

Comment Form — Project 2007-18 — SAR for Reliability-based Control

Please use this form to submit comments on the proposed SAR for Reliability-based Control. Comments must be submitted by **June 13, 2007**. Please submit the completed form by e-mail to sarcomm@nerc.net with the words "RB Control" in the subject line. If you have questions please contact Gerry Adamski at gerry.adamski@nerc.net or by telephone at 609-452-8060.

Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Thad K. Ness	
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NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input checked="" type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input checked="" type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input checked="" type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input checked="" type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations and Regional Entities

Background Information

The NERC Operating Committee endorsed the adoption of the proposed Balance Resources and Demand Standards BAL-007 through BAL-011; however, the proposed standards did not pass when balloted in April 2007. The proposed standards were supported unanimously by all entities that participated in the field test of the draft standards, including Reliability Coordinators and Balancing Authorities; however, comments primarily provided by WECC and NPCC members indicated that transmission-related problems due to imbalanced operations should also be considered in the standards development.

The proposed SAR calls for retention of the already-drafted BAL-007 through BAL-011 and continued work in that area, along with including in its scope the transmission-related concerns of the WECC and NPCC, the short-duration frequency excursions associated with Interchange Schedule ramping, the transmission loading relief associated with load/resource balance after curtailment of Interchange Transactions, and the directives of FERC Order 693.

The purpose of the proposed SAR is to develop requirements to achieve the following objectives:

1. Maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 through BAL-011.)
2. Support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").
3. Prevent Interconnection frequency excursions of short duration attributed to the ramping of on- and off-peak Interchange Transactions.
4. Support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.
5. Address the directives of FERC Order 693.

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You do not have to answer all questions. Insert a “check” mark in the appropriate boxes by clicking the gray areas.

1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments: We already have sufficient Standards that, if enforced correctly would have an appropriate result

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: We already have sufficient Standards that, if enforced correctly would have an appropriate result

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: There needs to be enforceable requirements for Generator Operators to follow approved ramp profiles. The Interchange transaction standards need to address these requirements rather than the Balancing Resources and Load standards.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: There must be a mature market mechanism to implement load management effectively.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: Yes, the framework of the standards is in place, but standards and requirements need to address some gaps that don't provide the appropriate signals to all entities that contribute to these reliability concerns. However, we may kill the patient with the cure if we are not careful. We have been talking about many of these same issues for as long as Interchange has been happening.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments: None at this time

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
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NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
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To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

- Yes
 No

Comments: Studying frequency over the past 10 years with the CPS1 and CPS2 standards in place has shown no degradation of system frequency. There have not been instances of frequency-related instability due to control actions, DCS covers unplanned tripping of load and generation and during uncontrolled separation or cascading outages, no standard will keep frequency in bounds until things have settled out

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

- Yes
 No

Comments: In order for this standard to be acceptable, it cannot degrade reliability by allowing more unscheduled flow on constrained paths

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

- Yes
 No

Comments: This means that the standard will need to look at a sub-30 minute time frame for compliance since many of the excursions seen during the ramping are less than 30 minutes.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

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Yes

No

Comments: This is already addressed in other standards. The RBC standard could contribute to transmission congestion, but that was adressed in question 2 above

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments: We must always take into account FERC Orders.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: The current standards have proven to work over the course of time. There is a frequency component in CPS1 that has never been modified (Epsilon) even though that is allowed in the standard. If frequency is a serious concern, we should first look at using the tools in the current standards rather than creating a new one.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: Frequency Trigger Limit calculations are inadequate for WECC. This is in the writeup of the SAR so will be addressed.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: A field trial is not useful with a handful of participants. If the industry is determined to carry forward with this SAR and subsequent standard drafting, the field trial must be mandatory rather than voluntary. It would also be more appropriate to call this frequency-based control rather than reliability based control since that is the basis behind the SAR.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
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NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
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Yes

No

Comments: Yes. Duke Energy supports the concepts behind BAL-007 through BAL-011 and agrees with expansion of the field test to bring more Balancing Authorities under its scope to support the Interconnection frequency. However as the parameters are developed to address the transmission-related and short-term frequency excursion aspects of this proposed Standard, we need to build on the field test to add the additional parameters and those under the field test monitoring. As all Balancing Authorities who operated under the field test supported the adoption of the proposed standards, we believe it is important that more Balancing Authorities have the opportunity to evaluate their operation under the proposed standards and add to the reliable operation of the interconnected system by taking action when their ACE is impacting the Interconnection frequency beyond their Balancing Authority ACE Limit

As the majority of comments supported BAL-007 through BAL-011 and those not in support were primarily focused on transmission-related concerns of NPCC and WECC, Duke Energy would not support changes being made to BAL-007 through BAL-011 until work is done on the transmission-related areas of this SAR, with the exception of the work necessary to address the WECC-specific concerns on the selection of the frequency limits.

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: Though there are standards in place today to address actions to be taken by the Transmission Operator to relieve SOL/IROL problems, we believe that a "cap" on ACE could be determined in a balancing standard that clearly defines "excessive ACE" and limits the duration of operating in that area, as such operation could cause or contribute to an SOL/IROL problem, or otherwise burden its interconnected neighbors, no matter if the BA is supporting Interconnection

frequency. This standard should not attempt to address "loop flow" and other associated problems that could occur even when ACE is zero. This standard should address what the appropriate tradeoffs are between supporting the interconnection frequency, with perhaps less generation control at times and more at others, and not burdening the interconnected neighbors by unacceptable unbalanced operations.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: Based upon the significant impact the coincident behavior of multiple systems can have on the frequency at the two periods of the day cited, Duke Energy believes that this could pose a reliability problem and should be evaluated further as no balancing standard addresses the excursions specifically.

Duke Energy also supports that the standard should include in its scope the resources responsible for ramping appropriately within the BA Area to ensure that the BA doesn't have to utilize its Regulating and Contingency Reserves to balance its ACE due to the resource not following its ramp. Though the existing standards would support that the BA should evaluate all transactions against its ramping capability, and make adjustments as necessary to ensure that it can meet the expected ramp, we know that the best information may not be good enough if the resources associated with the transactions do not ramp appropriately in real-time. In other words, the BA may execute its plan exactly as required for evaluating its ramping capability yet still have problems if the resources do not deliver.

Any standards developed should require the BA to know their actual ramp capability at all times and to schedule their interchange accordingly. If BA knows that a change in schedules will exceed its ramp capability then a change should be required. These changes could include changing the ramp period of the schedule, modifying interchange to reduce ramp or bringing on more units to support the ramp.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: Duke Energy supports the further development of a standard that would support timely transmission congestion relief. The volume of transactions cut under TLR and expected time for relief need to be considered in the practical implementation of the standard.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments: FERC directives, including those in Order No. 693, must be addressed by NERC. However, FERC noted that it did not mandate particular outcomes in Order 693, but expects the ERO to respond with equivalent, fully supported alternatives. This is consistent with FERC's statutory authority in Section 215 of the Federal Power Act which requires that FERC "...give due weight to the technical expertise of the Electric Reliability Organization with respect to the content of a proposed standard or modification to a reliability standard..."

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: Duke Energy- The team should not try to solve the loop-flow issue.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: The criteria for the selection of the targeted frequency bounds may need to be different in the WECC given that non-firm load shedding at a higher Interconnection frequency is also in place.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments: We are not confident that the resulting Standard(s) will apply to Generator Operators and PSEs,

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: We believe that the focus of the drafting team should be on the new areas added to address the transmission-related concerns that have been noted and the short-term frequency excursions. The standards developed must not put the Balancing Authority, or the Reliability Coordinator, in the position where compliance with one standard could result in non-compliance with another, it is for that reason that we support the drafting of the standards fall under one team.

Under all circumstances that we have considered, balancing ACE to zero should always move the Balancing Authority into compliance under any of the proposed standards. This concept needs to be discussed further: can a Reliability Coordinator direct the Balancing Authority to "push" or "drag", or is it limited to directing correction action to not operate in a certain manner where balancing to zero ACE is an acceptable solution?

As the Reliability Coordinator has the authority under the field test to direct a Balancing Authority to cease operating under the field test for a period, we believe such direction should be reviewed after-the-fact with the Reliability Coordinator to understand the circumstances leading up to the RC directive being given and the criteria followed for determining when to allow the BA to begin operating under the field test again. We believe that it is important that the entities that voted against the BRD standard consider participating in the field test and SAR/Standard drafting to help drive the industry to an acceptable solution.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Denver York	
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E-mail:	denver.york@ekpc.coop	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
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Yes

No

Comments: Yes.

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

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Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: EKPC believes that frequency-related instability is important to address in a standard such as this. The work proposed by BAL-007 - BAL-011 addresses this issue directly instead of letting CPS2 address the issue indirectly.

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Name:	Howard Illian	
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NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
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The proposed SAR calls for retention of the already-drafted BAL-007 through BAL-011 and continued work in that area, along with including in its scope the transmission-related concerns of the WECC and NPCC, the short-duration frequency excursions associated with Interchange Schedule ramping, the transmission loading relief associated with load/resource balance after curtailment of Interchange Transactions, and the directives of FERC Order 693.

The purpose of the proposed SAR is to develop requirements to achieve the following objectives:

1. Maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 through BAL-011.)
2. Support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").
3. Prevent Interconnection frequency excursions of short duration attributed to the ramping of on- and off-peak Interchange Transactions.
4. Support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.
5. Address the directives of FERC Order 693.

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You do not have to answer all questions. *Insert a “check” mark in the appropriate boxes by clicking the gray areas.*

1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments: This is the primary goal of the balancing standards.

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: The TLR and other transmission reliability standards are currently blind to ACE error. As a consequence, it is possible for SOL/IROL violations to occur as a result of excessive ACE and cause the curtailment of commercial transactions without initiating steps to correct the ACE. This weakness in the current standards should be corrected. The current assumption is that CPS2 prevents the above from occurring, but careful investigation of the CPS2 requirement reveals that it could overconstrain unscheduled flows without benefit most of the time while allowing unscheduled flows to contribute to the above problem because it fails to constrain flows due to ACE in any manner as much as 10% of the time. The industry should be able to do better.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: The industry currently is using a statistically based control performance standard, CPS1. This standard allows maximum flexibility in control while still guaranteeing frequency based reliability. Although current operating history indicates that large frequency deviations are occurring during the ramping periods between on and off peak periods, analysis of the frequency density functions of the frequency error also indicate that these large frequency deviations are not outside

the expected Gaussian distribution of frequency error on the Eastern Interconnection. This indicates that these deviations are not causing reliability problems beyond what should be expected for the method of control performance measurement selected. The advantage of using a statistically based measurement control standard is that it allows the individual BAs to choose when it is most economic to manage reliability risk and still guarantee the desired level of reliability for the interconnection. Therefore, based on current information available, these frequency excursions are not causing unreasonable reliability risk at this time. However, one must keep an open mind on these issues because the data can change over time and a situation that is not currently contributing unreasonable reliability risk could do so in the future. More discussion and investigation of this issue needs to be performed so that the industry can arrive at a solid consensus on this issue.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: The above statement is not clear, but I do support the premise that ACE can contribute to the need for TLR, and therefore, TLR procedures should include the recognition that ACE contributes to the problem and may need to be adjusted or limited when TLR is implemented.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

- Yes
 No

Comments: Many of the directives in FERC Order 693 deserve to be answered in a clear and concise manner. Some of the directives have a solid reliability basis and should be implemented in some way in the standards. However, other directives indicate a lack of understanding by FERC about how current reliability standards are intended to support both reliability and market development. These later directives should have well supported position papers developed to educate FERC on the validity of those parts of the standards that should not be revised.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

- Yes
 No

Comments: I agree with the scope of this SAR when considered in conjunction with other SARs currently in progress. I expect that there will be interaction between this SAR, the Frequency Response SAR, and the other Balancing SARs currently under consideration. I will provide well supported detailed justification for those interactions when the specifics are considered as part of the Standards Development Process.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: Both ERCOT and Hydro Quebec are both single BA interconnections and require adjustments to the standards to recognize that fact.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

- Yes
 No

Comments:

9. Do you agree with the applicability section of this SAR?

- Yes
 No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Will Franklin	
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NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input checked="" type="checkbox"/> SERC	<input checked="" type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
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Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

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Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments: Based on the proposed issues to be addressed, it would appear that Transmission Operators may be an applicable entity.

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Doug Hohlbaugh	
Organization:	FirstEnergy	
Telephone:	330-384-4698	
E-mail:	hohlbaughdg@firstenergycorp.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input checked="" type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input checked="" type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
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Yes

No

Comments: FirstEnergy believes the proposed standards address improvements over existing control performance standards by enhancing frequency control.

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

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Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

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Yes

No

Comments:

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Yes

No

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E-mail:		
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Yes

No

Comments: FRCC contains the highest underfrequency load shedding set-points in the Eastern Interconnection and therefore supports maintaining frequency. We also support all the reliability concepts listed above.

Although, in our opinion, the existing Balancing and Transmission Operating standards already contain requirements that adequately address the items listed above and therefore there is not a reliability-related reason to support developing additional requirements.

We also understand that there are technical bases that support refining the frequency requirements of the Balancing standards as was proposed in the previously balloted BAAL standards. As a Region we had a mix of support for the standards and would encourage the DT that is pursuing the BAAL concept to address the core differences within the Balancing requirements and not try to address ALL periphery reliability requirements that may be encountered during the course of trying to balance generation to load.

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: The FRCC could not support the elimination of SOL/IROL violations that result from excessive ACE. The elimination of compliance implications would degrade Interconnection reliability by allowing an increase in exposure to transmission SOL/IROL risks caused by excessive ACEs, particularly in cases where frequency is within limits. Condoning IROLs when frequency is within limits goes against conventional operating practices and many NERC reliability principles.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: Ramping capabilities are addressed in existing interchange and balancing standards.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: This seems fundamental to "Balancing" and is already addressed within the standards. To try to address every potential variable that is experienced on the Interconnections and create a standard that addresses specific limits for specific scenarios will in our opinion lead to additional confusion within the operating standards (and in extreme cases cause delays in operator response).

The industry needs to get back to the idea of "matching generation (resources) and demand (load)". Granted, efforts at smoothing Interconnection frequency profiles by accelerating or delaying operator responses to balancing based on prevailing frequency seem appropriate but to standardize curtailment responses based on frequency seems counterproductive and fruitless due to the short durations of frequency excursions.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments: All FERC directives should be addressed within the Standards Process. In our opinion, in certifying NERC as the ERO, FERC is relying on the ERO to be responsive to its concerns. But its important to note that FERC has also expressed that an important facet of the ERO is its collective technical expertise at addressing reliability for the industry in an open and inclusive forum. There is an important distinction between addressing and incorporating directives.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: Scope is too broad and goes beyond the Balancing / Frequency concept that was initially proposed (in the failed ballot). Again trying to include every possible operating scenario and standardizing an operator response based on prevailing frequency will, in our opinion confuse and dilute existing reliability standards.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: None

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments: The scope is too broad to answer this question appropriately.

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: Trying to address interchange practices in order to clarify the perception of frequency related of events with respect to the BAAL field test seems inappropriate.

Entities are required to address schedule ramping capability and if balance can't be maintained, entities RESPONSIBLE for BALANCING should try longer ramp times or increasing ramping capability.

We appreciate the previous DT efforts at addressing FRCC concerns in the previous standard developed, especially with regard to maintaining DCS through the proposed implementation of BAAL.

Going forward we would suggest that the drafting team address an underlying issue that may have caused some ballot members to vote against the standard. Other than unintended transmission flows (which are addressed within existing standard requirements), it appears there is a perception of lack of equity on the part of smaller Balancing entities that needs to be addressed. Either a technical solution with regard to setting limits or additional field work and demonstration may be needed to make these standards the "right" reliability solution for the majority of the ballot pool.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Ron Falsetti	
Organization:	IESO	
Telephone:	905-855-6187	
E-mail:	ron.falsetti@ieso.ca	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
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Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: We do not fully understand this objective. We agree that BAL standards or requirements should be developed with due consideration to transmission reliability impacts such as to limit ACE as a means of reducing parallel flows that may result in SOL violations or transmission congestion. However, we do not support development of any standard requirements that would stipulate actions to prevent/mitigate SOL/IROL violations or relieve transmission congestions. Requirements to take such actions are currently covered by other more pertinent standards. Further, the BAL standards are applicable primarily to the Balancing Authority, who may not have the capability to monitor transmission loading, SOLs and IROLs.

While it is a worthwhile exercise to conduct field tests to assess whether any proposed BAL requirements (on frequency, etc.) can result in increased parallel flows or aggravated transmission loading to address WECC's and NPCC's concerns, developing requirements to support eliminating SOL/IROL violations appear to be outside of the scope of any proposed BAL standards.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: While developing requirements in this area, the SDT should look at cost implications to the industry by performing a cost benefit study for any proposed measure(s)

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: See our comments under Q2.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: Please see our comments under Q2 and Q4.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: None

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Kathleen Goodman	
Organization:	ISO New England	
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NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations and Regional Entities

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2. Support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").
3. Prevent Interconnection frequency excursions of short duration attributed to the ramping of on- and off-peak Interchange Transactions.
4. Support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.
5. Address the directives of FERC Order 693.

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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").

Yes

No

Comments: Change the statement to the following, as it seems to be too specific as presently written: "To the extent practical, minimize the adverse impact on transmission facilities caused by large ACE values."

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: This requirement should be applied to all peak periods. It is not clear whether the intent was that it would apply only to the on- to off-peak transition that is presently causing large frequency deviations.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: Change the statement to the following, as it seems to be too specific as presently written: To the extent practical, minimize the adverse impact on transmission facilities caused by large ACE values. With respect to the specific text about TLRs, it seems to cover the case when a TLR takes away energy from a Balancing Area that results in a large negative ACE. However, it does not seem to address the case that a large ACE is imminently causing a TLR to be called and which could be avoided by reducing the large ACE. Also, similar phenomena can occur due to over-generation. While it is a robust solution to directly address problematic large ACE values within the context of TLRs, it is not clear whether this would be technically or economically feasible, and approximate methods may be necessary.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: The transmission related solutions are too specific- they may be where it ends up, but, other solutions are possible and should be considered. Also, while not stated explicitly, as written the SAR seems to imply that the frequency model in the standard which was not approved would simply be carried forward. Subject matter experts have provided feedback on problem areas with the model, and it should not simply be carried forward. Instead, the standard development outcomes could be: (a) accepting the current model if it passes the appropriate sensitivity analyses for the previously stated concerns; (b) incrementally enhancing it by making empirical corrections for the previously stated concerns; or, (c) replacing it altogether with a more robust solution.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: For a single Balancing Area interconnection like Hydro-Québec Interconnection, BAAL-007-1 is not appropriate. Thus, Hydro-Québec TransÉnergie (HQT) should not be subjected to BAAL-007-1 requirements and so not be subject to compliance to that standards. BAAL-008 is the Standard that is more appropriate for HQT reliable operation.

The other standards like BAAL-008 to BAAL-011 would be applicable to HQT. Although, the frequency range (e.g. FTL, etc.) in some of the Standards would probably need to be different for Hydro-Québec Interconnection due to its asynchronous characteristics. HQT would be willing to participate in field test to gather more analytical data to evaluate reliability.

The SAR drafting team should specify if an Interconnection -wide Regional variance to that effect is necessary and if so, it should be included in the further developpement of these Standards. If there is another means to take into account these concerns, the SAR drafting team should indicate how.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments: Please refer to Q7.

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: While not stated explicitly, as written the SAR seems to imply that the frequency model in the standard which was not approved would simply be carried forward. Subject matter experts have provided feedback on problem areas with the model, and it should not simply be carried forward. Instead, the standard development outcomes could be: (a) accepting the current model if it passes the appropriate sensitivity analyses for the previously stated concerns; (b) incrementally enhancing it by making empirical corrections for the previously stated concerns; or, (c) replacing it altogether with a more robust solution.

While not actually part of the new SAR itself, the Standards Committee has approved the continuation of the field trial for the Eastern Interconnection until the new standard is approved. This seems very inappropriate. The industry by its own approved process has not approved the standard for (real or perceived or unanswered) reliability concerns. This action negates the process. The field trial should be continued with re-approval of the Operating Committee on a semi-annual basis after a comprehensive performance analysis has been reviewed by the Operating Committee. The only purpose that continuation of the field trial should serve is to gather more analytical data to evaluate reliability. Again note that adverse trends may take time to develop. For example, after the industry made the transition from A1 and A2 to CPS 1 and CPS 2, the historic epsilon 1 value of 10.6 mHz was virtually unchanged for the first two years. But several years later epsilon1 approached 15 mHz after many Balancing Areas detuned their systems. The overall interconnection performance may eventually become undesirable if many Balancing Areas significantly detune their systems to respect BAAL limits instead of CPS 2.

Since generation/load imbalances can simultaneously impact both frequency and transmission, the standard should address both together and not piecemeal them with separate balloting and approval. Given the interdependencies of reliable operations, continued reliability may be jeopardized by modifying existing reliability standards in a piecemeal fashion.

The reliability based Balancing Standard needs to be coordinated with other standards so that longer-term aggregate performance measures such as time error, inadvertent, and long -term integrated ACE are bound within reasonable limits. The previous Balancing Standard that was not approved, lacking CPS 2 bounds, did not limit ACE sufficiently through CPS 1 and BAAL limits when the DCS was not applicable.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Brian Thumm	
Organization:	ITC Holdings	
Telephone:	248-360-8486	
E-mail:	bthumm@itctransco.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: While elimination of SOL/IROL violations is a good requirement, it is unlikely that any significant number of such violations are actually caused solely by excessive ACE.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments: FERC Order 693 should not be tied to "reliability-related" reasoning. I think the directives need to be addressed, but not under the guise of reliability.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: If portions of the resulting Standards addressed by this SAR will be balloted separately, they should be identified up front and addressed by individual SARs.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
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E-mail:	jdepoorter@mge.com	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input checked="" type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input checked="" type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments: We feel that the BAAL concept as drafted in the original version of BAL-007 supports maintaining Interconnection frequency.

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: In general, we support the idea that short-duration frequency excursions should be prevented. However, this may be better addressed by correctly modeling ramp in determining NSI than including something in these standards.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: This is another important concept, however, it seems to be addressed by TLR and may not belong in these standards.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

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Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

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Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Craig McLean	
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Telephone:	204-487-5517	
E-mail:	cmclean@hydro.mb.ca	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input checked="" type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

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Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: Manitoba Hydro was part of the BAAL field test and was comfortable operating to BAL-007. Manitoba Hydro contributed to frequency regulation, minimized CPM2 violations and our inadvertent account has not been negatively impacted.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Jason L. Marshall	
Organization:	Midwest ISO	
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E-mail:	jmarshall@midwestiso.org	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations and Regional Entities

Background Information

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The proposed SAR calls for retention of the already-drafted BAL-007 through BAL-011 and continued work in that area, along with including in its scope the transmission-related concerns of the WECC and NPCC, the short-duration frequency excursions associated with Interchange Schedule ramping, the transmission loading relief associated with load/resource balance after curtailment of Interchange Transactions, and the directives of FERC Order 693.

The purpose of the proposed SAR is to develop requirements to achieve the following objectives:

1. Maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 through BAL-011.)
2. Support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").
3. Prevent Interconnection frequency excursions of short duration attributed to the ramping of on- and off-peak Interchange Transactions.
4. Support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.
5. Address the directives of FERC Order 693.

Please review the SAR and then submit your comments on this form and e-mail to sarcomm@nerc.net by **June 13, 2007** with the words "**RB Control**" in the subject line.

You do not have to answer all questions. *Insert a “check” mark in the appropriate boxes by clicking the gray areas.*

1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: A balancing standard should not try to address the loop-flow issue. If that is the concern, then generation to load impacts need to be uploaded to the IDC rather than ACE. If the goal is to address the presumed likelihood of a BA having unbounded ACE and somehow frequency remaining normal, then the standard should have some cap on ACE. Such a cap should be much larger than L10 as L10 does not mandate corrective action for all excursions and also allows very poor control in one direction to be corrected by very poor control in the other.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: We support this in general. Any standard developed should require the BA to know their ramp capability and to schedule their interchange accordingly (perhaps logging exceptions). The ramp capability should not be an arbitrary number that cannot be exceeded. For example, a BA can import more when load is ramping in coincident with the schedule change. If not properly crafted, this standard could have negative impact on reliability. It should not preclude a BA from importing a greater amount if it is experiencing a generation shortfall.

NERC could also allow a load-following schedule (something that ramps continuously through the hour), which would minimize excursions at the top of the hour.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: We believe this is already addressed in TLR. Can anyone provide an example where this has been a problem?

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments: The FERC Order is a legal document document to which the ERO must respond. However, it should not be pre-ordained that every item is addressed. The industry should not blindly pursue directives that may be in error, poorly thought out or where there are superior alternatives. There are things of questionable value in the Order and perhaps demonstrate a misunderstanding or miscommunication on the part of the FERC.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: We agree with the general scope. The corrective load/generation management in response to TLR schedule curtailments appears to be trying to fix something that has never been a problem. Even if it occurs, it probably is a violation of the TLR standard as the BA did not properly implement the curtailment. If something has to be done to deal with the supposed case where a BA could have an extremely large ACE with normal frequency, it would be preferable to put MW cap on BAAL (many times larger than L10 since response for all events is required, compared to 90% for CPS2). Regions could always ask for a smaller cap if there is a local issue.

The team should not try to solve the loop-flow issue unless it is a requirement to upload all generation to load impacts to the IDC.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: If this standard delves into loop flow, it should not conflict with RC joint operating agreements to manage flows on neighboring facilities.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: It is important for a large proportion of BAs to participate in any field trial of this standard, either directly or through the provision of data. If there is any directive to cease the field test, the reasons and circumstances should be documented. There should be a summary report of any reliability issues identified.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	James Castle	
Organization:	New York Independent System Operator	
Telephone:	518-356-6244	
E-mail:	jcastle@nyiso.com	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: The NYISO is interested in requirements that penalize for poor control performance that can aggravate unscheduled flows that result in SOL/IROL limits exceeded. The NYISO full appreciates that other standards exist that are specific to reacting to SOL/IROL limit violations. A requirement that limits excessive ACE will reduce the frequency of SOL/IROL limit violations caused by unscheduled flows.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: See our comments under Q2.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: Please see our comments under Q2.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: None

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Willaim H SeDoris	
Organization:	Northern Indiana Public Service Company	
Telephone:	219-853-5847	
E-mail:	whsedoris@nisource.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
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To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments: It is important that more BAs participate in the field trials. Those that are currently under the trials have supported the adoption of the proposed standards

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: This standard should address the balance between frequency support and not burdening the interconnection with unacceptable unbalance.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: BA should know their ramp capability and should schedule their interchange accordingly.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments: To the extent that the ERO identifies items that need addressed.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: NIPSCO is an original participant in the BAAL field trials and continues to operate under the trials. NIPSCO supports the continued development of the proposed "Balance Resources and Demand Standards BAL-007 through BAL-011"

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(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
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You do not have to answer all questions. *Insert a “check” mark in the appropriate boxes by clicking the gray areas.*

1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: Change the statement to the following, as it seems to be too specific as presently written: To the extent practical, minimize the adverse impact on transmission facilities caused by large ACE values.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: This requirement should be applied to all peak periods. It is not clear whether the intent was that it would apply only to the on- to off-peak transition that is presently causing large frequency deviations.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: Change the statement to the following, as it seems to be too specific as presently written: To the extent practical, minimize the adverse impact on transmission facilities caused by large ACE values. With respect to the specific text about TLRs, it seems to cover the case when a TLR takes away energy from a Balancing Area that results in a large negative ACE. However, it does not seem to address the case that a large ACE is imminently causing a TLR to be called and which could be avoided by reducing the large ACE. Also, similar phenomena can occur due to over-generation. While it is a robust solution to directly address problematic large ACE values within the context of TLRs, it is not clear whether this would be technically or economically feasible, and approximate methods may be necessary.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: The transmission related solutions are too specific- they may be where it ends up, but, other solutions are possible and should be considered. Also, while not stated explicitly, as written the SAR seems to imply that the frequency model in the standard which was not approved would simply be carried forward. Subject matter experts have provided feedback on problem areas with the model, and it should not simply be carried forward. Instead, the standard development outcomes could be: (a) accepting the current model if it passes the appropriate sensitivity analyses for the previously stated concerns; (b) incrementally enhancing it by making empirical corrections for the previously stated concerns; or, (c) replacing it altogether with a more robust solution.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: For a single Balancing Area interconnection like Hydro-Québec Interconnection, BAAL-007-1 is not appropriate. Thus, Hydro-Québec TransÉnergie (HQT) should not be subjected to BAAL-007-1 requirements and so not be subject to compliance to that standards. BAAL-008 is the Standard that is more appropriate for HQT reliable operation.

The other standards like BAAL-008 to BAAL-011 would be applicable to HQT. Although, the frequency range (e.g. FTL, etc.) in some of the Standards would probably need to be different for Hydro-Québec Interconnection due to its asynchronous characteristics. HQT would be willing to participate in field test to gather more analytical data to evaluate reliability.

The SAR drafting team should specify if an Interconnection -wide Regional variance to that effect is necessary and if so, it should be included in the further developpement of these Standards. If there is another means to take into account these concerns, the SAR drafting team should indicate how.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments: Please refer to Q7.

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: While not stated explicitly, as written the SAR seems to imply that the frequency model in the standard which was not approved would simply be carried forward. Subject matter experts have provided feedback on problem areas with the model, and it should not simply be carried forward. Instead, the standard development outcomes could be: (a) accepting the current model if it passes the appropriate sensitivity analyses for the previously stated concerns; (b) incrementally enhancing it by making empirical corrections for the previously stated concerns; or, (c) replacing it altogether with a more robust solution.

While not actually part of the new SAR itself, the Standards Committee has approved the continuation of the field trial for the Eastern Interconnection until the new standard is approved. This seems very inappropriate. The industry by its own approved process has not approved the standard for (real or perceived or unanswered) reliability concerns. This action negates the process. The field trial should be continued with re-approval of the Operating Committee on a semi-annual basis after a comprehensive performance analysis has been reviewed by the Operating Committee. The only purpose that continuation of the field trial should serve is to gather more analytical data to evaluate reliability. Again note that adverse trends may take time to develop. For example, after the industry made the transition from A1 and A2 to CPS 1 and CPS 2, the historic epsilon 1 value of 10.6 mHz was virtually unchanged for the first two years. But several years later epsilon1 approached 15 mHz after many Balancing Areas detuned their systems. The overall interconnection performance may eventually become undesirable if many Balancing Areas significantly detune their systems to respect BAAL limits instead of CPS 2.

Since generation/load imbalances can simultaneously impact both frequency and transmission, the standard should address both together and not piecemeal them with separate balloting and approval. Given the interdependencies of reliable operations, continued reliability may be jeopardized by modifying existing reliability standards in a piecemeal fashion.

The reliability based Balancing Standard needs to be coordinated with other standards so that longer-term aggregate performance measures such as time error, inadvertent, and long -term integrated ACE are bound within reasonable limits. The previous Balancing Standard that was not approved, lacking CPS 2 bounds, did not limit ACE sufficiently through CPS 1 and BAAL limits when the DCS was not applicable.

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Comment Form — Project 2007-18 — SAR for Reliability-based Control

Group Comments (Complete this page if comments are from a group.)

Group Name: CP9 Reliability Standards Working Group

Lead Contact: Guy V. Zito

Contact Organization: Northeast Power Coordinating Council

Contact Segment: 10

Contact Telephone: 212-840-1070

Contact E-mail: gzito@npcc.org

Additional Member Name	Additional Member Organization	Region*	Segment*
i			
	I		
i			
Ralph Ruffano	New York Power Authority	NPCC	1

*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

Background Information

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The proposed SAR calls for retention of the already-drafted BAL-007 through BAL-011 and continued work in that area, along with including in its scope the transmission-related concerns of the WECC and NPCC, the short-duration frequency excursions associated with Interchange Schedule ramping, the transmission loading relief associated with load/resource balance after curtailment of Interchange Transactions, and the directives of FERC Order 693.

The purpose of the proposed SAR is to develop requirements to achieve the following objectives:

1. Maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 through BAL-011.)
2. Support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").
3. Prevent Interconnection frequency excursions of short duration attributed to the ramping of on- and off-peak Interchange Transactions.
4. Support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.
5. Address the directives of FERC Order 693.

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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: Change the statement to the following, as it seems to be too specific as presently written: To the extent practical, minimize the adverse impact on transmission facilities caused by large ACE values.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: This requirement should be applied to all peak periods. It is not clear whether the intent was that it would apply only to the on- to off-peak transition that is presently causing large frequency deviations.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: Change the statement to the following, as it seems to be too specific as presently written: To the extent practical, minimize the adverse impact on transmission facilities caused by large ACE values. With respect to the specific text about TLRs, it seems to cover the case when a TLR takes away energy from a Balancing Area that results in a large negative ACE. However, it does not seem to address the case that a large ACE is imminently causing a TLR to be called and which could be avoided by reducing the large ACE. Also, similar phenomena can occur due to over-generation. While it is a robust solution to directly address problematic large ACE values within the context of TLRs, it is not clear whether this would be technically or economically feasible, and approximate methods may be necessary.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: The transmission related solutions are too specific- they may be where it ends up, but, other solutions are possible and should be considered. Also, while not stated explicitly, as written the SAR seems to imply that the frequency model in the standard which was not approved would simply be carried forward. Subject matter experts have provided feedback on problem areas with the model, and it should not simply be carried forward. Instead, the standard development outcomes could be: (a) accepting the current model if it passes the appropriate sensitivity analyses for the previously stated concerns; (b) incrementally enhancing it by making empirical corrections for the previously stated concerns; or, (c) replacing it altogether with a more robust solution.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: For a single Balancing Area interconnection like Hydro-Québec Interconnection, BAAL-007-1 is not appropriate. Thus, Hydro-Québec TransÉnergie (HQT) should not be subjected to BAAL-007-1 requirements and so not be subject to compliance to that standards. BAAL-008 is the Standard that is more appropriate for HQT reliable operation.

The other standards like BAAL-008 to BAAL-011 would be applicable to HQT. Although, the frequency range (e.g. FTL, etc.) in some of the Standards would probably need to be different for Hydro-Québec Interconnection due to its asynchronous characteristics. HQT would be willing to participate in field test to gather more analytical data to evaluate reliability.

The SAR drafting team should specify if an Interconnection -wide Regional variance to that effect is necessary and if so, it should be included in the further developpement of these Standards. If there is another means to take into account these concerns, the SAR drafting team should indicate how.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments: Please refer to Q7.

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: While not stated explicitly, as written the SAR seems to imply that the frequency model in the standard which was not approved would simply be carried forward. Subject matter experts have provided feedback on problem areas with the model, and it should not simply be carried forward. Instead, the standard development outcomes could be: (a) accepting the current model if it passes the appropriate sensitivity analyses for the previously stated concerns; (b) incrementally enhancing it by making empirical corrections for the previously stated concerns; or, (c) replacing it altogether with a more robust solution.

While not actually part of the new SAR itself, the Standards Committee has approved the continuation of the field trial for the Eastern Interconnection until the new standard is approved. This seems very inappropriate. The industry by its own approved process has not approved the standard for (real or perceived or unanswered) reliability concerns. This action negates the process. The field trial should be continued with re-approval of the Operating Committee on a semi-annual basis after a comprehensive performance analysis has been reviewed by the Operating Committee. The only purpose that continuation of the field trial should serve is to gather more analytical data to evaluate reliability. Again note that adverse trends may take time to develop. For example, after the industry made the transition from A1 and A2 to CPS 1 and CPS 2, the historic epsilon 1 value of 10.6 mHz was virtually unchanged for the first two years. But several years later epsilon1 approached 15 mHz after many Balancing Areas detuned their systems. The overall interconnection performance may eventually become undesirable if many Balancing Areas significantly detune their systems to respect BAAL limits instead of CPS 2.

Since generation/load imbalances can simultaneously impact both frequency and transmission, the standard should address both together and not piecemeal them with separate balloting and approval. Given the interdependencies of reliable operations, continued reliability may be jeopardized by modifying existing reliability standards in a piecemeal fashion.

The reliability based Balancing Standard needs to be coordinated with other standards so that longer-term aggregate performance measures such as time error, inadvertent, and long -term integrated ACE are bound within reasonable limits. The previous Balancing Standard that was not approved, lacking CPS 2 bounds, did not limit ACE sufficiently through CPS 1 and BAAL limits when the DCS was not applicable.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	David Kulisek	
Organization:	Omaha Public Power District	
Telephone:	402-514-1005	
E-mail:	dkulisek@oppd.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input checked="" type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input checked="" type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input checked="" type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations and Regional Entities

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Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments: Consider changing the default ramp rate for scheduled transactions from 10 minutes to 20 minutes or possibly longer for large schedules.

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: Being a relatively small steam-based system, it is extremely challenging to comply with the BAAL limits during large schedule changes. Steam units simply do not respond very quickly, and they have a relatively small regulating range, primarily due to emissions requirements. Ten-minute ramp rates are unmanageable for large schedule changes which usually occur during the transitions between off-peak and on-peak periods. The proliferation of wind generation adds a new challenge, with wind being erratic and unpredictable. However, our biggest challenge is responding to TLR events. We often get schedule changes of 300 MWS or higher due to TLR events. These changes come with little or no notice, and oftentimes, the curtailed transactions

will get "reloaded" the next hour. We have also seen TLR events cycle in and out - first a 300 MW cut, then everything gets reloaded, only to be cut again. It is not reasonable to expect BAs to meet the BAAL limits when TLR events are slamming extremely large schedule changes back and forth. We need to either figure out a better way to manage TLR events, or have some provision to exclude these time periods when determining compliance with the BAAL limits. We also need to change the default ramp rate from 10 minutes to at least 20 minutes.

For OPPD to comply with the BAAL Standard, we would have to start and stop combustion turbines very frequently (several times a day), we would have to significantly reduce off-system sales (which accounts for a very significant part of our revenue), and we would have to negotiate longer ramp periods for large schedule changes. Some of these measures would be very costly, and may not have that much impact on grid reliability.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: None

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments: None

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: None

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Christopher M. Turner	
Organization:	Seattle City Light	
Telephone:	206-706-0240	
E-mail:	chris.turner@seattle.gov	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
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Yes

No

Comments: Current standards handle this issue adequately

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: Current standards handle this adequately

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: Improvements are of course always supported in the reliability arena, but existing standards handle this better than this proposal will.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments: The blackstart directives are clear in the FERC order.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: This SAR is a recompilation of a recently defeated effort of the same BAL standards with a few slight changes. The registered ballot body spoke to those standards and they were voted down by a substantial percentage. We should be utilizing our finite resources on more pressing standards. There is a large body of experienced balancing authorities who are not convinced that this effort will improve reliability and indeed will harm reliability and the vote shows this, we're not sure why this is being forced through the process again.

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Yes

No

Comments: There are clear indicators that Eastern Interconnection frequency control is severely stressed during the 0600/2200 hour Peak Period boundaries. The fact that interconnection frequency runs consistently higher than setpoint frequency and that Time Error Corrections are called for frequently yet are not particularly effective is also troubling and indicative of problems with frequency control. We feel strongly that a set of standards is needed to control these problems. The requirement to avoid all unplanned tripping of load or generation is simply unrealistic. Equipment failures at a generating plant or on the transmission or distribution system will always cause some amount of unavoidable interruption..

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: Although theoretically possible, this situation appears to be very improbable. If it occurs, there are adequate transmission flow relief standards to take care of it

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: See question 1 above.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: Although theoretically possible, this situation appears to be very improbable.

However, if it does occur there do not appear to be any standards in place to mitigate the situation.

Any requirement to reduce excessive ACE following the curtailment of Interchange Transactions under TLR procedures should only be effective if that excessive ACE is contributing to an SOL/ROL violation.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: The increased scope of the SAR compared to the Balance Resources and Demand SAR gives the drafting teams sufficient latitude to respond to industry concerns.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: FRCC and NPCC may need regional variances due to the peninsular nature of their networks.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: Development of this SAR and the related standards is critical to the industry. It is, however, only one part of the picture and can not truly control frequency without the Frequency Response SAR that is being developed independently. It may be good to combine or at least link these two efforts into a coordinated whole. It also seems unrealistic to operate within pre-defined frequency limits for all abnormal system conditions. For example, it may be extremely difficult to accurately simulate in

advance a widespread weather-based disruption of service, such as might be caused by a flood, hurricane, tornado, etc.

Comment Form — Project 2007-18 — SAR for Reliability-based Control

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NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input checked="" type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input checked="" type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input checked="" type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input checked="" type="checkbox"/> SPP	<input checked="" type="checkbox"/>	7 — Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations and Regional Entities

Background Information

The NERC Operating Committee endorsed the adoption of the proposed Balance Resources and Demand Standards BAL-007 through BAL-011; however, the proposed standards did not pass when balloted in April 2007. The proposed standards were supported unanimously by all entities that participated in the field test of the draft standards, including Reliability Coordinators and Balancing Authorities; however, comments primarily provided by WECC and NPCC members indicated that transmission-related problems due to imbalanced operations should also be considered in the standards development.

The proposed SAR calls for retention of the already-drafted BAL-007 through BAL-011 and continued work in that area, along with including in its scope the transmission-related concerns of the WECC and NPCC, the short-duration frequency excursions associated with Interchange Schedule ramping, the transmission loading relief associated with load/resource balance after curtailment of Interchange Transactions, and the directives of FERC Order 693.

The purpose of the proposed SAR is to develop requirements to achieve the following objectives:

1. Maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 through BAL-011.)
2. Support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").
3. Prevent Interconnection frequency excursions of short duration attributed to the ramping of on- and off-peak Interchange Transactions.
4. Support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.
5. Address the directives of FERC Order 693.

Please review the SAR and then submit your comments on this form and e-mail to sarcomm@nerc.net by **June 13, 2007** with the words "**RB Control**" in the subject line.

You do not have to answer all questions. *Insert a “check” mark in the appropriate boxes by clicking the gray areas.*

1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments: SMA supported the previous proposal to adopt BAL-007 through BAL-011 and supports the current SAR. The proposed action outlined in the SAR appropriately requires control actions that truly support system frequency while reducing unnecessary control actions that have an adverse impact on system frequency and increase the cost of operating the interconnected system. The SAR accurately notes that the previously proposed BAL-007 through BAL-011 standards had widespread stakeholder support, and unanimous support among those that field tested the standards. The SAR should, as proposed, retain the BAL-007 through BAL-011 standards and work to address specific reliability based concerns raised in comments filed in opposition to those proposed standards.

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

Comment Form — Project 2007-18 — SAR for Reliability-based Control

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments:

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments:

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<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input checked="" type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
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Background Information

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The proposed SAR calls for retention of the already-drafted BAL-007 through BAL-011 and continued work in that area, along with including in its scope the transmission-related concerns of the WECC and NPCC, the short-duration frequency excursions associated with Interchange Schedule ramping, the transmission loading relief associated with load/resource balance after curtailment of Interchange Transactions, and the directives of FERC Order 693.

The purpose of the proposed SAR is to develop requirements to achieve the following objectives:

1. Maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 through BAL-011.)
2. Support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").
3. Prevent Interconnection frequency excursions of short duration attributed to the ramping of on- and off-peak Interchange Transactions.
4. Support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.
5. Address the directives of FERC Order 693.

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You do not have to answer all questions. *Insert a "check" mark in the appropriate boxes by clicking the gray areas.*

1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments: The statement above is already addressed in the current standards.

EOP-002-2 R5 states "A deficient Balancing Authority shall only use the assistance provided by the Interconnection's frequency bias for the time needed to implement corrective actions." This requirement is in effect at all times, not just when in a declared Emergency.

Additional actions are specified in R6 and R7 when unable to meet CPS performance standards. We feel this is the place that says you should always be striving to return ACE to within L10. You can't wait until the end of the month to see if you are not meeting the CPS standard and then take action!

This is where it prevents entities from "dragging 100's of MWs". If a schedule is cut by a TLR, you are still "deficient" and need to get back within limits.

The goals of preventing instability, uncontrolled separation and cascading outages are already in the standards. Why do we need to add "frequency related to this goal? Should we then add "line flow related" or "generator loss related" to the same goal?

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").

Yes

No

Comments: SOL/IROL violations need to be mitigated regardless of the origin. A large ACE is not the SOL/IROL violation, the associated flows or overloads are.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: This requirement already exists in INT-005-1.

R1 states: " Each involved Balancing Authority shall evaluate the Arranged Interchange with respect to"

R.1.1.2 "Ramp (ability of generation maneuverability to)."

The FRCC has gone to a 20 minute ramp between FRCC entities and have seen smaller ACE deviations since then.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: The statement above is already addressed in the current standards.

EOP-002-2 R5 states "A deficient Balancing Authority shall only use the assistance provided by the Interconnection's frequency bias for the time needed to implement corrective actions." This requirement is in effect at all times, not just when in a declared Emergency.

Additional actions are specified in R6 and R7 when unable to meet CPS performance standards. We feel this is the place that says entities should always be striving to return ACE to within L10. You can't wait until the end of the month to see if you are not meeting the CPS standard and then take action!

The industry needs to get back to the idea of "matching generation (resources) and demand (load)", not try to be able to "drag 100's of MW's" under the disguise of trying to help frequency.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments: Many of the recommendations are administrative in nature, such as adding measures or requiring the addition of words to provide clarification. While some will enhance security of the BES, they are not needed to achieve the current level of reliability.

The key ingredient is to follow the standards we have and get back to the idea of matching "resources and demand". If this had been done properly, the August 14, 2003 blackout would not have occurred.

Do I think the directives need to be addressed? Absolutely. I would not like to be the one entity that would tell FERC "No"! They are in control now, but there still needs to be a benefit to the reliability of the BES for the changes made.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: There is no "scope" section SAR. I assume the "Purpose" is the same.

What is "broke" with the current standards that we are trying to "fix"?

See answers above for each specific purpose comments.

Many of the items in the scope are already addressed in current standards. The push of this SAR appears to be to take another shot at passing the field tested BAAL standards so the larger entities with numerous generators can relax their control bands further and save money under the guise of "If frequency is okay, what does it matter?"

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: WECC - It appears that the discussion on page 5 of the SAR, that starts "As WECC may have other requirements, such as the prevention of under-frequency "non-firm" load shedding..." is being considered as a regional difference.

FRCC - The FRCC region is a peninsula with ties to SERC via SOCO only. Our import limit is a specific limit that would always trump the BAAL standard because even if we were to drag to help frequency, we would be in jeopardy of violating our import limit. This would penalize FRCC members by having to support the new requirements without getting the claimed benefit of being able to drag, as long as you aren't hurting frequency.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments: There should be a business practice of matching resources and demand, since it will apparently not be a part of this standard.

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments: One of the items discussed in the SAR is the frequency problems occurring during the on-to-off peak hour interchange schedules. A SAR potentially dealing with this aspect should indicate that it is applicable to the Interchange Coordinator and the Market Operator.

Additionally, the determination of SOL/IROL, and the removing of them, will directly effect the Transmission Operator, which is not checked as an affected party.

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments:

CPS1 and CPS2 are not the only standards that govern the reliability of the BES. Yes, it is possible to be compliant and still "hurt frequency". If a unit (or transaction) is lost, replace the MW or reduce load! The standards already prohibit leaning on the ties for an extended period. The standards already have provisions to force an entity to take action if they are contributing to an SOL/IROL.

Frequency is not the cure all that the previous tries to pass the "new" BAAL standards would have us believe. The benefit of "aiding frequency recovery" (slowing it down) is not enough of a benefit to allow this unequitable solution to progress. If resources do not match demand something has to change. Waiting for frequency to go low before doing something about it is not the answer.

Perhaps the change should be to tighten the DCS standard only. 80% of your largest unit is a big chunk and will effect frequency. IF this is dropped to a MUCH lower percent or a "common size", i.e. 100MW, you would see entities repositing faster to unit losses and getting back to the resource/load balance faster and having less impact on system frequency. This also would provide more "meaningful" data for analysis of reserve use and availability.

This SAR takes work from defeated standards (BAL-007 through BAL-011) and is trying to redirect the journey to get to the same result, approving BAL-007 through BAL-011.

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(Complete this page for comments from one organization or individual.)		
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<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
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5. Address the directives of FERC Order 693.

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You do not have to answer all questions. *Insert a “check” mark in the appropriate boxes by clicking the gray areas.*

1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: Change the statement to the following, as it seems to be too specific as presently written: To the extent practical, minimize the adverse impact on transmission facilities caused by large ACE values.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: This requirement should be applied to all peak periods. It is not clear whether the intent was that it would apply only to the on- to off-peak transition that is presently causing large frequency deviations.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: Change the statement to the following, as it seems to be too specific as presently written: To the extent practical, minimize the adverse impact on transmission facilities caused by large ACE values. With respect to the specific text about TLRs, it seems to cover the case when a TLR takes away energy from a Balancing Area that results in a large negative ACE. However, it does not seem to address the case that a large ACE is imminently causing a TLR to be called and which could be avoided by reducing the large ACE. Also, similar phenomena can occur due to over-generation. While it is a robust solution to directly address problematic large ACE values within the context of TLRs, it is not clear whether this would be technically or economically feasible, and approximate methods may be necessary.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: The transmission related solutions are too specific- they may be where it ends up, but, other solutions are possible and should be considered. Also, while not stated explicitly, as written the SAR seems to imply that the frequency model in the standard which was not approved would simply be carried forward. Subject matter experts have provided feedback on problem areas with the model, and it should not simply be carried forward. Instead, the standard development outcomes could be: (a) accepting the current model if it passes the appropriate sensitivity analyses for the previously stated concerns; (b) incrementally enhancing it by making empirical corrections for the previously stated concerns; or, (c) replacing it altogether with a more robust solution.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: For a single Balancing Area interconnection like Hydro-Québec Interconnection, BAAL-007-1 is not appropriate. Thus, Hydro-Québec TransÉnergie (HQT) should not be subjected to BAAL-007-1 requirements and so not be subject to compliance to that standards. BAAL-008 is the Standard that is more appropriate for HQT reliable operation.

The other standards like BAAL-008 to BAAL-011 would be applicable to HQT. Although, the frequency range (e.g. FTL, etc.) in some of the Standards would probably need to be different for Hydro-Québec Interconnection due to its asynchronous characteristics. HQT would be willing to participate in field test to gather more analytical data to evaluate reliability.

The SAR drafting team should specify if an Interconnection -wide Regional variance to that effect is necessary and if so, it should be included in the further developpement of these Standards. If there is another means to take into account these concerns, the SAR drafting team should indicate how.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments: Please refer to Q7.

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: While not stated explicitly, as written the SAR seems to imply that the frequency model in the standard which was not approved would simply be carried forward. Subject matter experts have provided feedback on problem areas with the model, and it should not simply be carried forward. Instead, the standard development outcomes could be: (a) accepting the current model if it passes the appropriate sensitivity analyses for the previously stated concerns; (b) incrementally enhancing it by making empirical corrections for the previously stated concerns; or, (c) replacing it altogether with a more robust solution.

While not actually part of the new SAR itself, the Standards Committee has approved the continuation of the field trial for the Eastern Interconnection until the new standard is approved. This seems very inappropriate. The industry by its own approved process has not approved the standard for (real or perceived or unanswered) reliability concerns. This action negates the process. The field trial should be continued with re-approval of the Operating Committee on a semi-annual basis after a comprehensive performance analysis has been reviewed by the Operating Committee. The only purpose that continuation of the field trial should serve is to gather more analytical data to evaluate reliability. Again note that adverse trends may take time to develop. For example, after the industry made the transition from A1 and A2 to CPS 1 and CPS 2, the historic epsilon 1 value of 10.6 mHz was virtually unchanged for the first two years. But several years later epsilon1 approached 15 mHz after many Balancing Areas detuned their systems. The overall interconnection performance may eventually become undesirable if many Balancing Areas significantly detune their systems to respect BAAL limits instead of CPS 2.

Since generation/load imbalances can simultaneously impact both frequency and transmission, the standard should address both together and not piecemeal them with separate balloting and approval. Given the interdependencies of reliable operations, continued reliability may be jeopardized by modifying existing reliability standards in a piecemeal fashion.

The reliability based Balancing Standard needs to be coordinated with other standards so that longer-term aggregate performance measures such as time error, inadvertent, and long -term integrated ACE are bound within reasonable limits. The previous Balancing Standard that was not approved, lacking CPS 2 bounds, did not limit ACE sufficiently through CPS 1 and BAAL limits when the DCS was not applicable.

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<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations and Regional Entities

Background Information

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The proposed SAR calls for retention of the already-drafted BAL-007 through BAL-011 and continued work in that area, along with including in its scope the transmission-related concerns of the WECC and NPCC, the short-duration frequency excursions associated with Interchange Schedule ramping, the transmission loading relief associated with load/resource balance after curtailment of Interchange Transactions, and the directives of FERC Order 693.

The purpose of the proposed SAR is to develop requirements to achieve the following objectives:

1. Maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 through BAL-011.)
2. Support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error ("ACE").
3. Prevent Interconnection frequency excursions of short duration attributed to the ramping of on- and off-peak Interchange Transactions.
4. Support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.
5. Address the directives of FERC Order 693.

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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments: Yes, TVA supports all the metrics and concepts associated with BAL-007 - BAL-011. We also support the extension and expansion of the proof of concept field trial.

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: We believe there is a need for direction in the BAL standards in regards to the BA's needed supportive actions during SOL/IROL events. We believe that the drafting team should help define excessive ACE and how it contributes to SOL/IROL violation. The standards should closely reflect the concepts and language of the IRO Standards. We believe that the standards should not address any concerns about "loop Flow" which can occur even when you have a zero ACE.

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: According to the INT Standards the BA is required to verify and approve the capability of his ramp and the energy profile for the schedule he is approving. There should be a measurement that requires the BA to remain within a certain percentage of his approved ramp change for that time period. There are also concerns that the BA could violate ramping standards to address TLR's.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

Comment Form — Project 2007-18 — SAR for Reliability-based Control

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: We believe the Reliability-Based Control Standards should focus on Frequency and ACE management. "Congestion Management" reflects a jump into the TLR process; due to the complexity, this should be a separate Standard.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments: we feel congestion management should not be included, therefore we don't agree with the scope of the SAR. However, we believe the other areas should be addressed in the SAR.

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments:

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: How about the drafting team considering a proposed limit within the BAAL limits that would be imposed during SOL/IROL events. This would maybe address concerns in regards to the BA's ACE contributing to flow problems.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments:

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments:

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: There is some language that is Eastern Interconnection specific (transmission loading relief). Please confirm whether the timely congestion relief will impact all interconnections.

Corrective load/generation change needs to be effective for the transmission loading relief required.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

- Yes
 No

Comments: Please specify which directives of FERC Order 693 are to be addressed.

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

- Yes
 No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance: The WECC RCCWG recognizes that if there are frequency thresholds, those thresholds may be interconnection specific.

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

- Yes
 No

Comments: On- and off-peak blocks of power need to be replaced by non-blocked products. There needs to be more flexibility within the hour for products to replace transactions curtailed for reliability purposes.

9. Do you agree with the applicability section of this SAR?

- Yes
 No

Comments: We believe that the TOP may need to be added to the applicability section for those requirements that would deal with curtailments.

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: The WECC RCCWG would like the SAR drafting team to consider instituting a formal NERC definition of a Reliability Coordinator Directive, and differentiate that directive from a Transmission Operator Directive. We believe the definition should state what an RD Directive is, who it can be issued by, and how it differs from a Transmission Operator (or Balancing Authority) directive. The group would like to assert that specific language should be used for a Reliability Coordinator, such as "This

is a Reliability Coordinator Directive,..." to differentiate and clarify that the directive issued is from a Reliability Coordinator.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	H. Steven (Steve) Myers	
Organization:	ERCOT	
Telephone:	512-248-3077	
E-mail:	smyers@ercot.com	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input checked="" type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs and ISOs
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1. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection.

Yes

No

Comments:

2. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”).

Yes

No

Comments: The actions taken to eliminate SOL/IROL violations probably should be stated in other standards. This standard could identify requirements to reduce ACE in balance between frequency control and contribution to flow distributions on the transmission system that contribute to SOL/IROL violations, but there must be a balance and, perhaps, an establishment of a priority of resolution; i.e., which problem is most important to solve, frequency off-normal or a limit violation?

3. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions.

Yes

No

Comments: ERCOT experienced a DCS event during the time in which a short-duration frequency excursion was occurring due to the ramping of on and off-peak Interchange Transactions. The units were ramping at maximum rate to try to accommodate the large changes in schedules. Because of this, there was no additional “response” in the units to restore frequency. As a result, ERCOT was unable to restore frequency within the timeframe of the DCS requirements and was charged with a DCS violation.

If market operations cannot occur within existing reliability requirements without causing frequency excursions that cannot be mitigated within existing reliability requirements, then the reliability standards must address the problem and establish requirements which must be met by those who are participating in market activities such as interchange transactions.

4. Do you think that there is a reliability-related reason to support developing requirements to address the following?

To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures.

Yes

No

Comments: This would seem to be similar to the scenario described in my comments to Question # 3 above.

5. Do you think that there is a reliability-related reason to address the directives in FERC Order 693 relative to the BAL standards?

Yes

No

Comments:

6. Do you agree with the scope of the SAR? If no, please identify topics you feel should be added or deleted, and provide an explanation for your recommendations.

Yes

No

Comments:

7. If you are aware of a Regional Variance that should be included in the scope of the SAR, please identify the variance below:

Variance:

8. Are you aware of any Business Practice that should be developed to support the work described in this SAR? If yes, please identify what the Business Practice should address.

Yes

No

Comments: See my comments to Question # 3 above. Perhaps coordination of the business practices by NAESB and the reliability requirements by NERC Standards would help to produce an improvement to reliable control.

9. Do you agree with the applicability section of this SAR?

Yes

No

Comments:

10. If there are any other comments you wish to provide the SAR drafting team that you have not already provided in response to the questions above, please provide them here.

Comments: