to assess whether the planned bulk electric system operations within the RA's reliability area will exceed any of its interconnection reliability operating limits.
	
	     The reliability authority shall perform real-time assessments to determine if its reliability area is exceeding any interconnection reliability operating limits or is expected to exceed any interconnection reliability operating limits.
	
	 Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.
	
	     – If an analysis doesn't show anything that will specifically have an adverse impact on another RA, then the results of the analysis are expected to be handled as part of a routine communication process between RAs, where operating information is exchanged on a daily basis. This is addressed in the Notifications and Information Exchange Requirement.
	
	     – If an analysis shows that one RA's system may or does have an adverse impact on another RA, then sharing the results of the analysis is handled under the Coordination Requirement.
	
	 Note that the SDT did **not** include a requirement that the results of analyses be shared with entities other than RAs. To require sharing with 'other involved entities' seems to be in conflict with the purpose of the SAR which focuses on RA to RA coordination, and not coordination between all involved entities.

Communicate with other impacted RAs to share information:
 	
 • The RA shall communicate with other impacted RAs whenever there is a known potential or actual condition that may adversely affect another RA's Area, such as:
    - A generator or transmission outage will impact another RA
 	
    - Outages of information technology (IT) systems
	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Notifications and Data Exchange" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs on a 'For Your Information' basis. RAs are not required to coordinate actions as a result of the data that is shared under this requirement.

(telemetering, communications, and/or control equipment or other information systems) prevent an RA from performing a reliability analysis of its RA Area or impact the ability of one RA to receive/send data or voice communications to another RA - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred	
Communicate with other impacted RAs to identify, agree upon, and act or direct others to act to implement solutions to prevent/resolve impending/actual operating problems such as: • When interconnection -wide transmission reliability preservation procedures need to be implemented • When a reliability problem occurs that requires the initiation/coordination of Operating Procedures or the development of new or temporary procedures. • When interconnection frequency is exceeding interconnection frequency limits • For prioritization of transmission outages • For prioritization of IT outages	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement. Note that the data that is exchanged under this requirement is data that is being provided to other RAs so that the RAs can work together, using the data that was exchanged.
Resolve Conflicts Between RAs	This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the "Coordination" requirement.

	Commenter Information (For Individual Commenters)

Commenter Information (For Individual Commenters)

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Key to Industry Segment #'s:

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

STD Commenter Information (For Groups Submitting Group Comments)

Name of Group:	Group Chair:	Chair Phone:
	Chair Email:	

List of Group Participants that Support These Comments:

Name	Company	Industry Segment #

Background

1. Do you agree with the SDT that the procedures addressed in this standard should be limited to procedures that aren't addressed in either the RA Certification SAR or the Operate within IORLs Standard?'

    ☐ Yes

    ☒ No

    ☒ Comments: Please refer to Question 29, comment 1.

2. Do you agree with the SDT that documenting the RA's authority to assist in resolving problems that it caused to another system is addressed in the RA Certification Criteria?

    ☒ Yes

    ☐ No

    ☒ Comments: Please refer to Question 29, comment 1.

3. The Operate Within IROLs Standard has a requirement that the RA conduct Operational Planning Analyses and Real-time Assessments relative to IROLs.

    Do you think this Coordinate Operations Standard should have a requirement that the RA conduct Operational Planning Analyses and Real Time Assessments to identify normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☐ Yes - the two requirements would be different to the operations personnel

    ☒ No – the two requirements would be the same to the operations personnel

    ☒ Comments: Please refer to Question 29, comment 1.

4. Do you agree with the SDT that Analyzing Maintenance Outages is adequately addressed in the RA Certification SAR and the Operate Within IROLs Standard?

    ☒ Yes

    ☐ No

    ☐ Comments: Please refer to Question 29, comment 1.

5. Do you think that sharing outage data between RAs is properly placed in the draft standard, or do you think that sharing outage data should be a separate requirement within this standard? (Currently the Procedures Requirement requires that there be a procedure to address how outage data will be shared – and the data is expected to be shared according to that procedure, under both the Notifications and Information Exchange Requirement and the Coordinate Requirement.)

    ☒ Keep the sharing of outage data embedded in other requirements.

    ☐ Move the sharing of outage data to a separate requirement.

    ☐ Comments:

6. Do you agree with the SDT that this standard should be limited to RA to RA coordination and including a requirement that the RA share its Operating Procedures, Processes or Plans with entities other than RAs is beyond the intended scope of the SAR?

    ☒ Yes

    ☐ No

    ☒ Comments: The CAISO agrees that "that the RA share its Operating Procedures, Processes or Plans with entities other than RAs" is beyond the scope of the original SAR but is concerned that this is not lost and is addressed in a standard.

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

    ☒ Yes

    ☐ No

    ☒ Comments: In general the CAISO agrees with the definitions. The definitions used in all Standards needs to be coordinated.

Requirement 101 - Procedures

8. Do you agree with the requirement?

    ☒ Yes

    ☐ No

    ☐ Comments:

9. Do you agree with the measures?

    ☒ Yes

    ☐ No

    ☐ Comments:

10. Do you agree with the compliance monitoring process?

    ☒ Yes

    ☐ No

    ☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

12. This requirement includes a minimum list of topics that must be addressed within procedures, processes or plans. Do you feel the minimum list of topics is sufficient? If not, please identify what other topics should be added to this requirement.

    ☒ Yes, the minimum list of topics is sufficient as presented in the draft standard.

☐ No, the minimum list of topics is not sufficient as presented in the draft standard.

☐ Comments:

13. This requirement lists activities that require notifying other RAs, exchanging reliability-related information with other RAs or coordinating actions between RAs and requires that these topics be addressed in a procedure, process or plan. Do you think the list is sufficient, or should each of the following topics have an associated list of elements that must be addressed?
    – Daily communications and real time notifications, including the conditions under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs
    – Resolution of energy and capacity shortages
    – Exchange of planned or unplanned outage information
    – System restoration
    – Voltage control
    – Coordination of information exchange to support reliability assessments

    ☒ The list of activities is sufficient as presented in the draft standard

    ☒ Each of the items in the list should have more detail on what is needed

    ☐ Comments:

14. Do you think the standard should require the RA to have a list of identified normal and emergency system conditions involving its RA Area that may affect interconnection reliability?

    ☒ Yes

    ☐ No

    ☒ Comments: The requirement needs to indicate identified "known" normal and emergency system conditions.

15. Do you feel that the standard should require the RA to have a Document Change Control Procedure or do you think this requirement is delving too far into 'how' an RA meets the objective of maintaining its procedures?
    ☒ Requiring a Document Change Control procedure is appropriate
    ☐ Requiring a Document Change Control Procedure delves too far into "how" the RA meets its performance objective.
    ☐ Comments:

16. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think this standard should include a list of elements that must be included in that procedure?
    ☒ Yes, include a minimum list of elements.
    ☐ No, do not include a minimum list of elements.
    ☐ Not Applicable – The standard shouldn't require a Document Change Control Procedure.
    ☐ Comments:

17. If you feel that there should be a list of elements required in a Document Change Control Procedure, please check all of the elements you feel should be required:

☒ Review cycle of at least once every three years, regardless of whether changes have been actively identified.

☒ Methodology for distribution

☐ Summary or identification of changes made to the document.

☒ Version control and archival period

☐ Other (Please be as specific as possible.)

☐ Not Applicable

☐ Comments:

18. If you feel that the standard should require the RA to have a Document Change Control Procedure, do you think there should be a measure that the RA have evidence it followed its Document Change Control Procedure?

☒ Yes, the standard should require the RA to have evidence if followed its Document Change Control Procedure.

☐ No, the standard shouldn't require the RA to have evidence it followed its Document Change Control Procedure.

☐ Not Applicable

☐ Comments:

Requirement 102 - Notifications and Information Exchange

19. The proposed standard requires the RA to participate in **'agreed upon'** conference calls or other communication forums with other RAs. Should this requirement be more stringent and require that each RA participate in a **daily** conference call with adjacent RAs? (Note that most RAs have several adjacent RAs, unless all RAs in an interconnection were on a single call, most RAs would be required to participate in several conference calls each day.)

☒ The RA should be required to participate in 'agreed upon' conference calls and other communication forums

☒ The RA should be required to participate in a conference call with each of its adjacent RAs every day.

☐ Comments:

20. If you feel that the RA should be required to participate in **daily** conference calls with its adjacent RAs, what do you recommend as an appropriate method of measuring compliance with this requirement?

☐ Suggestions:

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

21. If you feel that the RA should be required to participate in a **daily** conference call with its adjacent RAs, how many RAs should participate in the call – should there be a single call with all RAs within an Interconnection or should there be smaller groups of RAs that participate in a daily call?

☐ All RAs within an Interconnection on a single call

☒ Other (Please be as specific as possible.)

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☒ Comments: Adjacent RA's need to communicate with each other on a regular daily basis.

22. If you think there should be a requirement that each RA participate in a **daily** conference call with its adjacent RAs, what position should participate in the call – should the call be limited to system operators, or should each RA determine what position should participate in the daily call.

☒ Limit participation to System Operators

☐ Allow each RA to assign any position to participate in the call

☐ Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

☐ Other (Please be as specific as possible.)

23. Should this standard include a requirement that all the RAs in an interconnection have an agreed-to method for RAs to communicate with one another across their interconnection?

☒ Yes

☐ No

☐ Comments

Requirement 103 - Coordination

24. Do you agree with the requirement to Coordinate Operations?

☒ Yes

☐ No

☐ Comments:

25. Do you agree with the measures?

☒ Yes

☐ No

☐ Comments:

26. Do you agree with the compliance monitoring process?

☒ Yes

☐ No

☐ Comments:

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

    ☒ Yes

    ☐ No

    ☐ Comments:

Other Issues

28. Are you aware of any Regional or Interconnection Differences that should be added to this standard?

    ☐ Comments:

29. Do you have any other comments on the standard?

    ☒ Comments:

1) This draft of the Coordinate Operations Standard has been written dependent on certain requirements being covered in the RA Certification Standard and the Operate Within IROL Standard. The first draft of the RA Certification Standard has not yet been posted for review and the Operate Within IROL Standard failed on its first ballot attempt and is being re-written. With the uncertain final states of these two standards the CAISO is uncomfortable relying on requirements in the Coordinate Operations SAR not being included in the Coordinate Operations Standard. Could NERC please explain how the development of Reliability Standards is being coordinated?

The RA Certification Standard only requires compliance for the initial certification process and does not encompass ongoing compliance audits. If requirements in the Coordinate Operations SAR are not being included in the Coordinate Operations Standard because they are included in the RA Certification Standard how will the RA be audited on a ongoing basis on these requirements?

The CAISO does support the concept that a requirement should not be duplicated in more than one standard subjecting an entity to potential double compliance fine.

The CAISO also believes that the final success of the Reliability Standards will be dependent on the development of the Reliability Standards database that will allow, for example, a RA to easily identify all Reliability Standard pertinent to RAs. What are the plans and schedule for the development of this database?

2) Levels of non-compliance – The formatting of many of the sections on non-compliance are difficult to follow and understand. A table format may work better.