NERC

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Meeting Agenda

Transmission Loading Relief DT — Project 2006-08

December 10, 2008 | 9 a.m.–5 p.m. EST December 11, 2008 | 9 a.m.–noon EST Toronto Marriott Bloor Yorkville Toronto, ON Conference Call and WebEx Information on page 2

1. Administration

- a) NERC Antitrust Compliance Guidelines (Attachment 1)
- b) Introduction of Attendees
- c) Adoption of Agenda
- d) Approval of Meeting Notes (Attachment 1a)

2. Phase II Work

Field Test Report from Tom Mallinger

3. Phase III Work

- a) Discuss WECC referencing concerns in IRO-006-5
- b) Review Comments and Discuss Plans

4. "Parallel Flow Visualization and Mitigation for RCs in El" SAR Update on the SARDT's work from Frank Koza, Tom Mallinger, and Don Shipley

5. Future Meetings and Schedule Review

January 28–29 — 9 a.m.–5 p.m., 9 a.m.–noon Houston, TX at the NAESB Offices

6. Adjourn

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Conference Call Information:

December 10, 2008: Dial in: 732-694-2061 Conference Code: 1205121008

December 11, 2008: Dial in: 732-694-2061 Conference Code: 1205121108

WebEx Information:

http://nerc.webex.com Password: standards

NERC

Antitrust Compliance Guidelines

I. General

It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC's antitrust compliance policy is implicated in any situation should consult NERC's General Counsel immediately.

II. Prohibited Activities

Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference calls and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.



- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.
- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

III. Activities That Are Permitted

From time to time decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.
- Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

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NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Meeting Notes Transmission Loading Relief DT — Project 2006-08

September 29, 2008 | 1–5 p.m. September 30, 2008 | 8 a.m.–5 p.m. Marriott Orlando Airport Orlando, FL

1. Administration

a. NERC Antitrust Compliance Guidelines

Andy Rodriquez reviewed the NERC Antitrust Compliance Guidelines with meeting participants.

b. Introduction of Attendees

The following members and guests were in attendance:

- Jim Busbin, NAESB Co-Chair
- Ben Li, NERC Co-Chair
- Daryn Barker
- Jonathon Booe
- Barry Green
- Larry Kezele
- Frank Koza
- Tom Mallinger
- Nelson Muller
- Narinder Saini
- Ed Skiba
- Kathy York
- Andy Rodriquez

c. Approval of Agenda

The drafting team reviewed the agenda and made minor modifications. Ed Skiba moved that the modified agenda be adopted. The motion was seconded and passed unanimously.

d. Approval of Meeting Notes

The drafting team reviewed the meeting notes from the June 26–27 meeting and made minor modifications. Tom Mallinger moved that the

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meeting notes be approved as modified. The motion was seconded and passed unanimously.

e. Update on FERC NOPR and NERC's filing

Andy provided a brief update on the NERC response filing to the FERC NOPR on the TLR filing. NERC explained how it had indicated to FERC that the "sole remedy" aspects of TLR in the standard were due to the fact that TLR was an ongoing, reissued process, and that there was no real way to "halt" a TLR when facing an actual IROL.

2. Phase II Work (Field Test) Report

Frank Koza reviewed the presentation that had been given to the ORS related to the field test. The field test has largely been focused on external flowgates, since internal flowgates are addressed by other processes. The team now has data accumulated using a 5 percent threshold. The team also has met with the IESO to discuss their unique concerns.

It seems that a 5 percent threshold improves the rate of success, so long as the relief request is less than 20MW. When requests are larger, the efficacy drops significantly. IESO typically makes large requests, which has been impacting PJM. They have done this because they expect to not get a certain amount of relief, so they ask for more than they need.

The improvement in MISO at 5 percent is fairly obvious. In PJM, this seems to not be the case, but this is all based a specific IESO flowgate (9160) and the fact that flowgate was not defined correctly during a model update of the allocation engine. MISO had this same problem, but they had other events that "balanced out" their results; for PJM, all their events were based on this flowgate.

Daryn Barker pointed out the SPP results seemed to also contradict the "5 percent" results. Tom Mallinger and Frank explained that they use TLR differently, which may be part of the problem.

Frank pointed out there was also a problem in the way PJM "binds" their market. When they do so, it makes it somewhat difficult to redispatch, as their software does not recognize generators that "hurt less." In other words, it would not redispatch to bring on a 1 percent PTDF unit to replace a 5 percent PTDF. PJM is looking to modify their market software.

Frank gave an overview of agreements made with IESO to hopefully assist moving forward. IESO agreed that from now on, they will either use a local procedure **or** TLR, not local **and** TLR. IESO also agreed that they will not ask for more MW of relief than they need, and provide data for post-mortem analysis. Finally, IESO will look at entering into an agreement to specify "Safe Operating Mode" procedures. Other important factors include the fact that MISO is still required to implement down to 0 percent for the MSPP flowgates, and some problems with the Unconstrained Market Flow calculation. It looks like Marginal Zones are NOT the problem. Success criteria need to be finalized.

Tom indicated that given the changes they have been making to improve the process, we may need more data (Tom would like at least 50 events). Tom thinks the Field Test should be extended by at least 6 months, possibly a year. This is being pursued with the ORS and Standards Committee, PJM and MISO would need to request the extension be included in the FERC-filed seams agreements. Ben will try to get this pre-authorized for the Standards Committee' Executive Committee action, as the schedule is tight. Ben believes a year extension is more appropriate (due to seasonal patterns), and will work with Tom to move this forward. The SDT agreed that extending the field test for a year makes sense, and supports the request.

As a side note, MAPP has agreed that when their Seams agreement expires, they will sue a 3 percent threshold. Barry Green suggested that this may have impact on the Parallel Flow SAR, and will need to be considered at the same time.

There was some discussion on the elimination of the regional differences currently in the NERC and NAESB standards. Ed Skiba asked to review the steps. Will the end of the Field Test drive changes at NAESB? The team summarized that we would remove them from the NERC standards as a retirement with the next version of the standard. The TLRDT may wish to make a recommendation that the NAESB differences in the BPs be removed or modified based on the Field Test results. However, this may just need to be handled as a "minimum" threshold as we discussed (and optionally a maximum). If we created such a standard, this would probably make things easier, as it would communicate one or two "reliability" numbers to limit the business practices. If we don't have such a standard, then any recommendation we have would be largely advisory, and the BPs could set the threshold anywhere.

Larry Kezele pointed out that **if** the thresholds are changed, it would require an IDC change order, as well as FERC approval.

3. Joint Operator Manual Status

Ben Li reported on the SC approval of the Joint Operator Manual. The manual has been approved for posting, and Maureen will be posting it soon. Ben thanked Kathy York and Jim Busbin for their hard work on the manual.

4. Phase III Work

Andy Rodriquez presented the comment form and the Implementation Plan to the team. The team made modifications to the comment form and Implementation Plan. It was noted that we need a definition of Market Flow. Kathy provided a

definition based on the NAESB work. The SDT agreed that the PJM, SPP, and MISO waivers did not need to be in the new standards.

The team agreed to shoot for a 45-day posting target, starting on October 6^{th} . **UDPATE** — Due to excessive workload and NERC resource constraints, this was posted on October 30^{th} for 30-days.

The team discussed the term "Reallocation," and agreed that it did not need to be in the NERC glossary anymore. Reallocation is addressed within the NAESB standards, and is easily covered in existing language related to curtailments and reloads. The team agreed to recommend removal of the definition from the glossary.

5. "Parallel Flow Visualization and Mitigation for RCs in EI" SAR

Ben Li reviewed the current procedural state of the SAR. The OC has endorsed the SAR, and the SC has assigned it to the SDT as a "supplemental SAR" to our work. Ben has some concerns about the timing of the SAR, as we have some many other things going on right now.

Tom and Frank provided further discussion on the SAR. The issue of priority of generator flows from non-Designated Network Resources will be addressed at NAESB, rather than in this SAR, which will focus just on the reliability aspects of the effort. The SAR was modified to be clear than an RC could outsource these calculations to a vendor if desired.

The ORS and RCWG are looking for a business case to support the SAR that will include the costs to the RCs, costs of changing the IDC, and the benefits. Some other questions form the OC were who will pay for the IDC, and who will maintain the tool on an ongoing basis (NERC? Not sure)? If the costs are small (<\$50k), some of the RTOs may pay the cost.

Tom indicated that Lanny had been named to the SARDT. **UPDATE** — This may change, as Lanny has indicated that he was assigned to the SARDT erroneously. Don Shipley should be the SARDT member, per Lanny.

There was some question whether we really need a standard on this or not. Maybe we only need a data requirement of some kind? However, by putting it into a standard, it would level the playing field and ensure all entities have to support the data needs.

From a timing perspective, the SARDT should plan on posting the SAR after the Phase III posting. Frank, Tom, and Lanny (or Don) will work on drafting the business case, the next revision to the SAR, and the comment form to be presented at the next meeting. The ORS may be presented the business case



before the SDT, and the IDCWG may be asked to think about this in advance of our next meeting as well.

6. NAESB Coordination

Jim Busbin and Kathy York provided a review of the NAESB Annual Plan recommendation related to this team's work.

Jim Busbin provided a brief overview of the current efforts at NAESB to address discrepancies between the old NERC standards and the new NAESB business practices. Currently, there is a conflict between TLR 5B and 3B and reallocation.

7. Future Meetings (Italics not confirmed)

December 10–11 — 9a.m.–5 p.m., 9 a.m.–noon in Toronto, ON at the Marriott Bloor Yorkville January 28–29 — 9 a.m.–5 p.m., 9 a.m.–noon in Houston, TX at the NAESB Offices

8. Adjourn

The drafting team adjourned at approximately 10:55 a.m. on September 30, 2008.

Market Flow Threshold Field Test Results



Joint Stakeholder Meeting November 14, 2008





Reason for Change in Threshold

- Market flows are assigned an amount of relief by the IDC based on level of TLR, amount of curtailment requested and the priority of tags relative to market flows.
- On some flowgates, Midwest ISO and PJM are unable to consistently accomplish their relief where they have very small impacts.
- On some flowgates, the markets will either have no generation they can move or will require a large amount of redispatch for a small amount of relief.





Market Flow Threshold Field Test

- NERC Standards Committee (SC) approved a market flow threshold field test involving Midwest ISO, PJM and SPP
 - Objective of the field test is to determine a market flow threshold that will allow the three markets to meet their relief obligations during TLR.
 - The NERC TLR Standard Drafting Team (SDT) is responsible for the field test and for any changes that will be made to the regional difference following the end of the field test.
 - The NERC Operating Reliability Subcommittee (ORS) monitors the field test for any reliability impacts that may require suspending the field test.
 - The field test results are being reviewed by the NERC ORS Market Flow Threshold Task Force. Status reports are provided at NERC ORS meetings and NERC TLR SDT meetings.





Market Flow Threshold Field Test

- Field test has been underway since June 1, 2007. PJM first to report 3% market flows to IDC. SPP joined October 1, 2007. Midwest ISO joined field test on November 1, 2007.
- Because MAPP companies oppose the field test, Midwest ISO continues to use a 0% threshold on flowgates that are reciprocal with MAPP.
- Based on field test results that indicated a 30% success rate using a 3% threshold, NERC SC approved increasing the threshold to 5% on June 1, 2008.
- Based on limited field test results for external flowgates, NERC SC approved extending the field test from October 31, 2008, to October 31, 2009.





Three Factors That Limit Sample Size

- 1. Only including TLR events on external flowgates (non-Midwest ISO and non-PJM)
 - Internal flowgates are impacted by the markets managing total flow.
 - Internal flowgates are impacted by the M2M process.
- 2. Not using SPP results to make a recommendation.
 - SPP has a sample size of 743 hours where SPP has a relief obligation using a 5% threshold on external flowgates.
 - SPP energy imbalance market operates differently than the Midwest ISO and PJM energy markets.
 - SPP continues to tag some of its inter-BA flows that are not included in the SPP market flows.





Three Factors That Limit Sample Size

- 2. Not using SPP results to make a recommendation (continued)
 - While we track SPP results, we do not plan to use these results to make a threshold recommendation.
- 3. Midwest ISO has a sample size of 563 hours on external flowgates using a 0% threshold from January 1, 2008 to September 28, 2008.
 - Midwest ISO continues to use a 0% threshold on external flowgates that are reciprocal with MAPP.
 - The threshold on these flowgates will change to 5% on January 1, 2009.
 - An attempt to evaluate the impact of meeting the relief obligation compared with a 5% market flow did not produce meaningful results.





Majority of External Flowgates Are Owned by IESO

- Met with IESO on August 30, 2008, to discuss the large amounts of relief requested on IESO flowgates (up to 2000 MW) which has resulted in Midwest ISO and PJM relief obligations exceeding 20 MW (got as high as 300 MW)
- IESO has agreed to take three steps that will reduce the amount of relief requested
 - IESO will continue to use local procedures with NYISO or TLR but not both.
 - IESO will no longer include a buffer in their relief request and will provide post-event information to the markets to better understand the issues.
 - IESO will be able to call for Safe Operating Mode procedure from Midwest ISO and PJM if a problem occurs.





7

Firm Flow Limit on External Flowgates

- How Midwest ISO and PJM determine the firm flow limit on external flowgates affects the ability to meet relief obligation
 - The markets are reviewing process to only include the transfer component of market flows in the non-firm bucket.
 - This issue could eventually be resolved by NAESB under the Parallel Flow Visualization/Mitigation SAR that has been submitted to NERC.





Other Factors Affecting Meeting Relief Obligation

- Use of marginal zones by Midwest ISO and PJM may result in very large next hour tag impacts that cause very large relief requested amounts when in TLR. Midwest ISO to revise the marginal zone process in December 2008.
- A large number of Midwest ISO TLR events involve MAPP flowgates that continue to use a 0% threshold. Flowgates reciprocal with MAPP will begin using a 5% threshold for TLR on January 1, 2009.
- Midwest ISO and PJM hold market flows down to 0% even when the relief obligation from the IDC is based on a 5% threshold.





Other Factors Affecting Meeting Relief Obligation

- NERC ORS Market Flow Threshold Working Group developing success criteria
 - Focus on relief achieved 30 minutes after TLR implemented.
 - Still need to agree on how to measure the amount of relief achieved. (Is it the difference between constrained and unconstrained market flows or is the amount market flows are below/above target?)
 - Still need to agree on an appropriate bandwidth. (How close to target must be to claim success?)





Upon Completion of the Field Test

- The regional difference in the NERC TLR Standard (IRO-006) goes away and the regional difference that appears in the NAESB TLR business practice (WEQ-008) becomes effective.
- According to FERC Order 676-D, there will be no time lag between the end of the field test and when the threshold in the NAESB business practice becomes mandatory.
- This means the results of the field test through July 2009 will be used to establish a threshold. This will allow 3 months to receive NERC/NAESB approvals for a recommended threshold and to make appropriate FERC filings.





Future Path for TLR Proposal









The Transmission Loading Relief Standard Drafting Team thanks all commenters who submitted comments on the 1st draft of standards IRO-006-5 — Reliability Coordination — Transmission Loading Relief and IRO-006-EI-1 — TLR Procedure for the Eastern Interconnection. These standards were posted for a 30-day public comment period from October 30, 2008 through December 1, 2008. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 12 sets of comments, including comments from more than 40 different people from approximately 30 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Reliability-Coordination-Transmission-Loading-Relief.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at <u>gerry.adamski@nerc.net</u>. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <u>http://www.nerc.com/standards/newstandardsprocess.html</u>.

Index to Questions, Comments, and Responses

1.	The drafting team has proposed to remove the NERC definition of Reallocation from the Glossary, as it is already defined in NAESB Business Practices. Do you believe this
	removal to be appropriate?
2.	The drafting team has proposed a new definition for inclusion in the NERC glossary: 9
Mar	rket Flow: the amount of energy flowing across a specified facility or set of facilities due
	to the operation of a market that has implemented a "Market Flow Calculation"
	methodology
Doy	you agree with the proposed definitions in the standard?
3.	The drafting team has moved or eliminated three of the requirements originally in IRO-
	006-4:
Doy	you believe these modifications are appropriate?11
4.	The SDT has proposed removing the Regional Differences for MISO, PJM, and SPP, as
	the language within IRO-006-EI-1 incorporates the concept of Market Flow. Do you
	agree that these Regional Differences can be removed?13
5.	The drafting team has converted Attachment 1 to a separate standard that is posted
	with this comment form (IRO-006-EI-1). Do you believe this is appropriate?15
6.	The drafting team has proposed that Attachment 1 be treated as a standard for the
	Eastern Interconnection (IRO-006-EI-1). Alternatively, the standard may be treated as
	a continent-wide standard (IRO-017) that is applicable only to entities in the Eastern
	Interconnection. Do you prefer one approach over the other?17
7.	The drafting team has identified a concern related to compliance with IRO-006-EI-1
	and the availability of the IDC or similar technology. To address this, the SDT is
	considering adding the following language to the IRO-006-5:19
Doy	you believe this or similar language is appropriate and necessary?
8.	Are you aware of any conflicts between the proposed standard and any regulatory
	function, rule/order, tariff, rate schedule, legislative requirement or agreement?22
9.	Please provide any other comments (that you have not already provided in response to
	the questions above) that you have on the proposed standards

The Industry Segments are:

- 1 Transmission Owners
- 2 RTOS, ISOS
- 3 Load-serving Entities
- 4 Transmission-dependent Utilities
- 5 Electric Generators
- 6 Electricity Brokers, Aggregators, and Marketers
- 7 Large Electricity End Users
- 8 Small Electricity End Users
- 9 Federal, State, Provincial Regulatory or other Government Entities
- 10 Regional Reliability Organizations, Regional Entities

	Commente	er	Organiza	tion	Industry Segment										
						1	2	3	4	5	6	7	8	9	10
1.	Guy Zito		NPCC												✓
	Additional Member			Decier	Commont	Calaa	4 :								
		Addition	nal Organization	Region	Segment	Selec	tion								
1.	Ralph Rufrano	New York Power	Authority	NPCC	5										
2.	Roger Champagne	Hydro-Quebec T	ransEnergie	NPCC	2										
3.	Rick White	Northeast Utilities	6	NPCC	1										
4.	Greg Campoli	New York Indepe	endent System Operator	NPCC	2										
5.	Mike Garton	Dominion Resour	rces Services, Inc.	NPCC	5										
6.	Chris De Graffenried	Consolidated Edi	son Co. of New York, Inc.	NPCC	1										
7.	Don Nelson	Massachusetts D	ept. of Public Utilities	NPCC	9										
8.	Kurtis Chong	Independent Elec	ctricity System Operator	NPCC	2										
9.	Brian Gooder	Ontario Power G	eneration Incorporated	NPCC	5										
10.	David Kiguel	Hydro One Netwo	orks Inc.	NPCC	1										
11.	Kathleen Goodman	ISO - New Engla	nd	NPCC	2										
12.	Brian Evans-Mongeon	Utility Services, L	NPCC	6											
13.	Mike Gildea	Constellation Ene	NPCC	6											
14.	Lee Pedowicz	NPCC		NPCC	10										

	Comme		Organiz	ation	Industry Segment										
					1	2	3	4	5	6	7	8	9	10	
2.	Jason Marsha	II	Midwest IS Stakeholde				~								
	Additional Member	r Additional Organiz	ation Region	Segment	Selection										
1.	Jim Cyrulewski	JDRJC Associates	RFC	8											
2.	Kirit Shah	Ameren	SERC	1											
3.	Denise Koehn	l	Bonneville	Power Ac	Iministration	~		~		~	~				
	Additional Member	r Addition	al Organizatio	n	Region Segment	Select	ion								
1.	Thomas Westbrook	Transmission Opera	ational Analysis	s & Suppor	t WECC 1										
2.	Wesley Hutchison	chedule & Rea	hedule & Real Time WECC 1												
3.	Timothy Loepker	tch		WECC 1											
4.	Joel Jenck	Jenck Power - Scheduling Coordination			WECC 5										
4.	Roman Carter Southern Compa		Company	Transmission	~										
	Additional Member	r Additional Organiz	vation Region	Segment	Selection		1		1	1					
	Jim Busbin	Southern Transmiss	-	-											
2.	Raymond Vice	Southern Transmiss													
	JT Wood	Southern Transmiss													
	Marc Butts	Southern Transmiss													
5.	Sam Ciccone		FirstEnergy	ý		~		~	~	~	~				
	Additional Manul		nation Danier	Comment	Coloction	I	1	I	1	I	1	1	I	1	1
4	Dave Folk	r Additional Organiz	RFC	segment	Selection										
	Doug Hohlbaugh	FE	RFC			r –	1	r –		1	1	1		1	1
6.	Charles Yeung	g	IRC Standa	ards Revi	ew Committee		~								
	Additional Mem	her Additional Or	ganization Re	aion Sea	ment Selection				_		_				

Commenter			Organization			Industry Segment									
					1	2	3	4	5	6	7	8	9	10	
1. P	Patrick Brown	PJM	RFC	2						•					
2. J	im Castle	New York ISO	NPCC	2											
3. N	latt Goldberg	ISONE	NPCC	2											
4. L	ourdes Estrada-Salin	ero CAISO	WECC												
5. A	nita Lee	AESO	WECC												
6. S	Steve Myers	ERCOT	ERCOT	2											
7. B	Bill Phillips	Midwest ISO	RFC	2											
8. C	Dan Rochester	IESO	NPCC	2											
7.	Dan Rochester		IESO			~									
8.	Thad Ness		American Electi	ric Power (AEP)	~		~		~	~					
9.	9. Kathleen Goodman		ISO New England Inc			~									
10.	Patrick Brown		PJM Interconnection												
11.	Paul Humbersor Lemmons, Steve Donald Pape		WACM, Excel, WECC		~									~	
12.	Jason Shaver		American Trans	smission Company	~										
13.	Michael Brytows	ski	MRO											~	
	Additional Member	- Additio	nal Organization	Segment Sele	ction	1	1	1			1		1	1	
1.	Neal Balu	WPS		3,4,5,6											
2.	2. Terry Bilke MISO			2											
3.	3. Carol Gerou MP			1,3,5,6											
4. Jim Haigh WAPA			1,6												
5. Charles Lawrence ATC			1												
6.	Ken Goldsmith	ALTW		4											
7.	Pam Sordet	XEL		1,3,5,6											
8.	Dave Rudolph	BEPC		1,3,5,6											

Commenter		Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
9. Eric Ruskamp	LES	1,3,5,6			•							
10. Joseph Knight	GRE	1,3,5,6										
11. Joe DePoorte	MGE	3,4,5,6										
12. Larry Brusseau	MRO	10										

1. The drafting team has proposed to remove the NERC definition of Reallocation from the Glossary, as it is already defined in NAESB Business Practices. Do you believe this removal to be appropriate?

Summary Consideration: 13 responses. 8 like the removal, 3 don't, 2 no comment.

Organization	Question #1 Yes or No	Question #1 Comment						
NPCC	No	NPCC participating members are not in agreement. A term used in a NERC standard should not be defined in a NAESB document. A joint NERC/NAESB glossary should be developed defining al terms in all standards. Until such time, the term must remain in the NERC glossary.						
Response: This term is no a summary of system cond		any requirement. It is only used in Appendix A, which is intended to provide the RC with lire any specific action.						
NERC and NAESB have discussed the possibility of creating a single joint glossary, but at this time, various logistical and regulatory constraints would make such a proposition difficult. The topic may be revisited in the future.								
ANDY COMMENT – I sugges discussed thoroughly in the		er removing the term from the Appendix. I don't think it is needed, and the concept is ards.						
Midwest ISO Standards Stakeholders Collaborators	Yes	It is not clear how definitions in NAESB Business Practice apply to NERC standards. Do they apply because they are approved by FERC? To the extent this definition applies, we agree with it.						
		to NERC standards, and vice versa. The drafting team is proposing to eliminate the sed in any requirement. It is only used in Appendix A.						
Bonneville Power Administration	Yes							
Southern Company Yes Transmission Yes								
FirstEnergy	Yes							
IRC Standards Review Committee	Yes It is not clear how definitions in NAESB Business Practice apply to NERC standards. Do they apply because they are approved by FERC? To the extent this definition applies, we agree with it.							

Organization	Question #1 Yes or No	Question #1 Comment					
Response: NAESB definitions do not apply to NERC standards, and vice versa. The drafting team is proposing to eliminate the definition because the term is no longer used in any requirement. It is only used in Appendix A.							
IESO	Yes We agree that reallocation is a business practice and hence its definition is better placed in the NAESB Business Practices. Furthermore, to avoid inconsistencies terms should only be defined one document. However, we recommend that a footnote is added in the NERC standards to refer to the appropriate NAESB documents for the definition of reallocation. In terms of the impact that such a change could eventually have on reliability, we recommend that NERC and NAESB develop the necessary controls such that, whenever implemented, reallocation provides the appropriate amount of transmission loading relief.						
Response:							
AEP							
ISO New England Inc	No	A term used in a NERC standard should not be defined in a NAESB document. A joint NERC/NAESB glossary should be developed defining all terms in all standards.					
Response: The drafting tea only used in Appendix A.	am is proposing	g to eliminate the definition because the term is no longer used in any requirement. It is					
NERC and NAESB have disc regulatory constraints wou	ussed the poss Id make such a	sibility of creating a single joint glossary, but at this time, various logistical and a proposition difficult. The topic may be revisited in the future.					
PJM Interconnection	Yes						
WACM, Excel, WECC							
American Transmission Company	No	ATC Operations prefers to see all definitions in one location, rather than searching multiple documents.					
Response: NERC and NAESB have discussed the possibility of creating a single joint glossary, but at this time, various logistical and regulatory constraints would make such a proposition difficult. The topic may be revisited in the future.							
MRO NERS Standards Review Subcommittee	Yes						

2. The drafting team has proposed a new definition for inclusion in the NERC glossary:

Market Flow: the amount of energy flowing across a specified facility or set of facilities due to the operation of a market that has implemented a "Market Flow Calculation" methodology.

Do you agree with the proposed definitions in the standard?

Summary Consideration: 13 responses. 12 agree, 0 disagree, 1 no comment.

Organization	Question #2 Yes or No	Question #2 Comment			
NPCC	Yes				
Midwest ISO Standards Stakeholders Collaborators	Yes				
Bonneville Power Administration					
Southern Company Yes Transmission Yes					
FirstEnergy	Yes While we agree the definition is needed, it relies on the term "Market Flow Calculation" which i a NERC Glossary Term and should also be defined in this standard.				
Response: Not sure – do we load flows determined with		to define this term? We can lower case and put in quotes. Or we could define as gen to RTO?			
IRC Standards Review Committee	Yes				
IESO	Yes	While we agree that a market flow definition should be listed in the NERC glossary, we are concerned about the clarity of this definition. We think that the SDT should provide a market flow definition that is unequivocal and that does not allow entities to reclassify the components that constitute a market flow in manner that diminishes their obligation to provide transmission loading relief.			

Organization	Question #2 Yes or No	Question #2 Comment				
Response:						
AEP	Yes					
ISO New England Inc	Yes					
PJM Interconnection	Yes					
WACM, Excel, WECC						
American Transmission Company	Yes					
MRO NERS Standards Review Subcommittee	Yes	** what is 'Market Flow Methodology''?				
Response: Not sure – do we really want to define this term? We can lower case and put in quotes. Or we could define as gen to load flows determined within a market/RTO?						

- 3. The drafting team has moved or eliminated three of the requirements originally in IRO-006-4:
 - The drafting team eliminated IRO-006-4 R2, which stated "The Reliability Coordinator shall only use local transmission loading relief or congestion management procedures to which the Transmission Operator experiencing the potential or actual SOL or IROL violation is a party."
 - The drafting team moved IRO-006-4 R3, which stated "Each Reliability Coordinator with a relief obligation from an Interconnection-wide procedure shall follow the curtailments as directed by the Interconnection-wide procedure. A Reliability Coordinator desiring to use a local procedure as a substitute for curtailments as directed by the Interconnection-wide procedure shall obtain prior approval of the local procedure from the ERO." These concepts were incorporated into the new IRO-006-EI-1.
 - The drafting team eliminated IRO-006-4 R5, which stated "During the implementation of relief procedures, and up to the point that emergency action is necessary, Reliability Coordinators and Balancing Authorities shall comply with applicable Interchange scheduling standards." This language was redundant with the INT standards themselves.

Do you believe these modifications are appropriate?

Summary Consideration: 13 responses. 12 say appropriate, 1 says inappropriate.

Organization	Question #3 Yes or No	Question #3 Comment
NPCC	Yes	
Midwest ISO Standards Stakeholders Collaborators	Yes	
Bonneville Power Administration	Yes	
Southern Company Transmission	Yes	
FirstEnergy	Yes	
IRC Standards Review Committee	Yes	
IESO	Yes	

Organization	Question #3 Yes or No	Question #3 Comment
AEP	Yes	
ISO New England Inc	No	Although the ability for NERC to develop interconnection-wide standards is clearly adopted in the Rules of Procedure and Standards Development Procedure, we believe that NERC/ERO Standards should be either continent-wide or regional. Developing interconnection-wide standards adds complexity to the stakeholders and the compliance programs, and will result in a greater number of standards. In addition, the proposed numbering for IRO-006-EI-1 is an inconsistent standard numbering convention, and will create difficulties with compliance based software applications. Also, With the deletion of R3 and the wording of the new IRO-006-5 R1, it is unclear how/if all entities within an Interconnection are required to respond to a request for relief under an Interconnection Wide procedure. The confusion arises from the fact that R1 states the 'RC that USES an Interconnection-wide congestion management procedure shall use the procedure for its Interconnection'. If, for example, an RC in the Eastern Interconnect does not USE an Interconnection Wide congestion management process, that RC would not be required to follow the request for curtailment under the Interconnection Wide procedure.
Response:		
NEED TO DISCUSS		
On their third issue, the interconnection.	y are correct.	We should modify IRO-006 R2 to apply to requests from any RC, not just those in another
PJM Interconnection	Yes	
WACM, Excel, WECC	Yes	
American Transmission Company	Yes	
MRO NERS Standards Review Subcommittee	Yes	

4. The SDT has proposed removing the Regional Differences for MISO, PJM, and SPP, as the language within IRO-006-EI-1 incorporates the concept of Market Flow. Do you agree that these Regional Differences can be removed?

Organization	Question #4 Yes or No	Question #4 Comment
NPCC		
Midwest ISO Standards Stakeholders Collaborators	Yes	
Bonneville Power Administration		
Southern Company Transmission	Yes	
FirstEnergy	Yes	
IRC Standards Review Committee	Yes	
IESO	Yes	
AEP	Yes	
ISO New England Inc		
PJM Interconnection	Yes	
WACM, Excel, WECC		
American Transmission Company		

Summary Consideration: 13 responses. 8 agree, 0 disagree, 5 no comment.

Organization	Question #4 Yes or No	Question #4 Comment
MRO NERS Standards Review Subcommittee	Yes	

5. The drafting team has converted Attachment 1 to a separate standard that is posted with this comment form (IRO-006-EI-1). Do you believe this is appropriate?

Summary Consideration: 13 responses. 8 like the conversion, 3 don't, 2 no comment.

Organization	Question #5 Yes or No	Question #5 Comment		
NPCC	No	See response to question 6.		
Response: Please see our response in Question 6.				
Midwest ISO Standards Stakeholders Collaborators	Yes	In general, we do not support standards that are in essence procedures. However, we do believe the drafting team has pared down the true reliability requirements out of attachment one. Given this paring down of attachment one and the importance of the TLR procedure, we can support this standard.		
Response: Thank you for your supportive comment.				
Bonneville Power Administration				
Southern Company Transmission	Yes			
FirstEnergy	Yes			
IRC Standards Review Committee	Yes	In general, the IRC SRC does not support standards that are in essence procedures. However, we do believe the drafting team has pared down the true reliability requirements out of attachment one. Given this paring down of attachment one and the importance of the TLR procedure, the IRC SRC can support this standard.		
Response: Thank you for your supportive comment.				
IESO	Yes			
AEP	Yes			

Organization	Question #5 Yes or No	Question #5 Comment
ISO New England Inc	No	Although the ability for NERC to develop interconnection-wide standards is clearly adopted in the Rules of Procedure and Standards Development Procedure, we believe that NERC/ERO Standards should be either continent-wide or regional. Developing interconnection-wide standards adds complexity to the stakeholders and the compliance programs, and will result in a greater number of standards. In addition, the proposed numbering for IRO-006-EI-1 is an inconsistent standard numbering convention, and will create difficulties with compliance based software applications.
Response: NEED TO DISU	JCSS	
PJM Interconnection	Yes	
WACM, Excel, WECC	Yes	
American Transmission Company		
MRO NERS Standards Review Subcommittee	Yes	

6. The drafting team has proposed that Attachment 1 be treated as a standard for the Eastern Interconnection (IRO-006-EI-1). Alternatively, the standard may be treated as a continent-wide standard (IRO-017) that is applicable only to entities in the Eastern Interconnection. Do you prefer one approach over the other?

Summary Consideration: 13 responses. 7 prefer EI, 4 prefer 17, 2 no comment.

Organization	IRO-006-EI-1	IRO-017-1	Question #6 Comment
NPCC		X	Although the ability for NERC to develop interconnection-wide standards is clearly adopted in the Rules of Procedure and Standards Development Procedure, NPCC participating members believe that NERC/ERO Standards should be either continent-wide or regional. Developing interconnection-wide standards adds complexity and potential confusion to the stakeholders and the compliance programs, and will result in a greater number of standards. In addition, the proposed numbering for IRO-006-EI-1 is an inconsistent standard numbering convention, and will create difficulties with compliance based software applications.
Response: NEED	TO DISCUSS		
Midwest ISO Standards Stakeholders Collaborators	X		
Bonneville Power Administration			
Southern Company Transmission	х		
FirstEnergy	х		It may be better to easily identify the Eastern Interconnection requirements with the "EI" designation since WECC made their numbering system unique (WECC-IRO-STD-006-0).
Response: NEED T	O DI SCUSS		
IRC Standards Review Committee	Х		
IESO	х		

Organization	IRO-006-EI-1	IRO-017-1	Question #6 Comment
AEP	Х		AEP supports the use of IRO-006-EI-1, but is not strongly opposed to the use of IRO-017-1.
Response:			
ISO New England Inc		X	Although the ability for NERC to develop interconnection-wide standards is clearly adopted in the Rules of Procedure and Standards Development Procedure, we believe that NERC/ERO Standards should be either continent-wide or regional. Developing interconnection-wide standards adds complexity to the stakeholders and the compliance programs, and will result in a greater number of standards. In addition, the proposed numbering for IRO-006-EI-1 is an inconsistent standard numbering convention, and will create difficulties with compliance based software applications.
Response: NEED	TO DI SCUSS	·	·
PJM Interconnection	n X		
Response:	•		
WACM, Excel, WECC			No preference as to IRO-006-EI-1 or IRO-017, but agree treatment identifying it is the Eastern Interconnection process and not a continent-wide process is correct.
Response:			
American Transmission Company		X	
MRO NERS Standards Review Subcommittee		x	The MRO believes that naming the standard IRO-017-1 stays consistant with the NERC standard naming convention and does not add another element to the standards naming.

7. The drafting team has identified a concern related to compliance with IRO-006-EI-1 and the availability of the IDC or similar technology. To address this, the SDT is considering adding the following language to the IRO-006-5:

R1. A Reliability Coordinator desiring to utilize an Interconnection-wide congestion management procedure shall utilize the appropriate procedure below based on the region in which they oversee reliability, provided the necessary tools to support the procedure are available and in working order:

Do you believe this or similar language is appropriate and necessary?

Summary Consideration: 13 responses. 4 want the language, 7 do not, 2 no comment.

Organization	Question #7 Yes or No	Question #7 Comment	
NPCC	Yes	Remove the wording "provided the necessary tools to support the procedure are available and in working order:" The RC must have the tools to support the procedure.	
	Response: Need to discuss. As long as they direct actions per the standard, this should be OK. In fact, I think you could argue that if an RC called a TLR 6 and cut only one transaction manually, instead of relying on the IDC, he would be meeting the requirements of this standard. Agreed?		
Midwest ISO Standards Stakeholders Collaborators	No	This language is not appropriate. Because an RC can't relay on the use of TLR to mitigate an IROL, the RC must always have alternative methods to available to mitigate IROLs. Thus, the availability of the IDC is not truly relevant to reliability.	
Response: Need to discuss	. See above		
Bonneville Power Administration			
Southern Company Transmission	Yes		
FirstEnergy	No	If the "necessary tools to support the procedure are" not in service or available, then the procedure and/or standard should be retired at the same time that the tools are no longer available. Therefore this requirement is unnecessary and inappropriate for a reliability standard.	

Organization	Question #7 Yes or No	Question #7 Comment
Response: Need to discuss.		
IRC Standards Review Committee	No	All NERC standards implicitly require that the hardware and software associated with effecting a response to the respective requirement's is operational. There is no need to even include the provision about the availability of the support tools.
Response: Need to discuss.		
IESO	No	We disagree with the wording and suggest the latter part of the sentence be deleted (i.e. ", provided the necessary tools to support the procedure are available and in working order"). We believe that a Reliability Coordinator that chooses to utilize an Interconnection-wide congestion management procedure should make sure that it has the necessary tools to support the procedure and they are available and in working order. Furthermore, tools unavailability should not preclude the implementation of an interconnection-wide congestion management procedure. Besides TLR, system operators can access other mechanisms to mitigate IROL violations, such as reconfiguration, redispatch, load shedding etc.
Response: Need to discuss.		
AEP	Yes	- Our "yes" depends upon what this statement means We answer "yes" - if you mean that the RC cannot provide an Interconnection-wide congestion management procedure without the using the IDC or similar technology. We answer "no" - if you mean you don't
Response:		
ISO New England Inc	No	The last sentence "provided the necessary tools to support the procedure are available and in working order" is not needed.
Response:		
PJM Interconnection	No	he availability of a software tool should not dictate whether or not the RC takes action to alleviate a reliability issue. If the IDC tools are not available, or not properly functioning in real-time, the RC should not be absolved from the responsibility to initiate a good faith effort to comply with the spirit of the TLR procedures. The RC should not be considered non-compliant if the software is not functioning and, despite a good faith effort, the RC could not achieve full compliance.

Organization	Question #7 Yes or No	Question #7 Comment
Response:		
WACM, Excel, WECC		
American Transmission Company	No	
MRO NERS Standards Review Subcommittee	Yes	

8. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Summary Consideration: 13 responses. 0 see conflict, 11 see no conflict, 2 no comment.

Organization	Question #8 Yes or No	Question #8 Comment
NPCC	No	
Midwest ISO Standards Stakeholders Collaborators	No	
Bonneville Power Administration	No	
Southern Company Transmission	No	
FirstEnergy	No	
IRC Standards Review Committee	No	
IESO	No	
AEP		
ISO New England Inc	No	
PJM Interconnection	No	
WACM, Excel, WECC		
American Transmission Company	No	

Organization	Question #8 Yes or No	Question #8 Comment
MRO NERS Standards Review Subcommittee	No	

9. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards.

Summary Consideration:

Organization	Question #9 Comment
NPCC	
Midwest ISO Standards Stakeholders Collaborators	
Bonneville Power Administration	These revisions are quite specific to the methods and procedures of the Eastern Interconnection. Things are done a little differently in the West, therefore choosing not to comment on those specific questions.
Response:	
Southern Company Transmission	
	IRO-006-EI-1 R1 should be revised to state, "When responding to an IROL violation, each Reliability Coordinator shall implement other actions, including reconfiguration, redispatch, use of demand-side management, or load shedding in conjunction with the initiation of the Eastern Interconnection TLR procedure." In the standards the assumption should be that the operator is responding to actual situations unless stated otherwise. The reliability standards represent the minimum requirements therefore the term "but not limited to" is redundant and unnecessary.
FirstEnergy	IRO-006-EI-1 R2.2 should be revised to state, "A plan of action, based on the TLR level chosen." If the RC is in a TLR, they should be leading the activities and not merely proposing actions.
	Not sure if this makes much of a difference. Thoughts?
	In IRO-006-EI-1 R3 the phrase "a proposal for actions to take" should be replaced with the phrase "a plan of action." In IRO-006-EI-1 R3 the phrase "proposed actions to take" should be replaced with the phrase "action plan."
	Not sure if this makes much of a difference. Thoughts?
	In IRO-006-EI-1 R3.2 and R3.3 the phrase "proposed actions" should be replaced with the phrase "action plan."

Organization	Question #9 Comment
	In IRO-006-EI-1 R3.2, R3.3, R3.3.1, R3.3.2, R3.3.3, and R3.3.4 the term "proposed" should be replaced with the phrase "planned."
	Not sure if this makes much of a difference. Thoughts?
	IRO-006-EI-1 R4.2 - We suggest removing R4.2. We do not agree that the ERO should have a role in a reliability standard requirement. This requirement should be removed because it does not place responsibilities (and for that matter cannot since they are not a user, operator or owner of the BES) on the ERO to act in sufficient time to approve an alternate mitigation procedure. Any delay on the part of the ERO could adversely impact the reliability of the BES. Also, even if the ERO was appropriate in the standard, R4.2 is not necessary since R4.3 already covers alternate actions that can be taken in lieu of R4.1.
	R4.2 is intended to address situations where an entity wishes to use an alternate procedure on an ongoing basis, NOT one that is necessarily occurring in real-time. The SDT attempted to communicate this through the use of the phrase "pre-approved." If a real-time alternative was developed, it would fall as described under R4.3.
Response:	
IRC Standards Review Committee	
IESO	
AEP	
ISO New England Inc	
PJM Interconnection	R1. The first sentence should be reworded to say what actions should be taken instead of what should not be done. Current wording; R1. The Reliability Coordinator shall not use the Eastern Interconnection TLR procedure alone to mitigate an actual IROL violation. Recommended word change to make it a proactive requirement; R1. When responding to an actual IROL violation, each Reliability Coordinator shall implement supplementary mitigation actions prior to or in conjunction with the initiation of this TLR procedure. Such actions include, but are not limited to, the following: reconfiguration, redispatch, use of demand-side management, load shedding. This seems to be fine, but we'll need to think about it.

Organization	Question #9 Comment
	Two additional comments regarding R1: This requirement is similar to the Requirement R17 in IRO-005. The SDT should consider revising R1 of this standard or R17 of IRO-005 to address the need in one standard instead of splitting it into two separate requirements.
	I think we are including this because we want TLR specifically noted as NOT being enough. IRO-005 R17 applies to all actions, and leaves it up to the RC to determine if TLR is sufficient or not.
	Also the SDT needs to develop language that requires the mitigation actions external to the TLR procedures be bonafide mitigation attempts.
	Not sure what this proposes.
	R 4.3.2. The SDT should discuss the appropriateness of the "and" conditions throughout R 4.3. R 4.3.2 should be strengthened to accommodate alternatives to the TLR procedure. For example, if an action contained in the TLR procedure would have an adverse consequence on the network but, for whatever reason, concurrence from the RC calling the TLR isn't obtained, the only options available to the RC requesting an alternative are 1) to be non-compliant or 2) implement a change that has a negative impact on system reliability.
	Do we need to put an obligation somewhere for the initiating RC to respond? We can loosen it, but we need to think about the impact if we do.
	Appendix A- The standard references TLR level 0, which is not included in the appendix.
	We should fix.
Response:	
WACM, Excel, WECC	WECC believes that bullet 2 of R1 should reference the WECC Qualified Path Unscheduled Flow Relief Plan and not the WECC interim Tier 1 regional reliability standard. RCs in the West do not receive requests for curtailment. The WECC Qualified Path Unscheduled Flow Relief Procedures identifies entities receiving the schedule as the entity that must implement curtailments. We question whether RCs can actually curtail or reload transactions (normally a TOP function in the west). WECC RCs do not do this. We believe that RC's in the East are typically BA operators also. WECC's are not. We believe that the language in the current standard reflects an Eastern Interconnection bias towards transmission loading relief and would need to be modified to recognize the different process in the West before it could become a continent-wide standard.
for the Eastern Interconn covers their entities. The	e questions. First, I'm not sure if we need IRO-006-1 R1 anymore. Consider: we have proposed a standard tect. That defines it's applicability, so the first part of R1 is unnecessary. WECC has a regional standard that only thing we need to make R1 completely redundant is a standard that applies to ERCOT. Maybe we leveloping something instead.

I think In udnerrstand WECC's process enough to say some of the kanguae is confusing the issue. As I understand it, their process

Organization	Question #9 Comment
	e have documented except the TOP makes the initial list of cuts, not the RC. But the other RCs have to then directives go out to the BAs for impleentaion. We need to discuss this in detail But (see next
As written, the standard is int	ended to apply only to the Eastern Inerconnection.
American Transmission Company	
MRO NERS Standards Review Subcommittee	