

Comment Form for 1st Posting of Coordinate Operations Standard

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.**

<p>entities that are expected to take action or that may be impacted as a result of this procedure.</p>	<p>require plan to be shared.)</p> <p>Prepare for and Respond to Blackout and Island Conditions SAR:</p> <p>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.</p> <p>Prepare for and Respond to Abnormal or Emergency Conditions SAR:</p> <p>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.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> 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
---	--

	<p>perspective.</p> <p>Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p> <p>Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.</p> <p>Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.</p> <p>Process/procedure and tools in place to develop real-time operating reliability limits.</p> <p>Process/procedure in place that define the actions to be taken for maintaining reliability.</p> <p>Process/procedure and tools in place for compliance with all applicable NERC reliability standards.</p> <p>Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.</p> <p>Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.</p> <p>Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.</p> <p>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.</p>
--	---

<p>Analyze Maintenance Outages (real time to 12 months ahead)</p> <ul style="list-style-type: none"> Analyze the impact of generation outages from a reliability perspective Analyze the impact of transmission outages from a reliability perspective 	<p>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:</p> <p style="padding-left: 40px;">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</p> <p>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.</p> <p style="padding-left: 40px;">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.</p> <p>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:</p> <p style="padding-left: 40px;">Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.</p> <p style="padding-left: 40px;">Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p>
<p>Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current</p>	<p>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</p>

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.

<p>and next day and for its impact on other systems)</p> <ul style="list-style-type: none"> • 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 conditions² warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements) 	<p>with others.</p> <p>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.</p> <p>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.</p> <p>Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.</p> <ul style="list-style-type: none"> - 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. <p>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.</p>
<p>Communicate with other impacted RAs to share information:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems 	<p>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.</p>

Comment Form for 1st Posting of Coordinate Operations Standard

<p>(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</p> <ul style="list-style-type: none"> - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred 	
<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>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.</p>
<p>Resolve Conflicts Between RAs</p>	<p>This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the “Coordination” requirement.</p>

Commenter Information (For Individual Commenters)
Name: Richard J. Kafka
Organization: Potomac Electric Power Company
Industry Segment #: 3
Telephone: (301) 469-5274
E-mail: rjkafka@pepco.com

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

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 IROLs 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

Comment Form for 1st Posting of Coordinate Operations Standard

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:

Comment Form for 1st Posting of Coordinate Operations Standard

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

Comment Form for 1st Posting of Coordinate Operations Standard

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.

Comment Form for 1st Posting of Coordinate Operations Standard

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:

Comment Form for 1st Posting of Coordinate Operations Standard

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.**

<p>entities that are expected to take action or that may be impacted as a result of this procedure.</p>	<p>require plan to be shared.)</p> <p>Prepare for and Respond to Blackout and Island Conditions SAR:</p> <p>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.</p> <p>Prepare for and Respond to Abnormal or Emergency Conditions SAR:</p> <p>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.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> 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
---	--

	<p>perspective.</p> <p>Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p> <p>Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.</p> <p>Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.</p> <p>Process/procedure and tools in place to develop real-time operating reliability limits.</p> <p>Process/procedure in place that define the actions to be taken for maintaining reliability.</p> <p>Process/procedure and tools in place for compliance with all applicable NERC reliability standards.</p> <p>Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.</p> <p>Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.</p> <p>Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.</p> <p>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.</p>
--	---

<p>Analyze Maintenance Outages (real time to 12 months ahead)</p> <ul style="list-style-type: none"> Analyze the impact of generation outages from a reliability perspective Analyze the impact of transmission outages from a reliability perspective 	<p>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:</p> <p style="padding-left: 40px;">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</p> <p>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.</p> <p style="padding-left: 40px;">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.</p> <p>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:</p> <p style="padding-left: 40px;">Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.</p> <p style="padding-left: 40px;">Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p>
<p>Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current</p>	<p>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</p>

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.

<p>and next day and for its impact on other systems)</p> <ul style="list-style-type: none"> • 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 conditions² warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements) 	<p>with others.</p> <p>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.</p> <p>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.</p> <p>Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.</p> <ul style="list-style-type: none"> - 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. <p>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.</p>
<p>Communicate with other impacted RAs to share information:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems 	<p>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.</p>

Comment Form for 1st Posting of Coordinate Operations Standard

<p>(telemetry, 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</p> <ul style="list-style-type: none"> - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred 	
<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>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.</p>
<p>Resolve Conflicts Between RAs</p>	<p>This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the “Coordination” requirement.</p>

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 IROLs 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:

Comment Form for 1st Posting of Coordinate Operations Standard

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.

Comment Form for 1st Posting of Coordinate Operations 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:

Comment Form for 1st Posting of Coordinate Operations 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: 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

Comment Form for 1st Posting of Coordinate Operations Standard

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:

Comment Form for 1st Posting of Coordinate Operations Standard

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.**

<p>entities that are expected to take action or that may be impacted as a result of this procedure.</p>	<p>require plan to be shared.)</p> <p>Prepare for and Respond to Blackout and Island Conditions SAR:</p> <p>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.</p> <p>Prepare for and Respond to Abnormal or Emergency Conditions SAR:</p> <p>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.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> 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
---	--

	<p>perspective.</p> <p>Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p> <p>Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.</p> <p>Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.</p> <p>Process/procedure and tools in place to develop real-time operating reliability limits.</p> <p>Process/procedure in place that define the actions to be taken for maintaining reliability.</p> <p>Process/procedure and tools in place for compliance with all applicable NERC reliability standards.</p> <p>Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.</p> <p>Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.</p> <p>Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.</p> <p>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.</p>
--	---

<p>Analyze Maintenance Outages (real time to 12 months ahead)</p> <ul style="list-style-type: none"> Analyze the impact of generation outages from a reliability perspective Analyze the impact of transmission outages from a reliability perspective 	<p>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:</p> <p style="padding-left: 40px;">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</p> <p>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.</p> <p style="padding-left: 40px;">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.</p> <p>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:</p> <p style="padding-left: 40px;">Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.</p> <p style="padding-left: 40px;">Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p>
<p>Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current</p>	<p>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</p>

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.

<p>and next day and for its impact on other systems)</p> <ul style="list-style-type: none"> • 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 conditions² warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements) 	<p>with others.</p> <p>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.</p> <p>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.</p> <p>Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.</p> <ul style="list-style-type: none"> - 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. <p>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.</p>
<p>Communicate with other impacted RAs to share information:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems 	<p>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.</p>

Comment Form for 1st Posting of Coordinate Operations Standard

<p>(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</p> <ul style="list-style-type: none"> - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred 	
<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>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.</p>
<p>Resolve Conflicts Between RAs</p>	<p>This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the “Coordination” requirement.</p>

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 Administration	
Dan Cooper	Michigan Public Power Agency	
Ken Donohoo	ERCOT	
Tom Mallinger	Midwest ISO	
Darrick Moe	Western Area Power Administration	
Scott Moore	American Electric 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

- 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:

Comment Form for 1st Posting of Coordinate Operations 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: 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.

Comment Form for 1st Posting of Coordinate Operations Standard

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.

Comment Form for 1st Posting of Coordinate Operations 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:

Comment Form for 1st Posting of Coordinate Operations 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: 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

Comment Form for 1st Posting of Coordinate Operations Standard

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:

Comment Form for 1st Posting of Coordinate Operations Standard

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.**

<p>entities that are expected to take action or that may be impacted as a result of this procedure.</p>	<p>require plan to be shared.)</p> <p>Prepare for and Respond to Blackout and Island Conditions SAR:</p> <p>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.</p> <p>Prepare for and Respond to Abnormal or Emergency Conditions SAR:</p> <p>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.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> 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
---	--

	<p>perspective.</p> <p>Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p> <p>Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.</p> <p>Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.</p> <p>Process/procedure and tools in place to develop real-time operating reliability limits.</p> <p>Process/procedure in place that define the actions to be taken for maintaining reliability.</p> <p>Process/procedure and tools in place for compliance with all applicable NERC reliability standards.</p> <p>Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.</p> <p>Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.</p> <p>Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.</p> <p>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.</p>
--	---

<p>Analyze Maintenance Outages (real time to 12 months ahead)</p> <ul style="list-style-type: none"> Analyze the impact of generation outages from a reliability perspective Analyze the impact of transmission outages from a reliability perspective 	<p>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:</p> <p style="padding-left: 40px;">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</p> <p>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.</p> <p style="padding-left: 40px;">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.</p> <p>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:</p> <p style="padding-left: 40px;">Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.</p> <p style="padding-left: 40px;">Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p>
<p>Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current</p>	<p>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</p>

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.

<p>and next day and for its impact on other systems)</p> <ul style="list-style-type: none"> • 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 conditions² warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements) 	<p>with others.</p> <p>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.</p> <p>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.</p> <p>Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.</p> <ul style="list-style-type: none"> - 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. <p>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.</p>
<p>Communicate with other impacted RAs to share information:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems 	<p>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.</p>

Comment Form for 1st Posting of Coordinate Operations Standard

<p>(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</p> <ul style="list-style-type: none"> - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred 	
<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>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.</p>
<p>Resolve Conflicts Between RAs</p>	<p>This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the “Coordination” requirement.</p>

Comment Form for 1st Posting of Coordinate Operations Standard

Committer Information (For Individual Commenters)

Name: John Horakh – Feb. 23, 2004

Organization: MAAC

Industry Segment #: 2

Telephone: 609-625-6014

E-mail: john.horakh@conectiv.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 Committer 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 IROLs 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:

Comment Form for 1st Posting of Coordinate Operations Standard

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 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?

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.

Comment Form for 1st Posting of Coordinate Operations 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:

Comment Form for 1st Posting of Coordinate Operations 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:
 - Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

Comment Form for 1st Posting of Coordinate Operations Standard

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:

Comment Form for 1st Posting of Coordinate Operations Standard

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.**

<p>entities that are expected to take action or that may be impacted as a result of this procedure.</p>	<p>require plan to be shared.)</p> <p>Prepare for and Respond to Blackout and Island Conditions SAR:</p> <p>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.</p> <p>Prepare for and Respond to Abnormal or Emergency Conditions SAR:</p> <p>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.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> 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
---	--

	<p>perspective.</p> <p>Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p> <p>Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.</p> <p>Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.</p> <p>Process/procedure and tools in place to develop real-time operating reliability limits.</p> <p>Process/procedure in place that define the actions to be taken for maintaining reliability.</p> <p>Process/procedure and tools in place for compliance with all applicable NERC reliability standards.</p> <p>Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.</p> <p>Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.</p> <p>Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.</p> <p>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.</p>
--	---

<p>Analyze Maintenance Outages (real time to 12 months ahead)</p> <ul style="list-style-type: none"> Analyze the impact of generation outages from a reliability perspective Analyze the impact of transmission outages from a reliability perspective 	<p>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:</p> <p style="padding-left: 40px;">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</p> <p>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.</p> <p style="padding-left: 40px;">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.</p> <p>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:</p> <p style="padding-left: 40px;">Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.</p> <p style="padding-left: 40px;">Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p>
<p>Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current</p>	<p>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</p>

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.

<p>and next day and for its impact on other systems)</p> <ul style="list-style-type: none"> • 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 conditions² warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements) 	<p>with others.</p> <p>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.</p> <p>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.</p> <p>Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.</p> <ul style="list-style-type: none"> - 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. <p>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.</p>
<p>Communicate with other impacted RAs to share information:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems 	<p>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.</p>

Comment Form for 1st Posting of Coordinate Operations Standard

<p>(telemetry, 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</p> <ul style="list-style-type: none"> - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred 	
<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>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.</p>
<p>Resolve Conflicts Between RAs</p>	<p>This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the “Coordination” requirement.</p>

Comment Form for 1st Posting of Coordinate Operations Standard

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:

Comment Form for 1st Posting of Coordinate Operations Standard

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-

Comment Form for 1st Posting of Coordinate Operations Standard

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.

Comment Form for 1st Posting of Coordinate Operations Standard

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

Comment Form for 1st Posting of Coordinate Operations 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

Comment Form for 1st Posting of Coordinate Operations Standard

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.

Comment Form for 1st Posting of Coordinate Operations Standard

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.**

<p>entities that are expected to take action or that may be impacted as a result of this procedure.</p>	<p>require plan to be shared.)</p> <p>Prepare for and Respond to Blackout and Island Conditions SAR:</p> <p>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.</p> <p>Prepare for and Respond to Abnormal or Emergency Conditions SAR:</p> <p>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.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> 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
---	--

	<p>perspective.</p> <p>Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p> <p>Process/procedure in place with other Reliability Authorities to coordinate day-ahead analyses and to implement real-time actions.</p> <p>Process/procedure in place defining the analysis and approval process for interchange transactions into, out of, and through the reliability area.</p> <p>Process/procedure and tools in place to develop real-time operating reliability limits.</p> <p>Process/procedure in place that define the actions to be taken for maintaining reliability.</p> <p>Process/procedure and tools in place for compliance with all applicable NERC reliability standards.</p> <p>Process/procedure in place that defines the coordination and implementation of emergency operations within or on an area-wide basis.</p> <p>Process/procedure in place that defines the coordination and implementation of system restoration operations within or on an area-wide basis.</p> <p>Plan in place that ensures continued operation during abnormal and emergency conditions due to the loss of facilities.</p> <p>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.</p>
--	---

<p>Analyze Maintenance Outages (real time to 12 months ahead)</p> <ul style="list-style-type: none"> Analyze the impact of generation outages from a reliability perspective Analyze the impact of transmission outages from a reliability perspective 	<p>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:</p> <p style="padding-left: 40px;">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</p> <p>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.</p> <p style="padding-left: 40px;">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.</p> <p>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:</p> <p style="padding-left: 40px;">Process/procedure and tools in place to coordinate and approve transmission outages from a reliability perspective.</p> <p style="padding-left: 40px;">Process/procedure and tools in place to collect and analyze generation outages from a reliability perspective.</p>
<p>Coordinate Reliability Analyses (Generator Resources and Transmission Facilities) (For current</p>	<p>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</p>

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.

<p>and next day and for its impact on other systems)</p> <ul style="list-style-type: none"> • 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 conditions² warrant, with other RA's, and other involved entities (or upon request, subject to the FERC Code of Conduct and other Confidentiality Agreements) 	<p>with others.</p> <p>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.</p> <p>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.</p> <p>Sharing the results of analyses is expected to be handled in the Coordinate Operations Standard in two different ways.</p> <ul style="list-style-type: none"> - 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. <p>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.</p>
<p>Communicate with other impacted RAs to share information:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - A generator or transmission outage will impact another RA - Outages of information technology (IT) systems 	<p>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.</p>

Comment Form for 1st Posting of Coordinate Operations Standard

<p>(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</p> <ul style="list-style-type: none"> - Results of analyses or real-time conditions indicate potential or actual reliability problems - Physical or cyber attacks have been threatened or have occurred 	
<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>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.</p>
<p>Resolve Conflicts Between RAs</p>	<p>This topic is not addressed elsewhere, and is included in the Coordinate Operations Standard in the “Coordination” requirement.</p>

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 IROLs 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:

Comment Form for 1st Posting of Coordinate Operations Standard

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:

Comment Form for 1st Posting of Coordinate Operations Standard

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:

Comment Form for 1st Posting of Coordinate Operations 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:
 - Not Applicable – don't agree with the requirement of participating in daily conference calls with adjacent RAs

Comment Form for 1st Posting of Coordinate Operations Standard

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: