

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

The latest version of this SAR (COORD\_INTERCHNG\_01\_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between August 29 – September 27, 2002, to: [sarcomm@nerc.com](mailto: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 questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

The “Coordinate Interchange” SAR was posted for a 30-day public comment period from April 2 through May 3, 2002. On July 2, 2002, the Standards Authorization Committee (SAC) appointed a team to address the industry’s comments submitted in response to the following questions asked about this SAR:

Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include: See below

The scope of the SAR should be reduced to eliminate:

**Other comments:** *With the industry trend of increasing the size of a Control Area/Balancing Authority maybe this SAR should address more than interchange transactions. With the increase size of Control Areas the industry will see an increased use of non-designated resources to serve network load. These transactions could have an effect on reliability with the schedule information not available for the model that performs the reliability assessments. This SAR is probably good for today's environment of relatively small Balancing Authorities but may not meet the requirements of the future with an increased consolidation of existing Control Areas. The bottom line is to have the right information from reliability assessments so appropriate action can be implemented when necessary.*

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

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We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

### SAR Commenter Information

Name Alan Boesch

Organization Nebraska Public Power District

Telephone 402-845-5210

Fax 402-845-5205

E-mail agboesc@nppd.com

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments I believe that market mechanisms are appropriate. However if market mechanisms are not able to meet reliability criteria then a backup system such as TLR has to be available.

Though “Interchange” could cover both scheduled and actual activity, the SAR Drafting Team’s initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes

No

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Comments Whatever information that is necessary to perform reliability assessments should be the focus of the SAR.

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments The central objective of this SAR is reliability assessments. That assessment may require more information than the Net Scheduled Interchange.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?	
8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?	
9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?	
<p>12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?</p> <p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?</p>	

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments As long as reliability is addressed the location of the requirements is inconsequential.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments If there is not real-time coordination it could lead to reliability problems

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments I do not know what you mean by exact. Schedules should be coordinated.

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate: The focus should be on IA functions, not BA functions

**Other comments:** *The Reliability Model anticipates a much different approach for coordinating and implementing interchange schedules.*

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange.

**(F5 for “slide show” view)**

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Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

SAR Commenter Information			
Name	Jim Byrd		
Organization	Oncor		
Telephone	(214) 743-6870	Fax	
E-mail	jbyrd@oncorgroup.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes

No

Comments The Reliability Model is based on a new paradigm for scheduling and coordinating Interchange Schedules and takes the BA (Control Area) out of that role. The Model places these functions in the IA role. Each Interchange Schedule, before going physical, goes through an approval process managed through the IA functions. This provides necessary reliability assessment, confirmation of transmission service from source BA to sink BA, coordination of ramping capabilities, coordination of implementation (and/or change/stop) of the schedule and notification of parties to the transaction. Net



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Schedule Interchange would be summed by the specific BA as the net of all separate schedules into or out of the specific BA and used to balance with its interchange meters.

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

Yes

No

Comments In the new paradigm, schedules are between the source BA and IA and the IA and sink BA. The old daisy-chain of source BA to interim BA to interim BA to sink BA for a single schedule will not exist. Continuity is provided through the transmission reservation from source to sink and TSP(s) work with interim BAs to satisfy loss needs via loss schedules or compensation. This central focus should be on standards for the IA functions. NOTE: In the preface to question 4, the BA does not give transaction information to the RA for security studies. This is an IA function.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule  Yes  No

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability  Yes  No

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request  Yes  No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

10.1. Request for approval of interchange transactions  Yes  No

10.2. Confirmation of interchange transaction  Yes  No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?

11.1. Approval/denial of schedule request  Yes  No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

Yes  
 No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover? IA should ensure the TSP has satisfied loss needs with interim BAs

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments While interchange certainly must be coordinated, this SAR has a singular focus of defining standards for the IA functions. Coordinate Operations has a much broader scope and wider range of needs.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences ERCOT has an Interconnection Difference by Legislative direction for retail choice. There are no transmission reservations requirements and generation/load schedules are part of the real-time competitive market.

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Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments IOS services are deployed by the BA. If they are provided to the BA via interchange schedule, then that aspect is covered in the above.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments Prior comments - agreements are not between BAs. Agreements are IA - BA and IA provides transaction information.

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes      No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

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<b>SAR Commenter Information</b>			
Name	Gordon Pietsch		
Organization	Great River Energy		
Telephone	763-241-2235	Fax	763-241-6262
E-mail	gpietsch@GREnergy.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments

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4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

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10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

- Yes
- No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?



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***Purpose/Industry Need***

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

***Brief Description***

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences

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15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments The Interconnected Operations Services should be covered in their own SAR.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes      No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

<b>SAR Commenter Information</b>			
Name	Andrew Fusco		
Organization	NCMPA-1		
Telephone	919-760-6219	Fax	919-760-6050
E-mail	afusco@electricities.org		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

- Yes
- No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

Yes

No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences Regional differences involving RTO market design may need to be considered prior to implementation of Standard Market Design (SMD) as proposed by FERC.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments



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Yes      No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

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**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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<b>SAR Commenter Information</b>			
Name	Guy Zito		
Organization	Northeast Power Coordinating Council		
Telephone	212-840-1070	Fax	212-302-2782
E-mail	gzito@npcc.org		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes

No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

Yes

No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

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10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
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12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

- Yes
- No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover? When considering transactions that are scheduled across seams between RTOs/ITPs and or ISOs the NERC Functional Model is unclear in who assumes the Interchange Authority function. NPCC feels this is a fundamental seams issue which needs to be coordinated with the resulting FERC SMD Order.

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**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences None

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 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

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16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

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Comments

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<b>SAR Commenter Information</b>			
Name	Vinny Budd		
Organization	NYISO		
Telephone	518-356-6072	Fax	518-356-6118
E-mail	vbudd@nyiso.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments

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2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments



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One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

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4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

- Yes
- No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover? An RTO/ISO actually carries out most of the functions defined in the Functional model. In the Northeast, the reliability checks including checks for ramp are carried out by the individual Reliability Authorities (now "Reliability Coordinators" I think). There probably could be some recognition of this in the Standard.

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13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
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Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences See comments above regarding role of RTOs/ISOs, in general. There are also differences in the type of competitive internal and external markets coordinated by the RCs. For instance, request for transaction approval in the NYISO is really a bid/offer that is economically evaluated. I think, however, the SAR as described, although not specific, does actually accommodate this process. Certainly, we should review the FERC SMD NOPR to ensure that no SAR strays from the direction FERC intends to take.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

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16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments It seems that the responsibilities described in this SAR would be adequate for real-time coordination, at least in the Northeast, as well.

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

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If you have questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

The "Coordinate Interchange" SAR was posted for a 30-day public comment period from April 2 through May 3, 2002. On July 2, 2002, the Standards Authorization Committee (SAC) appointed a team to address the industry's comments submitted in response to the following questions asked about this SAR:

Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate: possibility of direct requirements on PSEs and market participants that may conflict with market rules such as SMD business standards developed by NAESB

**Other comments:** *The NAESB WEQ will develop business standards for the implementation of transmission service as prescribed by the FERC Order on Standard Market Desig. This NERC standard must not impose restrictions or impediments to full implementation of that market design unless demonstrated to and agreed upon by NAESB. Although many of the requirements on PSEs and market participants have been eliminated in this revision, Reliant believes that PSEs will indirectly have to provide certain data for this reliability standard. Therefore, NERC must rely on NAESB to develop business standards for PSEs to provide any necessary data for the analysis of "interchange" as defined by NERC for reliability purposes.*

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

SAR Commenter Information			
Name	Charles Yeung		
Organization	Reliant Resources		
Telephone	713-207-2935	Fax	713-207-9142
E-mail	cyeung@reliant.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments Approval by NAESB is necessary for NERC to adopt standards that may impede or alter business standards developed by NAESB.

Though “Interchange” could cover both scheduled and actual activity, the SAR Drafting Team’s initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Comments The traditional analysis on a per-transaction or per-schedule basis may not be efficient or feasible with bid-based markets. PSEs operating in a bid-based market system will not have point-to-point type information available to submit as schedules for analysis. NERC should move towards more physical/electrical measurement means to analyze interchange between electrically connected and metered Balancing Authorities and abandon reliance on PSEs to provide individual schedule information to preform reliability analysis.

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

Yes

No

Comments However, PSEs in a bid-based market may not be able to provide the same level of information regarding transactions as currently done in a point-to-point market model. The ensuing questions no. 4 -11, seem to be predicated on the existing point-to-point type transmission service that easily identifies source and sink control areas for analysis of interchange. The positive responses provided to this set of questions should not be used by the Standards Drafting Team to infer that PSEs must provide same information to the Balancing Authorities, Interchange Authorities or any relevant functions of the Functional Model. These positive responses should be taken as only agreement that the stated functional authorities may be required to communicate such information - how such information is generated cannot be assumed to be provided solely from PSEs engaged in transactions.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?	
6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?	
7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?	
8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?	
9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?
12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes
- No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes      No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

<b>SAR Commenter Information</b>			
Name	Jim Cyrulewski (P.E.), Vice President Operations, International Transmission Company and Manager of the Michigan Electric Power Coordination Center		
Organization	On behalf of the Michigan Electric Coordinated Systems (MECS)		
Telephone	734-665-3628	Fax	734-665-3480
E-mail	cyrulewskij@dteenergy.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes  
 No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes  
 No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

Yes  
 No

Comments While the coordination of Net Scheduled Interchange is a key component two other issues must be addressed to assure that the required functionality is

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

provided. First, the treatment of dynamic schedules must be coordinated to complete the ACE equation and meet reliability objectives. Second, the supply of accurate data to the Reliability Authority is essential to support their reliability mission.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?
12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments Although the two are related in part, they each address different and specific functions.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences None



**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments Particularly the handling of operating reserves as interchange schedules.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

7.1.1. Comments Real-time coordination is an essential part of the treatment of dynamic schedules that this SAR should explicitly address.

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include: Measurement of implementation accuracy  
The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

<b>SAR Commenter Information</b>			
Name	Doug Hils		
Organization	Cinergy Corp		
Telephone	513-287-2149	Fax	513-287-3812
E-mail	Doug.Hils@cinergy.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments This is an area of great uncertainty moving under SMD, however if one viewed the SMD market in the future as fulfilling the role of the BA, then the CI SAR might be one that applies to setting the standard for coordination between SMD markets. Bilaterals that go to physical implementation across markets fall under this also. If Control Areas collapse into a much-larger Balancing Authority in the future, it is not known how the granularity is maintained, or other information passed between ITPs to assess transmission impact as is currently achieved under tagging.

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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standard? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Comments
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Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?	
9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<p>Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?</p>
<p>12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover? For delivery of self-provided losses to the TSPs along the path, who is the delivery to? Some RTOs have a way of internally allocating all self-provided losses to various BAs based upon the methodology TSP - would the TSP be viewed as a BA for this function if the IA is "dropping off" MW only to the TSP?</p>

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments Coordination of transmission operations is much different than coordination of energy schedules and primarily impacts different functions.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes
- No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments The CI SAR could enable the allocation and implementation of Operating Reserves - coordination of capacity and energy. I believe the flexibility to work with the market has to be in the process - if the market wants to work in a certain way, it might be necessary for NERC to define additional information that might have to be passed in the coordination process.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes
- No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes
- No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes
- No

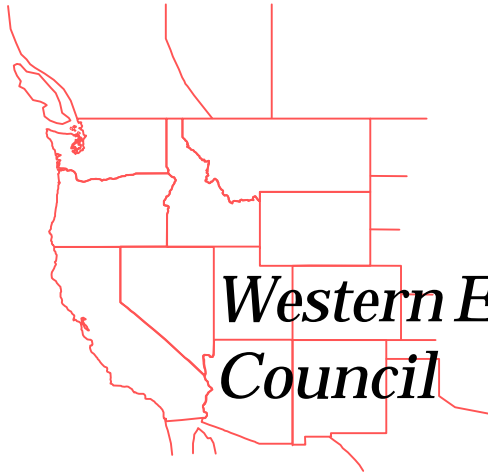
Comments I believe another reliability objective is to assure that information is passed

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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that will enable all parties to communicate interchange on a common basis.





# Western Electricity Coordinating Council

**STEVEN C. COBB**  
CHAIR

INTERCHANGE SCHEDULING AND ACCOUNTING  
SUBCOMMITTEE  
SALT RIVER PROJECT  
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September 28, 2002

NERC Standards Authorization Committee

The WECC Interchange Scheduling and Accounting Subcommittee (ISAS) has reviewed the proposed "Coordinate Interchange Transactions" Standard on behalf of the WECC. We find the basic concepts provided by the proposed Standard to be valid. However, we would like to provide several comments and recommendations for your consideration.

## 1. Terminology and Standardized Definitions

The SAR Drafting Team should ensure that the Standards consistently conform to NERC approved definitions. If the current definitions are not adequate or accurate, new definitions should be drafted and approved. This comment may initially be considered somewhat minor, however we believe it is very important. There is a significant difference in assessing an Interchange Schedule verses an Interchange Transaction.

The following terms are used throughout the SAR: Interchange Transaction, Interchange Schedule, schedule, and transaction. These terms seem to be used interchangeably.

Interchange Schedule and Interchange Transaction are defined NERC terms that have specific and unique meanings and requirements. We suggest that the SAR be reviewed to determine which term is appropriate in its respective context. We also suggest that if a term is being referenced, it be capitalized so the reader knows it is a defined term.

We have provided proposed modifications to the **Purpose/Industry Need** and **Brief Description** sections below. We have modified these sections based on our belief that they refer to Interchange Schedules. If they refer to Interchange Transactions, then additional reliability information needs to be confirmed between the Authorities and the Transmission Provider. This information should include where the Interchange Transaction begins, ends, and if the required transmission services (wheeling and ancillary) are adequate.

### **Purpose/Industry Need**

To ensure that the implementation of ~~transactions~~ [Interchange Schedules](#) between Balancing Authorities are coordinated by the Interchange Authority(s) such that the following reliability objectives are met:

- Each Interchange Schedule is checked for reliability before it is implemented
- The Balancing Authorities implement the Interchange Schedule exactly as [agreed upon in the Interchange Confirmation process](#) ~~scheduled~~
- [Interchange](#) Schedule information is available for reliability assessments

The changes above assume that we are conforming to the current definition of INTERCHANGE SCHEDULE - “The planned INTERCHANGE between two ADJACENT CONTROL AREAS (Balancing Authorities) that results from the implementation of one or more INTERCHANGE TRANSACTION(S).

“Interchange Transaction” could be substituted for “Interchange Schedule” if that was the intent of the SAR. The NERC definitions for Interchange Transactions are as follows:

TRANSACTION – “An agreement arranged by a PURCHASING-SELLING ENTITY to transfer energy from seller to a buyer.”

INTERCHANGE TRANSACTION – “A TRANSACTION that crosses one or more Control Area boundaries.”

### **Brief Description**

To ensure reliability related data pertaining to an ~~Interchange~~ [Schedule transactions](#) is verified and communicated to functional authorities. Reliability related data to be verified should include megawatt magnitude, ramp start and stop times, and the ~~Interchange~~ [Schedule's transactions](#) duration. Reliability related data should be communicated by and between the Interchange Authority, Balancing Authority, Reliability Authority, Transmission Service Provider, and Purchasing-Selling Entity functions.

Verification of data should indicate that a mutual agreement exists between parties that intend to implement a proposed ~~Interchange~~ [Schedule transactions](#) as well as approval by the appropriate functional authorities.

To provide a mechanism for transaction identification that could be used for congestion management and/or relieving operating limit violations.

## **2. Detailed Description Section**

The **Detailed Description** creates some confusion for us. Somewhere between steps 4 and 5, the “transaction” becomes an “interchange schedule.” In addition, isn't it possible that more than one Interchange Authority could be involved with an Interchange Transaction that travels through multiple Balancing Authorities? How would this modify the communication process?

Step 6 refers to “net schedules interchange.” If the intent was to use the defined term “Net Scheduled Interchange,” the term would be misused. Net Scheduled Interchange refers to a Control Area's (Balancing Authority's) Scheduled Interchange with the entire Interconnection, not just a single Control Area (Balancing Authority).

## **3. Emergency Conditions**

We assume that each SAR will include the pertinent information for maintaining the Standard under emergency conditions. The verification and/or implementation of an Interchange Transaction or Interchange Schedule under emergency conditions are significantly different than under normal

conditions. We find that the **Detailed Description** section of the SAR has no defined processes that would apply under emergency conditions.

**4. Regional Differences**

No regional differences are currently identified in the SAR. We realize that approved NERC Standards will eventually replace the current NERC Policies. The new Standards are being written to conform to the NERC Board of Trustees approved Functional Model. This model identifies an unbundled reliability environment operated by Authorities with defined responsibilities. These responsibilities are significantly different from those found in the current policies. e.g. Balancing Authority versus Control Area.

We believe the Reliability Functional Model responsibilities and processes are probably generic enough to accommodate basic reliability concepts. However, the WECC reserves the right to request waivers or other criteria specific to the needs of the Western Interconnection.

We appreciate your consideration of these comments.

Sincerely,

Steven C. Cobb

.xc Mark Fidrych  
Mark Meyer  
Jim McIntosh

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

The latest version of this SAR (COORD\_INTERCHNG\_01\_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between August 29 – September 27, 2002, to: [sarcomm@nerc.com](mailto: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 questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

The “Coordinate Interchange” SAR was posted for a 30-day public comment period from April 2 through May 3, 2002. On July 2, 2002, the Standards Authorization Committee (SAC) appointed a team to address the industry’s comments submitted in response to the following questions asked about this SAR:

Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

SAR Commenter Information			
Name	Raj Rana		
Organization	AEP		
Telephone	614-223-2359	Fax	614-223-2352
E-mail	raj_rana@aep.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes

No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

Yes

No

Comments

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

- Yes
- No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

Yes

No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences There may not be any regional differences but there could be interconnection differences that should be included in this SAR.



**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:** Attached

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

SAR Commenter Information			
Name	Steven C. Cobb		
Organization	SRP		
Telephone	602-236-3965	Fax	602-236-3808
E-mail	sccobb@SRPnet.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments Of course the answer to this question should be "yes." However, the development of market mechanisms should not delay the Standard from going into effect as soon as possible. The Standard may be modified later, as required, to integrate with approved market mechanisms. It will take some time for the market mechanisms to be developed. Reliability should not be impaired in the interim.

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments The SARDT should apply definitions consistently in the SAR. Please see the detailed comments from WECC.

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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- Yes  
 No

Comments Regardless of the number of Balancing Authorities in the future, the Coordination of Interchange between these entities is an integral part of load-generation balancing and operating the transmission system within its limits.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

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4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request

Yes    No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

10.1. Request for approval of interchange transactions

Yes    No

10.2. Confirmation of interchange transaction

Yes    No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?

11.1. Approval/denial of schedule request

Yes    No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

Yes

No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments Based on the broad scope of the Coordinate Operations SAR, one could argue that it could encompass all reliability criteria. If that is the case, it might as well become a NERC mission statement instead of a SAR. We need finer granularity than that in the SARs. The Coordinate Interchange SAR is an example of that granularity.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences The Reliability Coordinators in the Western Interconnection currently do not have the level of involvement as those in the Eastern Interconnection. The NERC Functional Model bundles responsibilities under several generic Authority entities. We understand that the same entity may perform multiple Authority responsibilities. However, the differences in responsibilities between the East and West can cause confusion when the SARs are applied. This problem will increase once some form of FERC Standard Market Design is implemented. We suggest that the right to request regional differences within a SAR be preserved until the full scope of industry changes and ensuing regional differences are known. Until that time, the Regions themselves must define the differences on behalf of their members.

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15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments The types of IOS the SAR should include is a product of the market environment the entities are operating in. The SAR cannot address this issue generically. For instance, in some regions the Balancing Authority may be totally responsible for Operating Reserve and Imbalance Energy requirements through markets it administers. In other regions, the PSE may be responsible for securing its own IOS. This issue is a good example why regional differences must be accommodated once the differences are defined in the future.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments Emergency coordination should also be specifically addressed.

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments Absolutely.

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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Comments The term "Exact" is relative. The entities should coordinate interchange within a defined range of accuracy that will ensure system reliability is not degraded.



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If you have questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:** *The SARDT has done a very good job of focusing this SAR on the what of the reliability issues related to coordination of interchange transactions.*

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

SAR Commenter Information			
Name	Edward Stoneburg		
Organization	Illinois Power Company		
Telephone	217-362-6363	Fax	
E-mail	edward_stoneburg@illinoispower.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes

No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

Yes

No

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

**Comments**

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---	---

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

10.1. Request for approval of interchange transactions

Yes  No

10.2. Confirmation of interchange transaction

Yes  No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?

11.1. Approval/denial of schedule request

Yes  No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

Yes

No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

***Purpose/Industry Need***

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

***Brief Description***

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments IP suggests that this SAR should address those IOS that can be self supplied.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments Can't answer this question as we are not clear which functions are being referenced that need to check and verify the data for agreement between BA's

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments If what is meant by this is standards related to changes in scheduled transactions in real time.

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

The latest version of this SAR (COORD\_INTERCHNG\_01\_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between August 29 – September 27, 2002, to: [sarcomm@nerc.com](mailto: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 questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

The “Coordinate Interchange” SAR was posted for a 30-day public comment period from April 2 through May 3, 2002. On July 2, 2002, the Standards Authorization Committee (SAC) appointed a team to address the industry’s comments submitted in response to the following questions asked about this SAR:

Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate: Emphasis on Balancing Authority requirements. Interchange Authorities have the responsibility to coordinate interchange in the new functional model.

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange.

**(F5 for “slide show” view)**

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

SAR Commenter Information			
Name	Kent Saathoff		
Organization	ERCOT		
Telephone	512-225-7011	Fax	512-225-7020
E-mail	ksaathoff@ercot.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes

No

Comments The function of implementing Net Scheduled Interchange between Balancing Authorities should be addressed in the Balance Resources and Demand SAR. The Interchange Authority is the prime function for coordination of interchange transactions and the Balancing Authority function is for physical implementation in the new Reliability model.

3. Do you agree that coordination of Net Scheduled Interchange between Balancing



**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Authoritites is a key component of reliabiity and a central objective of this proposed standard?

- Yes  
 No

Comments Coordination of Net scheduled Interchange is a key component of reliability, but it is the responsibility of Interchange Authorities, not Balancing Authorities in the new Reliability model.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?	
9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<p>Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?</p>
<p>12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?</p> <p><input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No</p> <p>If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover? Ensure requirements for losses are met.</p>

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences As a single Control Area (Balancing Authority) interconnection there are no true Interchange Schedules in ERCOT. The only Interchange is over DC ties which will have unique requirements.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments Balancing Authorities are one of the functions that must be provided data on interchange by the Interchange Authority, however there are no "agreements" between Balancing Authorities.

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

If you have questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

The “Coordinate Interchange” SAR was posted for a 30-day public comment period from April 2 through May 3, 2002. On July 2, 2002, the Standards Authorization Committee (SAC) appointed a team to address the industry’s comments submitted in response to the following questions asked about this SAR:

Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes      No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

SAR Commenter Information			
Name	Alan Johnson		
Organization	Mirant Americas Energy Marketing		
Telephone	(678) 579-3108	Fax	(678) 579-7726
E-mail	alan.r.johnson@mirant.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments This standard should focus on outlining/describing the information the IA requires from Service Functions and Operating functions, as applicable, in order to support reliability objectives. Only in the case of interaction between the IA and one of the Merchant Functions should the market participants, through the NAESB process, utilize market mechanisms to support the proposed reliability objectives. For example, the SAR can indicate that the source Generator must provide ramp rate information to the IA. It's NERC's responsibility to make this a standard. It should be up to the market participants, via NAESB, to determine the best way (business practice) to accomplish this task.

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments Assuming today's CA is the BA of tomorrow.

3. Do you agree that coordination of Net Scheduled Interchange between Balancing

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Reliability is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments Although coordination of net scheduled interchange is a key component of reliability, I don't believe that it is/should be the central objective of this standard. Under the functional model, the IA will only need to communicate with the source and sink BAs of the interchange transaction. The IA will need to communicate with any intermediary BAs regarding losses.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?	
8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?	
9.1. Approval/denial of transaction request	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?	
<p>12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?</p> <p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?</p>	



## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments Each proposed SAR has a distinct enough focus to warrant being separate.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences None

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments It should address the coordination of interchange transactions in both the scheduling time frame and real time. Per the functional model, the IA plays a key role in the curtailment process.

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments Within acceptable tolerances



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

If you have questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes      No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

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## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

SAR Commenter Information			
Name	Kenneth Githens		
Organization	Allegheny Energy Supply		
Telephone	412-858-1635	Fax	412-856-2912
E-mail	kgithen@alleghenyenergy.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

- Yes
- No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments However, many items are interrelated.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences



**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

The latest version of this SAR (COORD\_INTERCHNG\_01\_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between August 29 – September 27, 2002, to: [sarcomm@nerc.com](mailto: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 questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

The “Coordinate Interchange” SAR was posted for a 30-day public comment period from April 2 through May 3, 2002. On July 2, 2002, the Standards Authorization Committee (SAC) appointed a team to address the industry’s comments submitted in response to the following questions asked about this SAR:

Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:** *There is a requirement for this SAR under the context of a FERC 888 Tariffs to ensure that transactions are implemented in a reliable manner. The considerations and methodologies may be significantly different under a FERC SMD Tariff environment although the reliability principles to be addressed by the SAR should quite similar if not the same.*

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange.  
**(F5 for “slide show” view)**

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

SAR Commenter Information			
Name	Gerald Rheault		
Organization	Manitoba Hydro		
Telephone	204-487-5423	Fax	204-487-5360
E-mail	gnrheault@hydro.mb.ca		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes

No

Comments Information related to all schedules should be provided from the Interchange Authority to the Balancing Authorities implicated in the transactions

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

Yes

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

No

Comments The Coordination between the Balancing Authorities is coordinated by the Interchange Authority.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<p>Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?</p>
<p>12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?</p>

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

### **Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

### **Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments These two SARs cover different activities related to the use of the interconnected transmission facilities for delivery of energy from generation to load. They should be dealt with by separate SARs..

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments Any Scheduling activity related to IOS will dealt with by the Interchange Authority in a manner similar to any other Schedule.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments The real time coordination should be part of the activities that are covered in the Coordinate Operations SAR

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

If you have questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.



## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

SAR Commenter Information			
Name	Tom Hawley		
Organization	Wisconsin Electric Power Company (dba We Energies)		
Telephone	414-221-4500	Fax	414-221-4210
E-mail	tom.hawely@we-energies.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments Yes, but only to the extent that the benefits to be gained from market efficiencies exceed the costs of failing to maintain reliability of the interconnection. If we save \$1.00 by creating efficiencies through a more robust marketplace but the societal cost of reduced reliability (e.g., blackouts or the threat of blackouts) is \$1.25, then we haven't gained anything.

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments The focus should be broad enough to address today's structures/rules/tariffs as well as tomorrow's structures/rules/tariffs. Energy flows between control areas today may show up as schedules but under SMD/larger control areas the same flows may not show up as "schedules." Reliability entities need sufficient information to be able to effectively mitigate frequency issues and stability or thermal overloads on transmission elements.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments      Coordination of Net Scheduled Interchange between BAs is a key component of reliability but not necessarily the central objective of this proposed standard. The central objective of the proposed standard should be to ensure information about schedules/transactions/energy flows is provided to the reliability operator so proper steps can be taken to alleviate reliability issues.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?	
8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?	
9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?	
12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?	

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments But there is a need to ensure that the reliability coordinator receives the information needed in the timeframe required to be able to implement the appropriate relief actions required to alleviate transmission security events. The information provided has to be of sufficient quality to allow the reliability coordinator to take actions which are consistent with whatever market structures/rules/tariffs are in place. This would help ensure that the actions taken to preserve reliability are done in a way that addresses the desires of the marketplace.

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

---

Yes

No

Comments

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

If you have questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes      No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

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Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

The latest version of this SAR (COORD\_INTERCHNG\_01\_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between August 29 – September 27, 2002, to: [sarcomm@nerc.com](mailto: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 questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

The “Coordinate Interchange” SAR was posted for a 30-day public comment period from April 2 through May 3, 2002. On July 2, 2002, the Standards Authorization Committee (SAC) appointed a team to address the industry’s comments submitted in response to the following questions asked about this SAR:

Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes       No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

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## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

SAR Commenter Information			
Name	Ed Riley		
Organization	California ISO		
Telephone	(916) 351-4463	Fax	(916) 608-5906
E-mail	eriley@caiso.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments

Though “Interchange” could cover both scheduled and actual activity, the SAR Drafting Team’s initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes – See comments below  
 No

**Comments:** The CAISO agrees with this statement given the understanding that it is referring to the schedules between Balancing Authorities only.

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**NOTE: The CAISO wishes to clarify that Questions 4.1-4.4 refers to individual transaction schedules, and that “approved...interchange requirements” refers to properly tagged transactions.**

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**NOTE: The CAISO does not feel that the wording of Question 6.2 is clear enough to formulate a response.**

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

**NOTE: The CAISO believes that this data should be bi-directional, that is it should go from the Interchange Authority to the Balancing Authority as well.**

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

10.1. Request for approval of interchange transactions

Yes  No

10.2. Confirmation of interchange transaction

Yes  No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?

11.1. Approval/denial of schedule request

Yes  No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

Yes

No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

Yes

No

**Comments:** The CAISO feels that the subject matter of the SAR "Coordinate Interchange Transactions" is sufficiently important and complex to be a separate standard. However, we also feel that the two SAR's should reference each other, and/or incorporate mutual principle elements.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

**Regional Differences:** There are 4 regional differences already identified for the Western Interconnection in the Existing NERC Policy #3 "Interchange". They are: 1.) Ramp times (physical feasibility as well as timing and duration); 2.) Start time; 3.) Dynamic Schedules; and 4.) Inadvertent payback. In addition, there is the inherent difference in operating characteristics of the Western Interconnection and the Eastern Interconnection, such as Stability limitations in the West and Thermal limitations in the East. It is the assumption of the ISO that the NERC Organizational Standards would be written at a level that most Regional differences would be avoided in the OS and addressed in Regional policies and Commercial Business Practices.

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

**Comments:** In response to the first part of the question, the CAISO does not feel that the "Coordinate Interchange Transactions" SAR should be combined with the "Interconnected Operations Services" SAR.

In response to the second part of the question, YES, the CAISO feels that the lack of coordination of IOS presents a reliability concern, and should be addressed in a SAR.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments



## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

SAR Commenter Information			
Name	Francis Halpin		
Organization	BPA Power Business Line (WMF)		
Telephone	(503) 230-7545	Fax	
E-mail	fjhalpin@bpa.gov		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments Market mechanisms should be allowed to develop, but we must not lose sight of the dynamic nature of electric systems. System Operators must respond in the NOW. Market mechanisms must be set up to operate in an appropriate time frame. It is an unrealistic expectation to think the market will be able to respond in time to mitigate real time contingencies. Pre-crisis designation of the resources which will provide the capacity and energy necessary for maintenance or system stability is mandatory. The requirements set forth in the final iteration of this Standard should facilitate the use of resources by System Operators. They should not be a hindrance to that end nor should they be a hindrance to meeting the requirements of other Standards.

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Comments
3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Comments

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:	
4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?	
5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?	
6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?	
7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?	
8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?	
9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?	
<p>12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover? The "Generator" should be part of the coordination process. All interchange schedules must start with a generator as the source. Proper identification of the generator and it's location are needed to run power flow studies and to analyze the operational impacts of the interchange. Generators should be included in the scope of this standard or at the very least in the information path. described in preceding paragraphs.</p>	

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

**Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

**Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences I believe that the need for any regional differences will not manifest itself until the Standard takes on a somewhat less nebulous shape.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments Proper planning for the operational day/hour requires that the System Operator know where on the system the ability to "inc" or "dec" resources lies. We could envision this activity as "coordinating "potential" interchange". A resource pledged to provide reserves which is on the "wrong" side of a congested path will provide little help if called upon to mitigate a contingency. Regulation, Spinning Reserves, Supplemental Reserves, and Balancing Energy resources should be required to meet this Standard and should therefore be included in the scope of standard development process.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

Comments It is absolutely necessary that the requirements of this Standard assure that the System Operator can actually implement the actions necessary to meet other Reliability Standards.

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

---

Yes

No

Comments Precision is the nature of the electric system, resource must exactly meet demand. Balancing Authorities should be operating to the same schedule.

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

If you have questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

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Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes      No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:**

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange. **(F5 for “slide show” view)**

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

SAR Commenter Information			
Name	Albert M. DiCaprio		
Organization	PJM		
Telephone	610-666-8854	Fax	610-666-2297
E-mail	dicapram@pjm.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

- Yes  
 No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

- Yes  
 No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

- Yes  
 No

Comments The issue for Inter-regional reliability is that the producing area and the consuming area both know and implement a given transaction. One must be clear about

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

the phrase between Balancing Authorities. If the phrase were to only relate to between adjacent BAs then the Standard is not sufficiently flexible to handle non-traditional approaches.

The Functional Model properly addressed this point by looking at this activity from the view that BAs balance with IAs and not with each other. That of course allows for BAs to deal with one another in the traditional way (Note: the Model would interpret that to indicate that the two adjacent entities serve both as BAs and IAs).

The Model's concept that intra-BA transactions are matters for that RA and that BA properly allows commercial models to develop, models that are of commercial concern to the entities involved while at the same time maintaining interconnection reliability. The concept of Balancing Authority vs Control Area must be kept in mind. Both of these entities are defined by metering requirements and not by transaction models. Network transactions and internal dynamic scheduling is of no concern to this standard.

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?	
---	--

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?	
---	--

9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?	
--	--

10.1. Request for approval of interchange transactions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

10.2. Confirmation of interchange transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?	
--	--

11.1. Approval/denial of schedule request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?	



## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

### **Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

### **Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments Coordinate Interchange deals with transaction verification and their role in the ACE equation.

Coordinate Operations deals with the reliability Assessments of both transactions and all other aspects of interregional operations.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences None

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

Should Coordinate Interchange Transactions also cover coordination of certain Interconnected Operations Services (IOS) with the Balancing Authorities? Would the lack of coordination of IOS present a reliability concern that a SAR should address?

15. Do you think the Coordinate Interchange Transactions SAR should cover the coordination of Interconnected Operations Services?

- Yes  
 No

If you answered "yes" please provide more information to tell us which services you think should be included, and tell us why you think they belong in this SAR.

Comments This SAR deals with all transactions that cross borders. IOS in and of themselves are not reliability concerns - they are only tools for RAs and BAs to meet 's Reliability standards and therefore do not need NERC's scheduling oversight.

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

16. Should the proposed standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities?

- Yes  
 No

Comments

17. Should the proposed standard address the real-time coordination?

- Yes  
 No

7.1.1. Comments By definition that is what this standard is suppose to do.

18. Is one of the reliability objectives of the proposed standard to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

- Yes  
 No

Comments

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

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

The latest version of this SAR (COORD\_INTERCHNG\_01\_02) is posted on the Standards web site at: <http://www.nerc.com/~filez/sar-approved.html>

E-mail this form between August 29 – September 27, 2002, to: [sarcomm@nerc.com](mailto: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 questions, please call the Standards Process Manager, Maureen Long at 305-891-5497 or send a question to [spm@nerc.com](mailto:spm@nerc.com).

### Background

The “Coordinate Interchange” SAR was posted for a 30-day public comment period from April 2 through May 3, 2002. On July 2, 2002, the Standards Authorization Committee (SAC) appointed a team to address the industry’s comments submitted in response to the following questions asked about this SAR:

Look at SAR called: Coordinate Interchange

Is there a reliability-related need for an Organization Standard to be developed on this topic?

Yes  No

The scope of the SAR is fine as it is

The scope of the SAR should be expanded to include:

The scope of the SAR should be reduced to eliminate:

**Other comments:** Duke Energy (Duke Power and Duke Energy North American) believes that the SAR could be incorporated into the Coordinate Operations SAR. Duke Energy did answer all questions as if the SAR were to be a stand-alone Standard.

Comments were received from many different sources, including individuals, small and large utilities, groups of utilities, Regional Councils, and NERC Subcommittees. The original SAR did not provide many details and the comments submitted by Industry Participants indicated that the SAR needed more definition. The SAR Drafting Team (SAR DT) worked with the Requestor to try to clarify the purpose of the SAR and to ensure that the description supports that purpose. During the SAR DT discussions, several issues arose.

We have also included an attachment that demonstrates how to validate and implement schedules between the Reliability Functions of the Functional Model. You should review this document that will help explain the framework in which the Interchange Authority will coordinate interchange.

**(F5 for “slide show” view)**

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Your direction is appreciated on these issues. Let the SAR DT know what you believe **should be** addressed in the SAR and likewise, what you believe **should not be** addressed by addressing the 18 questions on the following pages.

SAR Commenter Information			
Name	David McRee		
Organization	Duke Energy Corporation (Duke Power and Duke Energy North American)		
Telephone	704-382-9841	Fax	704-382-0380
E-mail	damcree@duke-energy.com		

In the dawn of a new paradigm of transmission tariffs and tariff administrators, NERC should ensure that its standards do not impede on the ability for markets to meet NERC reliability criteria if the markets can do so in a reliable manner. Therefore, reliability standards must allow, to the extent possible, for market mechanisms to develop to support the reliability objectives of this proposed standard.

1. Do you agree that this proposed standard should, to the extent possible, allow market mechanisms to develop to support the proposed reliability objectives.

Yes

No

Comments

Though "Interchange" could cover both scheduled and actual activity, the SAR Drafting Team's initial discussions regarding this SAR focused on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today. Net Scheduled Interchange is a primary component of the Area Control Error (ACE) equation used to guide the real-time balancing of resources and load, and also used in the compliance calculations for the current Control Performance Standard and Disturbance Control Standard. Therefore, the SARDT believes that the coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective to this Standard.

2. Do you agree that this SAR should focus on Interchange as related to the multiple schedules that make up the Net Scheduled Interchange for a Control Area today ?

Yes

No

Comments

3. Do you agree that coordination of Net Scheduled Interchange between Balancing Authorities is a key component of reliability and a central objective of this proposed standard?

Yes

No

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

**Comments**

Industry participants asked that the reliability needs for this SAR be clarified. The SAR DT reviewed the Functional Model and identified the tasks that involve the coordination of interchange are reliability-related. From those tasks, the SAR DT identified the tasks contained in questions 3-10 as containing data needed to support reliability.

One of the purposes of this SAR is to ensure the BA has accurate transaction information to give to the RA so the RA can perform accurate security studies. This proposed standard could be limited to just the exchange of data between the BA and the RA or could be expanded to include the exchange of transaction data between other functions to ensure that the BA has correct data to hand off to the RA. (Questions 4 – 11 are all related to this issue.)

4. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Balancing Authority:

4.1. Requested MW amount	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.2. Start time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.3. Ramp duration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4.4. Approved/valid balanced interchange requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Transmission Service Provider?

5.1. Interchange transaction requests for approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

6. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Purchasing Selling Entity?

6.1. Approval/denial of transaction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6.2. Interchange transaction requirements	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

7. Should the proposed standard include requirements that the following transaction data be provided from the Interchange Authority to the Reliability Authority?

7.1. Request for approval of Interchange schedule	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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8. Should the proposed standard include requirements that the following transaction data be provided from the Balancing Authority to the Interchange Authority?

8.1. Confirmation of ramping capability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---

9. Should the proposed standard include requirements that the following transaction data be provided from the Transmission Service Provider to the Interchange Authority?

9.1. Approval/denial of transaction request	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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10. Should the proposed standard include requirements that the following transaction data be provided from the Purchasing Selling Entity to the Interchange Authority?

10.1. Request for approval of interchange transactions

Yes  No

10.2. Confirmation of interchange transaction

Yes  No

11. Should the proposed standard include requirements that the following transaction data be provided from the Reliability Authority to the Interchange Authority?

11.1. Approval/denial of schedule request

Yes  No

Should the Transmission Service Provider, Transmission Owner and/or other functions defined in the Functional Model have other requirements in the coordination process that were not identified in the above listing? If so, what are the reliability responsibilities these functions cover that the Balancing Authorities and Interchange Authority do not already cover?

12. Are there any other functions defined in the Functional Model that have requirements in the coordination process that should be included in the proposed standard?

Yes

No

If you think there are other functions that should have requirements, what reliability responsibilities do these functions cover?

## SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR

Several Industry Participants indicated that this SAR could be combined with the SAR for Coordinate Operations. The Coordinate Operations SAR's Purpose/Industry Need and Brief Description:

### **Purpose/Industry Need**

To ensure that each entity's operations are coordinated such that they will not have an adverse impact on the reliability of other entities and to preserve the reliability benefits of interconnected operations.

To ensure that each entity's operating information is shared with other entities whose reliability is or could be adversely impacted.

### **Brief Description**

Establish requirements for the coordinated planning, operations, and maintenance of the bulk electric system. This standard will include items such as data sharing, system conditions, procedures and studies.

13. Do you think the Coordinate Interchange Transactions SAR should be combined with the Coordinate Operations SAR?

- Yes  
 No

Comments As long as the significant issues encompassed by the Coordinate Interchange Transactions SAR are adequately addressed within the Coordinate SAR, Duke Energy would not be opposed to combination of the two SARs.

Some of the comments submitted by industry participants indicated that the SAR may need to address regional differences.

14. Identify any Regional Differences that you feel should be included in this SAR.

Regional Differences Duke Energy is unaware of any in our region, but if there were, the Standard should not take them into consideration.

**SAR Comment Form for 2<sup>nd</sup> Posting of the Coordinate Interchange SAR**

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Comments

Should the standard ensure that data is provided to those functions that need to check and verify the data for agreement between Balancing Authorities? The above statement assumes that the coordination can take place anytime before implementation, should the SAR also address real-time coordination. Is there a reliability objective to ensure that interchange is coordinated so that the affected functions are operating to the exact same schedule at the exact same time?

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 No

Comments

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- Yes  
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Comments

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- Yes  
 No

Comments