

Note – This form is to comment on version 2 of the Coordinate Operations SAR.

The latest version of this SAR (COORD_OPERATIONS_01_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between February 14–March 17, 2003 to: sarcomm@nerc.com with “SAR Comments” in the subject line.

Please review the changes made to the SAR and answer the questions in the yellow boxes.

If you have any questions about this SAR Comment Form, please contact Tim Gallagher, NERC’s Director of Standards at 609-452-8060 or timg@nerc.com

Background

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The original SAR provided a brief description, but did not include many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The requested details have been provided in the revised SAR.

When developing this revised SAR, the SAR DT made the following assumptions:

- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
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- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
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The SAR DT asks that you review the revised SAR and respond to the questions in this comment form. If you have questions, you can contact the Director of Standards, Tim Gallagher in the NERC office. Tim can be reached at 609-452-8060 or at tim.gallagher@nerc.com.

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: The detailed description also has "When one RA's system has a potential". Is potential being deleted. The system causing the problem should always have the first responsibility to take actions on its own system to mitigate the problem.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

Comments:

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes
 No

Comments: Impact on what? Is something missing or a period missing?

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes
 No

Comments:

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
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 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments: Should actual/impending be changed to impending/ actual, because prevent goes with impending?

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

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4. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments: The point of the standard should be the desired outcome, not a process. This addition seems to be prescriptive of a process rather than a condition. Further, this requirement will slow the pace of innovation to a crawl while multiple RA committees ruminate.

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

Yes

No

Comments: This does nothing to solve the point of conflict between reliability and

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commercial operations. The standard should be expanded to address what to do about conflicts between the two types of outage. As an alternative, this standard could stipulate that planned generation outages shall be accommodated to the maximum extent possible, including RA obligation to defer planned transmission outages to maintain reliability in the face of conflict.

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7. Do you agree with this requirement?

Yes

No

Comments: The security analysis should also include assessment of deliverability of operating reserves for generation contingency and use of operating reserves for special grid operating procedures.

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments: Inter-RA coordination could ensure no double-counting of available capacity. Also the horizon of analysis should be constrained to a reasonable, practical and relevant time horizon. This analysis is not a daily look for the next 10 years. Something in the day-ahead to day-of analysis performed on a snapshot basis is sufficient. This aspect is silent about what to do if bad impacts are identified, again this seems like the proposed language describes a process instead of a condition or outcome.

The following requirement was added to the detailed description of the SAR:

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

9. Do you agree with this requirement?

Yes

No

Comments: Who are the other involved entities? At a minimum (even though this is a reliability forum) there should be a means to indicate respect for and compliance with the need to maintain commercially sensitive information in a confidential manner.

The following requirement was added to the detailed description of the SAR:

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10. Do you agree with this requirement?

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Comments:

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 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
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 - Prioritization of IT outages

11. Do you agree with this requirement?

Yes

No

Comments: The frequency coordination issue may be partially addressed by the NERC Balance Resources and Demand Standards Drafting Team and should be coordinated with them.

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments: Some RAs operate to different reliability criteria within their footprint due to existing NERC regions. The standards should accommodate the RA using applicable reliability criteria depending on the region involved.

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments: Saying that it is standard to "do an analysis" is not very useful. The standards drafting team should focus on what is the desired result and the standards compliance should measure how well the RA is doing on meeting the desired result.

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SAR Comment Form for 2nd Posting of Coordinate Operations SAR

SAR Commenter Information (For Individual Commenters)	
Name	Kathleen M. Goodman
Organization	ISO New England Inc.
Industry Segment #	2
Telephone	(413) 535-4111
E-mail	kgoodman@iso-ne.com

- Key to Industry Segment #'s:**
- 1 – Trans. Owners
 - 2 – RTO's, ISO's, RRC's
 - 3 – LSE's
 - 4 – TDU (Transmission Dependent Utility)
 - 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

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

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments: I was under the impression that the latest terminology was "Reliability Coordinator." I think it is important that the terminology be clearly defined before activities are determined.

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

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3. Are there terms used in this SAR that you feel should be defined?

Yes

No

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4. Do you agree with this requirement?

Yes

No

Comments:

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5. Do you agree with this requirement?

Yes

No

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6. Do you agree with this requirement?

Yes

No

Comments:

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Yes

No

Comments:

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8. Do you agree with this requirement?

Yes

No

Comments: What if a centralized unit commitment is not done?

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No

Comments:

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10. Do you agree with this requirement?

Yes

No

Comments: Would transformer, phase angle regulators, reactive devices, special protection schemes be considered a "transmission outage?" Would a better term be "transmission element outage" to cover such situations?

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
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11. Do you agree with this requirement?

Yes

No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

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

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near term

Define as day ahead studies

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- Yes
 No

Comments: The RA's whos system is causing the problem should be required to take action within its own RA Area to midigate the problem

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

Comments:

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes
 No

Comments: Other involved entities must be entities a RA can exchange information with without violating its confidentiality agreements

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

Yes

No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: We agree with this requirement, but we believe the RA that is affected by the other's problem should have the ability to take action if the initiating RA does not take action, or the actions of the RA are ineffective.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments: We agree with the need for this requirement, suggest that the word "unique" be removed from this requirement.

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

Comments:

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes**
 No

Comments: The purpose of the Security Analysis should not be included in this requirement. If the "purpose sentence" is intended to state the minimum criteria of Security Analysis, it should clearly state that, i.e. "At a minimum the security analysis shall demonstrate that the RA's system and other impacted systems can be operated in both anticipated normal and contingency conditions."

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes**
 No

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.

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

Comments:

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes
 No

Comments: Bullet #3 requires the RA to communicate with others if an RA loses communication that impacts the ability of the RA to receive/send data. This requirement has the potential to be burdensome if an RA were required to communicate with others every time they lose any of their data. A qualifier of "critical data" should be added to the requirement.

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes
 No

Comments: Suggest bullet #2 be restated as "Reliability problems that require the initiation/coordination of Operating Procedures or the development of new or temporary procedures."

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
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SAR Comment Form for 2nd Posting of Coordinate Operations SAR

SAR Commenter Information (For Individual Commenters)	
Name	Guy V. Zito
Organization	NPCC
Industry Segment #	2
Telephone	212-840-1070
E-mail	gzito@npcc.org

Key to Industry Segment #'s:
1 – Trans. Owners
2 – RTO's, ISO's, RRC's
3 – LSE's
4 – TDU (Transmission Dependent Utility)
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

SAR Commenter Information (For Groups Submitting Group Comments)		
Name of Group: <i>CP9</i>	Group Chair: <i>Guy Zito</i>	
	Chair Phone: 212-840-1070	
List of Group Participants that Support These Comments:		
Name	Company	Industry Segment #
<i>Dan Stosick</i>	<i>ISO-NE</i>	<i>2</i>
<i>Roger Champagne</i>	<i>Hydro-Quebec TransEnergie</i>	<i>1</i>
<i>Barry Gee</i>	<i>NgridUSA</i>	<i>1</i>
<i>David Kiguel</i>	<i>Hydro One Networks Inc.</i>	<i>1</i>
<i>Ralph Rufrano</i>	<i>New York Power Authority</i>	<i>1</i>
<i>Chuck Rusowicz</i>	<i>Consolidated Edison Company of NY</i>	<i>1</i>
<i>Guy Zito</i>	<i>Northeast Power Coordinating Council</i>	<i>2</i>
<i>Greg Campoli</i>	<i>NYISO</i>	<i>2</i>

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments: Before a standard is written on Coordination, definitions of who is performing what functions needs to be finalized. Will it be the existing RCs, (ISOs ISAs etc) who assume the role of the RAs or will it be some other new organization? It seems that the coordination between the RCs and RAs relationship needs to be addressed.

In the Brief Description section page 1, under "This standard will addresss the following Areas" the first bullet change the "its" to it.

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

It is unclear what a Document Authority is. Clarification is needed here. A suggestion might be to change this to the "documenting RA", if that is what is intended.

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: "Potential" adverse impacts should also be considered between RAs, this needs to be added back in. It is not clear if this bullet is in addition to the original. If not, and the above is intended as a replacement, we would request that the potential adverse impact be reported and be included in this statement.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

Comments: We suggest broadening the meaning of transmission outages to include

¹ The impacts in this SAR 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

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

protection system outages and special protection system (SPS) outages.

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes
 No

Comments:

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments: Yes, but it was felt that the term transmission outage should be broadened to encompass other transmission facilities such as phase angle regulators, SPSs, SVCs etc. Perhaps Transmission Facilities Outage might be a better description. This would ensure the status of critical control devices is communicated between the RAs.

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments: The bullet "Implement Interconnection-Wide transmission reliability preservation procedures in conjunction with all RA's in that Interconnection" appears to have been omitted. This should remain in the SAR.

We suggest broadening the meaning of transmission outages to include protection system outages and special protection systems (SPS) outages or adding a bullet;

- Prioritization of protection systems or SPS outages

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
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6. Do you agree with this requirement?

Yes

No

Comments:

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

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Yes

No

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8. Do you agree with this requirement?

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 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

No

Comments:

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Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
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 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

Yes

No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

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The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: Does the statement "shall have the authority" mean the same as "shall have the obligation"? If so, then just say obligation - has more accountability.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments: Having a resolution before it happens is better than attempting to resolve it as it is happening. Is it safe to assume that the impacted neighbor would have a say in development of these unique operating procedures?

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

Comments: Are these planned and/or forced maintenance outages? How far in the

¹ The impacts in this SAR are those that if left unattended could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system

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future are the outages analyzed? What happens if the RA determines the outage causes problems? If the Transmission Owner or Generator have to reschedule, who will pay for any applicable costs associated with the reschedule. Generators have executed Interconnection and Operating Agreements with the Transmission Owner. If the RA is not the transmission owner, then this will be an additional obligation on the generator. This obligation could have adverse financial impact. This requirement if included need to be coordinated with FERC's ruling on the Generator Interconnection NOPR.

The following requirement was added to the detailed description of the SAR:

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 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes**
 No

Comments: For what time frame will the analysis be done? What types of coordination is needed between RAs? If one is short, will it have the authority to order generation output from another RA?

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes**
 No

Comments: We have concerns with whom this information is shared with? The RA

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

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will sign a code of conduct agreement and NERC confidentiality, but who is to say that the other parties or entities who are allowed to view these results are held to the same confidentiality.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments: If generator or transmission outage causes an reliability impact on the another RA, what happens? Not sure what is meant in the first sub-bullet by the wording "will impact another RA within the same Interconnection". Does Interconnection mean the Eastern Interconnection as opposed to the Western Interconnection.

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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Background

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The original SAR provided a brief description, but did not include many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The requested details have been provided in the revised SAR.

When developing this revised SAR, the SAR DT made the following assumptions:

- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
- Data needed by the RA is addressed through other SARs
- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
- Coordination required for Interchange is addressed through other SARs

The SAR DT asks that you review the revised SAR and respond to the questions in this comment form. If you have questions, you can contact the Director of Standards, Tim Gallagher in the NERC office. Tim can be reached at 609-452-8060 or at tim.gallagher@nerc.com.

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

Yes

No

Comments:

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

No

Comments:

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

Yes

No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
- Data needed by the RA is addressed through other SARs
- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
- Coordination required for Interchange is addressed through other SARs

The SAR DT asks that you review the revised SAR and respond to the questions in this comment form. If you have questions, you can contact the Director of Standards, Tim Gallagher in the NERC office. Tim can be reached at 609-452-8060 or at tim.gallagher@nerc.com.

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

The terms "involved parties" should be more clearly defined throughout this document. The "Shared Result section of page 2 the "Detailed Descriptions" should be modified to say "The RA shall share the results of its syhstem analyhses, when condidtions warrant , or upon request, with neighboring RA's and make data available to all RAs for their own system analysis.

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The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: Due to the importance of the statement that the RA should have the authority to take actions within its own RA Area to mitigate the problem, the parenthesis should not be used in the sentence.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments: "involved parties" should be further defined. The sentence should be changed to say "distributed to the impacted RAs."

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

Comments: The RAs should have a common process and standards to resolve the

¹ The impacts in this SAR 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

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

transmission outage coordination conflicts or problems. The RA has no authority over generation outages and must analyze concurrent generation outages.

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes
 No

Comments: The sentence should be rewritten saying that the analysis should be distributed to the TOPs and the adjacent control areas. Also, the purpose of the analysis should be to look at the impact of one RAs system on neighboring systems.

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes
 No

Comments: Common standards of this accounting should be uniform among RAs.

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes
 No

Comments: RAs should always share the results with control areas and transmission

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.

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

providers within its borders. It should always share these results with adjacent RAs. Analysis data should be made available to all RAs.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes
 No

Comments: This requirement should also include physical security information. The outages of information technology, etc. should not be limited to this examples.

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes
 No

Comments: Physical security actions which might jeopardize critical infrastructure should also be communicated. The sentence should reflect that all communications should be in a timely matter.

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments: This needs to be defined further in the SAR process and should not be excluded as a question in future process for this SAR.

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments: The assumptions made on page one by the SAR DT should be validated.

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When developing this revised SAR, the SAR DT made the following assumptions:

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- Data needed by the RA is addressed through other SARs
- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
- Coordination required for Interchange is addressed through other SARs

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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: If RA1's system impacts RA2's system, there may not be options on RA1's system to mitigate the problem. It may require actions in another RA's system to mitigate the problem. The SAR and standard need to provide a mechanism to ensure that if a problem is identified that all RA's that contribute to the problem are bound to take action to correct the problem.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

¹ The impacts in this SAR 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

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments: The SAR should clarify that when doing the reliability analyses that known outages in other RA's are included in the analyses.

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments: Please clarify that the analysis is not only for resource adequacy but also on the impacts of generator outages on the reliability of the transmission system. Too many generator outages at the wrong time may lead to reliability problems on the transmission system (it may not be able to handle the necessary imports to replace the off-line generation).

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

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.

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments: Prioritization of Generator outages should also be included on this list.

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments: See comments above

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments: However, we believe that consideration should be given to cover coordination with Planning Authority, Distribution Provider and Load-Serving Entity.

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: However, we feel that the wording should be "...shall have the authority and be responsible for taking actions....".

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

Comments: However, this does not describe how the RA will interact with the TSP, TO or the Generator nor does it describe the level of authority the RA has in reacting to Generator or Transmission Operator changes. For example, the MISO Outage

¹ The impacts in this SAR 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

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

Coordination Policy describes how generator or transmission outage changes requested by MISO or the transmission customer are handled but it does not cover changes to outages made by the Generator or Transmission Operator.

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments: We agree that this should be done, but it does not address the authority of the RA to implement changes nor does it address what happens when a Generator changes the plan.

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

No

Comments:

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments: This does raise the question of how this is implemented. In other words, if the RA's involved can't come to a resolution, how is the situation resolved?

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments: It appears that study methodology differs fro region to region.

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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The original SAR provided a brief description, but did not include many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The requested details have been provided in the revised SAR.

When developing this revised SAR, the SAR DT made the following assumptions:

- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
- Data needed by the RA is addressed through other SARs
- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
- Coordination required for Interchange is addressed through other SARs

The SAR DT asks that you review the revised SAR and respond to the questions in this comment form. If you have questions, you can contact the Director of Standards, Tim Gallagher in the NERC office. Tim can be reached at 609-452-8060 or at tim.gallagher@nerc.com.

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments: 1) The question asks about the "scope" of activities. However, scope is ambiguous and the question should be restated to clearly ask about the "Purpose/Industry Need," "Brief Description," "Detailed Description," "Reliability Function," etc. to ensure the question receives the proper response. 2) Since the activities covered within this SAR is restricted to Reliability Authority (RA) to RA coordination, the title should be modified - such as "Reliability Authority Coordination of Operations" to state this change. Highlighting the "RA" in the title will distinguish it from Transmission Operator Coordinate Operations, Balancing Authority Coordinate Operations, etc. 3) Alternately, should the Standard address the coordination responsibilities of the "other authorities?" The risk of multiple standards is that there could be conflicting or redundant requirements.

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

1) First sub-bullet under Develop and Share Unique Operating Procedures need to define "identified potential operating scenarios" 2) "Generation Resource Availability"

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: "Document Authority" requirement is abbreviated. However, as it is stated, it can be confusing. The TS recommends expanding the requirement to match the Brief Description "Documenting the RAs authority to assist in resolving problems that it is caused to another system"

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments: 1)The TS recommends enhancing the requirement by giving examples as follows: . . . that address identified potential operating scenarios that include special protective procedures, automatic actions, hardware, special relaying schemes, etc, that may impact 2) However, the standard should not require the exchange of information that is not applicable; and the standard should be appropriately worded to avoid requiring ALL RAs to implement some procedure or hardware "just because another RA has it."

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

¹ The impacts in this SAR 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

6. Do you agree with this requirement?

Yes

No

Comments: 1) The TS recommends including language that addresses "time" in this requirement. TS suggestion: Analyze the impact of generation (transmission) outages from a reliability perspective on a real-time and future twelve month time line. 2) This requirement should also imply coordination (or comparison) of scheduled outages among interconnecting RAs.

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments: There is a discrepancy between the requirement title language "security analyses" and the first line "reliability analyses." The TS suggest changing "security analyses" to "reliability analyses" as security analyses is too specific and tends to have the connotation of a single contingency or implies use of a specific EMS analysis tool.

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments: The TS suggests adding: 1) either "and operating margins" or "and reserves" after the sub-bullet words - generation resource, 2) incorporate a "time" parameter (see 6. above), 3) what is the RA "coordinating" - summer studies, 5-yr, 10-yr, GADS performance data, if so then include the language into the requirement?

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

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.

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

Yes

No

Comments: First sub-bullet, the TS recommends the deletion of "within its Interconnection" - since the language does not add to the requirement. Other RAs, and other involved entities outside of its Interconnection should be granted access to the analysis if "lessons learned" can be beneficial.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

Yes

No

Comments: First sub-bullet, the TS recommends the deletion of "within the same Interconnection" - since the language does not add to the requirement. The requirement will read "If a generator or transmission outage will impact another RA"

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

Yes

No

Comments: The TS questions whether the "Prioritization of IT outages" requirement is a RA to RA coordination requirement. The TS could not conceptualize RAs prioritizing IT outages. The TS recommends either enhancing the requirement or deleting it.

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

Note – This form is to comment on version 2 of the Coordinate Operations SAR.

The latest version of this SAR (COORD_OPERATONS_01_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between February 14–March 17, 2003 to: sarcomm@nerc.com with “SAR Comments” in the subject line.

Please review the changes made to the SAR and answer the questions in the yellow boxes.

If you have any questions about this SAR Comment Form, please contact Tim Gallagher, NERC’s Director of Standards at 609-452-8060 or timg@nerc.com

Background

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SAR Comment Form for 2nd Posting of Coordinate Operations SAR

SAR Commenter Information (For Individual Commenters)	
Name	Roman Carter
Organization	Southern Co. Generation & Energy Marketing
Industry Segment #	3,5,6
Telephone	205.257.6027
E-mail	jrcarter@southernco.com

Key to Industry Segment #'s:

- 1 – Trans. Owners
- 2 – RTO's, ISO's, RRC's
- 3 – LSE's
- 4 – TDU (Transmission Dependent Utility)
- 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

SAR Commenter Information (For Groups Submitting Group Comments)		
Name of Group: <i>Southern Co. Generation & Energy Marketing</i>	Group Chair: <i>Roman Carter</i> Chair Phone: 205.257.6027	
List of Group Participants that Support These Comments:		
Name	Company	Industry Segment #
<i>Joel Dison</i>	<i>SCGEM</i>	<i>3,5,6</i>
<i>Tony Reed</i>	<i>SCGEM</i>	<i>3,5,6</i>
<i>Lucius Burris</i>	<i>SCGEM</i>	<i>3,5,6</i>
<i>Clifford Shepard</i>	<i>SCGEM</i>	<i>3,5,6</i>

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments: Are the RA's the only authorities who are required to coordinate or will other authorities be required to coordinate in other SARs. Also, since this SAR is speaking strictly to the RA function, you may want to rename the SAR to "Reliability Authority Coordination of Operations".

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

Under "Perform Generation Resource Avail. Analysis", over what time period is the analysis performed- day, week, month, or multiple years?

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: What does "document authority" mean? I'm assuming that you are recommending that it is the RA who is causing a problem will have the authority to act and that the standard should have this "authority" documented. If this is what is being stated, then I agree.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments: Language should be included to cover relaying schemes, hardware requirements, protective procedures, etc as a part of the requirement.

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

¹ The impacts in this SAR 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

Comments: The Reliability Authority cannot dictate changes to the Generator outage schedules. Also, over what time period does this analysis cover, i.e., real-time or over the next 12 months.

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes
 No

Comments: Are Security analyses the same as the Reliability analyses. Some would disagree. Therefore, the use of the word Reliability analyses should be used in both places.

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes
 No

Comments: Over what timeframe does the analysis performed cover.

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes
 No

Comments:

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
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 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes
 No

Comments: Do RAs coordinate IT outages with other RAs.

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes
 No

Comments: Is prioritizing "IT outages" from RA to RA a coordination requirement.

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

"other involved entities", "all involved parties"

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: The SAR should address the need to coordinate procedures among the impacted and impacting RAs to mitigate the problem. The SAR should also address the authority rights that the impacted RA has. What can the impacted RA do if the impacting RA does not take action? Does the impacted RA have the "right" via this standard to demand the impacting RA to take action?

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments: Define "all involved parties". Confidentiality needs to be taken into account.

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

- Yes
 No

¹ The impacts in this SAR 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

Comments: AEP generally agrees with this requirement. However, we believe this requirement should go even further and state that the RA is to analyze the impact of generation maintenance outages and approve said outages. The RA needs to have the authority to cancel work of a non-emergency nature when that work impacts the reliability of the grid, with impacting being defined as in note 1. This requirement also has to encompass all generators (ie. IPPs) not just utility generators.

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes
 No

Comments: The purpose of the analysis should also include the development of mitigation plans as appropriate. Additionally, it needs to be clear that the RA has the authority to cancel work based upon these analyses, if the result of the analyses is that proposed work could lead to instability, uncontrolled separation or cascading outages on the interconnected bulk transmission system. This requirement should be consistent with trading/scheduling practices of the region (must include a timeframe for region and include all generators)

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes
 No

Comments: Requirement is too vague. Additionally, the requirement should state what action the RA is to take if reserves are found to be inadequate.

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes
 No

Comments: A qualified no. We believe as worded the phrase "and other involved entities" is too wide open. Define "other entities." It needs to be qualified to indicate that results will be shared within FERC Code of Conduct guidelines, that is results will not be shared with PSE's and others engaged in the marketing function. What kind of results? - too vague - please explain. If the results are not just shared between RA to RA, then need confidentiality agreements.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes
 No

Comments: The requirement regarding IT outages is too broad. Suggested rewording: "If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) prevent a RA from performing a security analysis of their system, and, thus, potentially jeopardizing the interconnected bulk transmission system." What are the defined interconnection frequency limits? RA can get BA to give status of all generation and then communicate that information to RA.

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.

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

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 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes
 No

Comments: Need to expand on the prioritization of IT and transmission outages. What are the defined interconnection frequency limits?

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

- Yes
 No

Comments:

If yes, please identify what you feel should be added.

Timelines for doing analysis - should be consistent with time lines of market operations.

13. Is the revised SAR missing any requirements that should be added?

- Yes
 No

Comments: Both these SAR and the Certification of the Reliability Authority Function SAR are lacking in detail regarding providing a more consistent direction and interpretation of what security analyses and next-day assessments should entail. This was flagged as an area needing further clarification from the 2002 Reliability Coordinator Audits.

If yes, please identify what you feel should be added.

1) Coordinate confidentiality between RA and "other parties". 2) Transmission

switching which impacts the other RA. 3)The SAR needs to include a section on a dispute resolution process for the RA's.

14. If there are any requirements that you feel cannot be measured, please identify them here.

Comments:

FRCC COMMENT 3/17/03

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FRCC COMMENT 3/17/03

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

SAR Commenter Information (For Individual Commenters)

Name Linda Campbell for the FRCC

Organization FRCC Operating and Engineering Committee

Industry Segment #

Telephone 813-289-5644

E-mail lcampbell@frcc.com

Key to Industry Segment #'s:

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

FRCC COMMENT 3/17/03

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

SAR Commenter Information (For Groups Submitting Group Comments)		
Name of Group: <i>FRCC</i>	Group Chair: Chair Phone:	
List of Group Participants that Support These Comments:		
Name	Company	Industry Segment #
<i>Paul Elwing</i>	<i>Lakeland Electric</i>	3
<i>Marty Mennes</i>	<i>Florida Power & Light</i>	1
<i>Mark Bennett</i>	<i>Gainesville Regional Utilities</i>	3
<i>Roger Westphal</i>	<i>Gainesville Regional Utilities</i>	3
<i>Ben Sharma</i>	<i>Kissimmee Utility Authority</i>	3
<i>Richard Gilbert</i>	<i>Lakeland Electric</i>	3

FRCC COMMENT 3/17/03

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments: We understand that this SAR limits the requirements to the RA, but are not sure this is appropriate. The drafting team states that they assume that the data dissemination by the RA to lower level functions is addressed in other SARs. We are not sure that this is true. The related SARs listed in this SAR may cover some parts of coordination with lower level functions, but we are not convinced that everything is captured, especially since not all of the other SARs have not been fully developed. Why does the drafting team feel it is necessary to limit this only to RA's? Would it make more sense to cover all coordination of operations for all reliability functions?

In addition, there is still confusion between Reliability Authority and Reliability Coordinator which needs to be cleared up before this can be fully developed.

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments: The first requirement for documentation of authority is not really a reliability requirement. It is however, part of the criteria to be certified as an RA so may not be appropriate in this SAR.

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

see above

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

FRCC COMMENT 3/17/03
SAR Comment Form for 2nd Posting of Coordinate Operations SAR



FRCC COMMENT 3/17/03

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The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: See comment to question 2. In addition, if the drafting team determines to keep this, the wording needs to be refined to make sure that the requirement is for documentation and not for having authority. The authority to act should be covered in the criteria for RA certification.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments: The RA certification SAR already has a requirements for operating procedures and processes for normal and emergency operations. Wouldn't a unique operating procedure fit in one of those categories already? If so, it seems like the essence of this requirement is to share it with all involved parties. And sharing results of analyses is a requirement later in this SAR that could be expanded to include sharing of procedures as appropriate.

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

¹ The impacts in this SAR 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

FRCC COMMENT 3/17/03

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

6. Do you agree with this requirement?

Yes

No

Comments:

FRCC COMMENT 3/17/03

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments: However, the wording (shall ensure) may need to be clarified. When reading this, you could ask the question, "Who is performing the analyses, the RA, the TOP(s) or both?"

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments: However, this is somewhat open or broad. It says to analyze generation resource availability for its impact, but to what?

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

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.

FRCC COMMENT 3/17/03

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

No

Comments: See comment to question number 5. Also, any sharing of information wether it is results of analyses or data, shall be governed by the applicable confidentiality agreements.

FRCC COMMENT 3/17/03

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

Yes

No

Comments: This is the requirement that really made us wonder why is this limited to only RA's? The communication needs to be with other reliability functions such as the BA, TOP, TSP, generator and others as identified in the functional model.

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

Yes

No

Comments: We agree with the items in this requirement, but it should be combined with the requirement in number 10 above. Act with others is the heading, but the actions taken start off with communication.

FRCC COMMENT 3/17/03

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments: The FRCC requires the RA to follow our Security Process (Reliability Plan) which has additional requirements beyond this SAR.

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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The original SAR provided a brief description, but did not include many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The requested details have been provided in the revised SAR.

When developing this revised SAR, the SAR DT made the following assumptions:

- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
- Data needed by the RA is addressed through other SARs
- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

Yes

No

Comments:

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

No

Comments:

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

Yes

No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

Yes

No

Comments:

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments: ERCOT staff agrees with this requirement, but recognizes an Interconnection Difference. In a Single Point Of Control Interconnection, such as ERCOT, the RA will perform the analysis for its Interconnection, but will not be performing this requirement to look for impact on other systems as there are no other systems in the Interconnection.

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

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.

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes
 No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments: An explanation or clarification for Single Point Of Control Interconnections is needed.

If yes, please identify what you feel should be added.

For a Single Point Of Control Interconnection these requirements will be performed by the Single RA for the reliability of the Interconnection, but will only be coordinated with another RA for matters of schedules across a DC tie connecting two Interconnections when necessary.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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When developing this revised SAR, the SAR DT made the following assumptions:

- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
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- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
- Coordination required for Interchange is addressed through other SARs

The SAR DT asks that you review the revised SAR and respond to the questions in this comment form. If you have questions, you can contact the Director of Standards, Tim Gallagher in the NERC office. Tim can be reached at 609-452-8060 or at tim.gallagher@nerc.com.

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments: The scope is not clear on if this defines the RA activities, or should the scope address the coordination of responsibilities among all "Authorities"? There is a risk of multiple standards or standards creating conflicting or redundant requirements.

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

Need definitions for "generation resource availability" and "identified potential operating scenarios."

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

- Yes
 No

Comments: The paraphrased statement above is misleading as it left out the reference to "potential adverse impact." The header for this section should also be reworded to "Document the RAs Authority." A standard should also clearly state that it is (also) the responsibility and obligation of the RA causing the problem to take corrective action to mitigate.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

- Yes
 No

Comments: Development of the standard should not require the exchange of information that is NOT applicable; the standard should be appropriately worded to avoid requiring ALL RAs to implement some procedure or hardware "just because another RA has it."

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

¹ The impacts in this SAR 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

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

Yes

No

Comments: Should this requirement also apply to the scheduling authority? This should require coordination (or comparison) of proposed scheduled outages among interconnecting RAs.

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments: Is this requirement intended to imply use of specific EMS software ("Security Analysis") tools or be limited solely to real-time analysis? The requirement needs clarification. Is the standard intended to require the RA to perform the analysis as a substitute for the TO performing analysis, or to supplement that analysis?

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments: In what time-frame is the RA being required to perform the analysis? Is this intended to supplement longer term resource planning assessment that is the responsibility of the Planning Authority. Will this require the RA to become the vehicle for collection, analysis, and interpretation of GADS data?

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

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.

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

Yes

No

Comments: Sharing of results of studies should not be limited to "within its Interconnection."

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 - The RA shall notify other impacted RA's under the following circumstances:
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 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

Yes

No

Comments: Similar concern as #9 above.

The following requirement was added to the detailed description of the SAR:

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 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
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 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

Yes

No

Comments: NYISO is concerned with the implied scope of "IT outages" and the level of information. Generalizing certain forms of power system-related communication facilities under an "IT umbrella" might serve to "trivialize" issues like protection communication applications and forms of real-time metering.

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

There might be some discussion regarding the use of the term authority rather than requirement. Does using authority mean it is optional?

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- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

Yes

No

Comments: Consideration might also be given to requiring assistance to others under certain conditions.

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

Yes

No

Comments:

¹ The impacts in this SAR are those that if left unattended could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system

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7. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes
 No

Comments: Although this might be reworded: ... availability for reliability exposure

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes
 No

Comments: This might be worded to say appropriate entities or some such, particularly in light of confidentiality issues.

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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When developing this revised SAR, the SAR DT made the following assumptions:

- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments: The procedures should be drafted with the input and agreement of the affected neighbors.

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

Yes

No

Comments: Recommend additional wording in this requirement that all generator and transmission owners within an RA's footprint provide outage information coincident with the RA's planning cycles.

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

No

Comments: Would recommend wording that parties other than RAs that receive this information are subject to the terms of Appendix 4B or its successor documents.

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.

The following requirement was added to the detailed description of the SAR:

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 - The RA shall notify other impacted RA's under the following circumstances:
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 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments: See comments to earlier questions

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

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4. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
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6. Do you agree with this requirement?

Yes

No

Comments:

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 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

- Yes
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

- Yes
 No

Comments:

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

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- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
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 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
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 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments: In some cases, the SAR makes a point of saying "within an Interconnection". This is important in the case of ERCOT which has a single RA for the Interconnection. Where ties to an adjacent RA are through a HVDC Tie, coordination standards may not apply exactly as they do to synchronously connected RAs.

If yes, please identify what you feel should be added.

This will be driven by specific standards as to whether or not they apply across a DC Tie. In some cases they may while in other cases they may not.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

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- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
- Data needed by the RA is addressed through other SARs
- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
- Coordination required for Interchange is addressed through other SARs

The SAR DT asks that you review the revised SAR and respond to the questions in this comment form. If you have questions, you can contact the Director of Standards, Tim Gallagher in the NERC office. Tim can be reached at 609-452-8060 or at tim.gallagher@nerc.com.

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments: We do not agree with this modification to the scope of the SAR. Version 1 of this SAR was in keeping with the concept that "each entity's operations are coordinated", as stated in the Purpose. We do agree with the more general Purpose of Version 1 of this SAR. We are very concerned that interaction among all the entities contributing to the reliability of the the system will be lost with the separation of functions and requirements as envisioned in this SAR.

We note there were several comments suggesting Version 1 was too vague, or general, from several of the commentors. These few comments do not justify this significant change especially when many entities did not comment on the original Purpose; and non-comment could be interpreted as agreement. We were satisfied with the detail of Version 1 and felt no need to comment on the level of detail. We also believe many others were also satisfied and did not feel the need to comment.

Please return the Purpose of the SAR to the more general Purpose contained in Version 1.

If the Purpose remains limited, then the Title of this SAR must be changed to reasonably reflect the Purpose. A more descriptive Title would be "Coordinate Operations - Reliability Authority to Reliability Authority". This SAR has been limited to reflect RA to RA coordination and the Title should reflect that limitation.

Also, most of the entries in the Detailed Description relate to Requirements the RA must perform within its own reliability region, are not Requirements for RA to RA coordination and should be deleted from this SAR. Please see comments in response to questions below.

This SAR appears to have been written placing Requirements on the RA that the authors, and NERC, do not have the authority to place on the RA. We hope this perception is an unintended result of short-hand discussion techniques and the SAR will be changed. Please see the detailed comments below.

The new authors of this SAR should also make it very clear there is a new approach to the SAR development for "Coordinate Operations". They should make it clear there will be multiple SARs, the expected Title of each of the SARs, and when they think those SARs will be developed. In keeping with this RA to RA SAR, an example of one of the needed SARs would be a SAR for "Coordinate Operations - Balancing Authority to Balancing Authority".

2. Does this SAR contain any requirements that are not needed for reliability?

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

Yes

No

Comments: This SAR contains Requirements that are not needed for Reliability Authorities to Coordinate with neighboring RAs. Most of the entries in the Detailed Description relate to Requirements the RA must perform within its own reliability region, are not Requirements for RA to RA coordination and should be deleted from this SAR.

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

Please see comments in response to questions below.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

Yes

No

Comments: The authors and NERC do not have the authority to have this as one of the RA Requirements, as written. There is no "RA system". An RA performs reliability services for the Transmission Service Providers that contract with the RA for those services. Each TSP has Tariff provisions and requirements that dictate the terms, conditions and price under which that TSP may take action to mitigate reliability or commercial situations on another Transmission Service Provider's system, not the RA's system. Each TSP has contracts with each generator owner dictating the terms, conditions and price under which each generator will perform what actions for maintaining reliability.

We agree, each RA should document its authority for performing reliability services for each of the TSPs with which it has contracts. However, that document is a general document that should probably go to NERC offices and is not part of the RA to RA documentation.

What should be communicated between RAs is each TSPs Tariff provisions for mitigating reliability problems on another TSPs transmission system.

Therefore, for the purposes of this SAR, we suggest the following wording for this Requirement:

"Document Authority - The RA shall communicate to the other RAs for each of the interconnected TSPs with which the other RAs have contracted, those TSP Tariff and contract provisions under which each TSP may take action to mitigate reliability situations on the transmission systems of the TSPs of the other RAs."

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures

¹ The impacts in this SAR 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

- Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments: This Requirement appears to be new and not in keeping with the Functional Model, either the January, 2002 version, nor Draft 5: January, 2003 version. Per the Functional Model, RAs Develop Operating Reliability Limits, not "unique operating procedures". The RA "Coordinates reliability processes and actions with and among other Reliability Authorities."

We suggest this Requirement be replaced with the following:

"RA Coordination - The RA shall coordinate reliability processes and actions with and among other Reliability Authorities."

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

Yes

No

Comments: This Requirement does not belong in a SAR for the RAs to Coordinate Operations - RA to RA. Each RA performs these analyses but the analyses are not part of the RA to RA coordination.

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments: We think this SAR should not be limited to RA to RA. However, since it is limited to RA to RA, this Requirement does not belong in a SAR for the RAs to Coordinate Operations - RA to RA. Each RA performs these analyses but the analyses are not part of the RA to RA coordination.

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments: We think this SAR should not be limited to RA to RA. However, since it is limited to RA to RA, this Requirement does not belong in a SAR for the RAs to Coordinate Operations - RA to RA. Each RA performs these analyses but the analyses are not part of the RA to RA coordination.

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

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.

Yes

No

Comments: In general, we agree with this Requirement. However, the statements are too broad. Our concerns are: what are the analyses - the results of which are going to be shared, what entities are the results to be shared with "upon request", and the phrase "and other involved entities within its Interconnection".

We suggest the following Requirement to wholly replace the existing draft:

"Share Results of Analyses - The RA shall share the results of its system analyses, when conditions warrant, with Transmission Service Providers, Balancing Authorities, and other RAs."

Note: we included entities other than RAs so the needed sharing of results does not get lost in the multiple SAR development.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
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 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
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 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments:

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments:

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments: We believe none of these Requirements as specified can be measured. They all are subjective at this time. Significantly more detail is needed to make any of these "measurable". For instance, what is the "MEASURE" for "Share Results of Analyses"? Who decides what is meant by "when conditions warrant"? How is that measured?

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Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

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Yes

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Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments: What does the term "shall be developed, and distributed" mean? More description is need to clarify if the RA is simply going to develop procedures and force feed them to others, or develop them openly and jointly with transmission owner/operator and other RAs?

The drafting team must remember that it is simply illegal for some entities to give up any functional control to other – including those performing the RA function. Therefore the drafting team should be absolutely certain that the scope of this SAR does not develops such that a transmission owner or operator is required to receive authority or permission from the RA to perform functions delegated to them by their PSCs. For example, Transmission owners and operators may already have processes or procedures in place that conflict with the unique procedures developed by the RA. This SAR should make clear that in a situation like that, the RA does not have the authority to force the owner/operator to act in a way that conflicts with the rules set for him by his PSC.

¹ The impacts in this SAR are those that if left unattended could cause instability, uncontrolled separation or cascading outages that adversely impact the reliability of the interconnected bulk transmission system

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6. Do you agree with this requirement?

Yes

No

Comments:

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 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

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 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments:

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No

Comments:

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Comments:

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 - Prioritization of transmission outages
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11. Do you agree with this requirement?

Yes

No

Comments: Not all regions have a mechanism in place that allows an RA to implement any solutions. We currently work under the jurisdictional requirements that call for the transmission owner/operator to implement such a solutions.

12. Are you aware of any Regional or Interconnection Differences that should be included in this SAR?

Yes

No

Comments: Although regional difference may not exist, state and jurisdictional differences will.

If yes, please identify what you feel should be added.

13. Is the revised SAR missing any requirements that should be added?

Yes

No

Comments:

If yes, please identify what you feel should be added.

14. If there are any requirements that you feel can not be measured, please identify them here.

Comments:

Note – This form is to comment on version 2 of the Coordinate Operations SAR.

The latest version of this SAR (COORD_OPERATIONS_01_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between February 14–March 17, 2003 to: sarcomm@nerc.com with “SAR Comments” in the subject line.

Please review the changes made to the SAR and answer the questions in the yellow boxes.

If you have any questions about this SAR Comment Form, please contact Tim Gallagher, NERC’s Director of Standards at 609-452-8060 or timg@nerc.com

Background

The “Coordinate Operations ” SAR was posted for its first, 30-day public comment period from April 2, 2002 through May 3, 2002. Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees.

The original SAR provided a brief description, but did not include many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The requested details have been provided in the revised SAR.

When developing this revised SAR, the SAR DT made the following assumptions:

- The Reliability Authority function (RA) will sign a code of conduct and NERC Data Confidentiality Agreement as part of the RA Certification process
- Data needed by the RA is addressed through other SARs
- Data from the RA’s analyses is disseminated by the RA to its lower level functions and is addressed through other SARs
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The SAR DT asks that you review the revised SAR and respond to the questions in this comment form. If you have questions, you can contact the Director of Standards, Tim Gallagher in the NERC office. Tim can be reached at 609-452-8060 or at tim.gallagher@nerc.com.

1. The SAR has been revised to clearly state that the scope of activities covered is restricted to Reliability Authority (RA) to RA coordination. Do you agree with this modification to the scope of the SAR?

Yes

No

Comments:

2. Does this SAR contain any requirements that are not needed for reliability?

Yes

No

Comments:

If yes, please identify what you think is listed in this SAR but is not needed for reliability.

3. Are there terms used in this SAR that you feel should be defined?

Yes

No

If yes, please list the terms you feel should be defined and if possible, provide a draft definition:

Interconnection frequency limits

SAR Comment Form for 2nd Posting of Coordinate Operations SAR

The following requirement was added to the detailed description of the SAR:

- Document Authority
 - When one RA's system has had an adverse impact¹ on another RA's system, the RA that caused the problem shall have the authority to take actions (within its own RA Area) to mitigate the problem.

4. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Develop and Share Unique Operating Procedures
 - Unique operating procedures that address identified potential operating scenarios that may impact neighbor RA's or the Interconnection shall be developed, and distributed to all involved parties.

5. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Analyze Maintenance Outages
 - Analyze the impact of generation outages from a reliability perspective
 - Analyze the impact of transmission outages from a reliability perspective

6. Do you agree with this requirement?

Yes

No

Comments:

¹ The impacts in this SAR 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

The following requirement was added to the detailed description of the SAR:

- Perform Security Analyses
 - The RA shall ensure that reliability analyses (including but not limited to a day-ahead analysis) are performed for all Transmission Operators (TOP's) in its Reliability Area and that such analysis is coordinated with similar analysis performed by neighboring RA's. The purpose of these analyses is to look at the impact of one RA's system on other systems and to assure that the interconnected bulk power system can be operated in both anticipated normal and contingency conditions.

7. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Perform Generation Resource Availability Analyses
 - Each RA shall analyze generation resource availability for its impact

8. Do you agree with this requirement?

Yes

No

Comments:

The following requirement was added to the detailed description of the SAR:

- Share Results of Analyses
 - The RA shall share the results of its system analyses, when conditions² warrant, or upon request, with other RA's, and other involved entities within its Interconnection.

9. Do you agree with this requirement?

Yes

No

Comments:

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.

The following requirement was added to the detailed description of the SAR:

- . Communicate with Others
 - The RA shall notify other impacted RA's under the following circumstances:
 - If a generator or transmission outage will impact another RA within the same Interconnection
 - If outages of information technology (IT) systems (telemetry, communications, and/or control equipment or other information systems) impact the ability of one RA to receive/send data or voice communications
 - If the results of analyses or real-time conditions indicate potential or actual reliability problems
 - If the actual interconnection frequency is outside the defined interconnection frequency limits

10. Do you agree with this requirement?

- Yes**
 No

Comments:

The following requirement was added to the detailed description of the SAR:

- . Act with Others
 - Communicate with other RA's to identify and implement a solution to prevent/resolve actual/impending operating problems such as:
 - Reliability problems that can't be resolved through existing procedures
 - Interconnection frequency outside the defined interconnection frequency limits
 - Prioritization of transmission outages
 - Prioritization of IT outages

11. Do you agree with this requirement?

- Yes**
 No

Comments:

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Yes

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Comments:

If yes, please identify what you feel should be added.

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