Consideration of Comments on 1st Posting of SAR to Supplement the Assess Transmission Future Needs SAR

The Supplemental Assess Transmission Future Needs SAR Drafting Team thanks all commenters who submitted comments on the Supplemental Assess Transmission Future Needs SAR. This SAR was posted for a 30-day public comment period from February 15 through March 16, 2007. The requesters asked stakeholders to provide feedback on the standard through a special standard Comment Form. There were 16 sets of comments, including comments from 42 different people associated with more than 37 companies or organizations representing 8 of the 10 Industry Segments as shown in the table on the following pages.

Based on the comments received, the drafting team is recommending that the Standards Committee approve the Supplemental SAR to be moved forward to the standards drafting stage of the process.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easy to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

http://www.nerc.com/~filez/standards/Assess-Transmission-Future-Needs.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 Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process. ¹

No changes were made to the SAR based on received comments. The only changes that were made to the SAR at this time were to add references and appropriate supporting material to address the FERC Order 693 and to update the attachment to reflect the latest version of the Standard Review Guidelines.

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

Consideration of Comments on $\mathbf{1}^{\text{st}}$ Posting of SAR to Supplement the Assess Transmission Future Needs SAR

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

	Commenter	Organization		Industry Segment								
				2	3	4	5	6	7	8	9	10
1.	James H. Sorrels, Jr.	AEP	✓				✓	✓				
2.	Anita Lee (G1)	AESO		✓								
3.	Ken Goldsmith (G3)	ALT										✓
4.	Dave Rudolph (G3)	BEPC										✓
5.	Brent Kingsford (G1)	CAISO		✓								
6.	Ed Thompson (G2)	ConEdison										✓
7.	Steve Myers (G1) (I)	ERCOT		✓								
8.	Eric Mortenson	Exelon										
9.	Dick Pursley (G3)	GRE										✓
10.	Roger Champagne	HQT	✓									
11.	Ron Falsetti (G1) (G2) (I)	IESO		✓								
12.	Kathleen Goodman (G2) (I)	ISO-NE										√
13.	Matt Goldberg (G1)	ISO-NE		✓								
14.	Brian Thumm	ITC Transmission	✓									
15.	Jim Cyrulewski	JDRJC Associates								✓		
16.	Michael Gammon	KCPL	✓									
17.	Eric Ruskamp (G3)	LES										✓
18.	Robert Coish, Chair (G3)	Manitoba Hydro										✓
19.	Ron Mazur	Manitoba Hydro	✓		✓		✓	✓				
20.	David Rudolph (G3)	MidAmerican										✓
21.	Jason Marshall	MISO		✓								
22.	Terry Bilke (G3)	MISO										✓
23.	William Phillips (G1)	MISO		✓								
24.	Carol Gerou (G3)	MP										✓
25.	Mike Brytowski (G3)	MRO										✓

Consideration of Comments on $\mathbf{1}^{\text{st}}$ Posting of SAR to Supplement the Assess Transmission Future Needs SAR

	Commenter	Organization		Industry Segment								
			1	2	3	4	5	6	7	8	9	10
26.	Randy Macdonald (G2)	New Brunswick System Opeartor		✓								✓
27.	Murale Gopinathan (G2)	Northeast Utilities										✓
28.	Guy V. Zito (G2)	NPCC										✓
29.	Al Boesch (G3)	NPPD										✓
30.	Greg Campoli (G2)	NY ISO										✓
31.	Mike Calamino (G1) (I)	NYISO		✓								
32.	Ralph Rufrano (G2)	NYPA										✓
33.	Al Adamson (G2)	NYSRC										✓
34.	Mark Ringhausen	Old Dominion Electric Coop.				✓						
35.	Todd Gosnell (G3)	OPPD										✓
36.	Alicia Daugherty (G1)	РЈМ		✓								
37.	Linda Brown	San Diego Gas and Electric	✓									
38.	Charles Yeung (G1)	SPP		✓								
39.	Roger Champagne (G2)	TransEnergie HydroQuebec										✓
40.	Jim Haigh (G3)	WAPA										✓
41.	Neal Balu (G3)	WPSR										✓
42.	Pam Oreschnik (G3)	XCEL										✓

Legend:

- G1 IRC Standards Review Committee
- G2 NPCC CP9 Working Group
- G3 MRO
- I Individual comments were submitted in addition to comments submitted as part of a group

Consideration of Comments on $\mathbf{1}^{\mathrm{st}}$ Posting of SAR to Supplement the Assess Transmission Future Needs SAR

Index to Questions, Comments, and Responses

1.	Do you believe that there is a reliability-related need to provide additional detail, including specific issues for consideration, to the requirements in this set of standards as proposed in this supplemental SAR?
2.	Do you agree with the expanded scope of the proposed project as set forth in this supplemental SAR?
3.	Do you think that there are any additional revisions that should be incorporated into this set of standards, beyond those that have already been identified in the April 30, 2006 version of the original SAR and this supplemental SAR?

1. Do you believe that there is a reliability-related need to provide additional detail, including specific issues for consideration, to the requirements in this set of standards as proposed in this supplemental SAR?

Summary Consideration: All respondents agreed with the statement. The affirmative responses that included comments mainly dealt with procedural issues as opposed to content. The SAR DT believes that we have answered those concerns in the provided responses and that no additional changes to the SAR are required.

Question #1			
Commenter	Yes	No	Comment
Exelon			I believe that most of the additional information contained in the draft 'supplemental' SAR is valuable and will assist the SDT in addressing the various stakeholder concerns. I am concerned with conflicting information addressed below.
			I am not familiar with the concept of a supplemental SAR and am not sure if there are going to be two SARs now, or if this new effort supercedes the existing SAR. This is especially a concern when there appear to be differences between them regarding functional applicabilities and principles, as well as the expansion of scope.
			I understand the Standards Development Procedure to require the original SAR to be modified, when it states, "If the standard drafting team determines it is necessary to expand the scope of the standard ot to modify the scope in a way that is no longer consistent with the scope defined in the SAR, then the drafting team may initiate or recommend another requestor initiate a new SAR (Step 1) to develop the expanded or modified scope. At no time will a drafting team develop a standard that is not within the scope of the SAR that was authorized for development."
industry since the app writing the original SA	roval o R. The	of the o	at the scope of the original SAR needed to be broadened to encompass changes in the original SAR. We decided to use the concept of a supplement rather than completely renot intended to be two distinct SARs. The Supplemental SAR is intended to be a true overy sense of the word.
ODEC	V		The planning of the transmission system is critical to the reliability of the transmission system. Additional details provided to all stakeholders are crucial to ensure that transmission is built in a timley manner to protect the relability of the system. Also, by making the process and information available to all stakeholders, you ensure that everyone's interest is heard in the process and not just the large transmission owner/operators, but all users of the transmission system. The assumptions used in the evaluation process must be vetted by all stakeholders as they are the critical drivers on what transmission is needed and when it is needed.
Response: Stakehold	ers wil	l receiv	ve their opportunity to vet the assumptions used in the evaluation process during comment

Commontor	Yes	No	Comment
Commenter and balloting of the sta			Comment
ERCOT			I recommend that you clarify that these lists of items in Appendix B are topics to consider, not topics that must be included. Also, I recommend that any standards requirements that are evident as Good Utility Practice or procedural in nature be retired as requirements, but retained in the form of reference documents, operating guidelines, or some other similar form that will be available to any industry participant that wishes to use them.
mentioned in the Tech the issues and not to r requirements will be p	nical Is make to assed	ssues L hem ne on to t	from point #3 of the Supplemental SAR Purpose Statement – " consider the items ists prepared by the NERC staff" (emphasis added). The intent was always to consider ecessarily mandatory changes. The comment on good utility practice and procedural he SDT. Please note that Appendix B as it was included in the Supplemental SAR was der. Directions included with that Order must be specifically addressed in the standards
MISO	V		As the standards are written now, all of the requirements apply to both the Transmission Planner and Planning Authority. The NERC Functional Model Version 3 replaced the Planning Authority with the Planning Coordinator. The standards should reflect this change as well as the division of responsibilities between Transmission Planner and Planning Coordinator in the functional model. Additionally, they should seek to clarify the relationship between Transmission Planner and Planning Coordinator. How many transmission planners can their be per Planning Coordinator. Can there be overlapping Planning Coordinators?
Response: Functional ITC Transmission	Model	v3 wil	be used as the reference. Your comment and questions will be passed on to the SDT. The original SAR did a good job of capturing many of the reliability improvements necessary to the TPL Standards. Now that additional information is available from the various stakeholder groups and drafting teams, it is clear that additional reliability-related improvements to the Standards can be made. It is not clear how to quantify the additional improvement the supplemental SAR will make to the existing Standard Drafting effort, but certainly there are additional reliability improvements to be made to each of the subject Standards.
Response: Agreed.	•	•	
Manitoba Hydro	V		Manitoba Hydro believes the planning standards should ensure that complete and consistent assessments are conducted by the responsible entities.
Response: Agreed.			
Response: Agreed.	$\overline{\mathbf{A}}$		

Consideration of Comments on Supplemental Assess Transmission Future Needs SAR

Question #1	Question #1						
Commenter	Yes	No	Comment				
HQT	V						
IESO	V						
ISO New England	$\overline{\mathbf{A}}$						
KCPL	$\overline{\mathbf{A}}$						
MRO	$\overline{\mathbf{A}}$						
NPCC CP9 Working Group							
NYISO	$\overline{\mathbf{A}}$						
San Diego Gas & Electric	V						
IRC Standards Review Committee	V						

2. Do you agree with the expanded scope of the proposed project as set forth in this supplemental SAR? (The scope includes all the items noted on the "Standard Review Forms" attached to the SAR as well as other improvements to the standards that meet the consensus of stakeholders, consistent with establishing high-quality, enforceable, and technically sufficient bulk power system reliability standards. Please consider these items as non-mandatory and only for consideration by the drafting team.)

Summary Consideration: The majority of respondents agreed to the proposition. The negative opinions ranged from procedural matters to items that dealt with providing the SDT with sufficient flexibility to do their job or issues that are more appropriately addressed at the standards drafting stage. In particular, there was concern that some of the applicable entities checked on the supplementary SAR were not appropriate. The SAR DT felt that the Transmission Owner & Generator Owner might potentially provide data that could come into play for some of the requirements in TPL-005 & 006. The SAR DT wanted to provide maximum flexibility to the SDT so these entities as well as the Reliability Coordinator were included. However they are only for consideration and not mandatory. The SAR DT believes that we have addressed these concerns in the responses provided and that no additional changes to the SAR are required.

Question #2			
Commenter	Yes	No	Comment
Exelon		V	The approved SAR is of type 'New Standard' while the supplemental SAR type is not, but rather, 'Revision to existing Standards' as well as, 'Withdraw of existing Standard (possible)'.
			Regarding the Reliability Function Applicabilities, the supplemental SAR does not include the Reliability Authority or the Planning Authority which were included in the approved SAR, and the supplemental SAR includes the Resource Planner and Generation Owner functions, which are not included in the approved SAR. I believe that the Planning Authority needs to be addressed in terms of the FERC NOPR discussion, summarized on pages B3 and B4 of the supplemental SAR.
			The supplemental SAR includes item 7 in the Applicable Reliability Principles, while the approved SAR does not.
			If there are going to be two SARs then I believe that the supplemental SAR should include the previously approved SAR in the 'Related SARs' section on page 7.
			The concise summaries of the Version 0 Industry comments are appreciated, but these should be made more clear in that these will probably become key to any actual changes to planning contingencies. For example, it is not clear what, 'Address deliverability of generation to load' means. Also, does, 'Don't include generation runback or redispatch'

Commenter	Yes	No	Comment
			mean that this shouldn't be addressed or that the standard should be worded to
			specifically not include them. Other terms such as, 'Don't include planning outage', and
			'single terminals are not included' should also be more thoroughly described.
Response: The SDT r	ecogni	zed tha	at the scope of the original SAR needed to be broadened to encompass changes in the
			riginal SAR. We decided to use the concept of a supplement rather than completely re-
			not intended to be two distinct SARs. The Supplemental SAR is intended to be a true
			very sense of the word. The full text of all comments referenced in the Supplemental SAI
• •	_		e to the SDT so that there should be no confusion as to the intent or meaning of the
comment.			3 · · · · · · · · · · · · · · · · · · ·
ODEC		$\overline{\mathbf{A}}$	These are transmission planning standards and as such, should only apply to TPs, not
			RP, TO and GO entities. Certainly, information must be provided from the TOs and GOs
			on their facilities to be able to run the planning studies, but the MOd standards should
			cover this obligation. And RC are operating entities and not planning entities.
Response: The SAR I	DT felt	that th	e TO & GO might potentially provide data that could come into play for some of the
			ne SAR DT wanted to provide maximum flexibility to the SDT so these entities as well as
			ey are only for consideration and not mandatory. Your comments will be passed on to the
SDT.			y · · · y · · · · · · · · · · · · · · · · · · ·
ISO New England		$\overline{\mathbf{V}}$	We do not support a long-term planning standards applying to RCs. The NERC functions
_			model is very clear that RCs are operational entities. Is the intent to replace RRO with
			RC for the fill-in-the-blank standards? That would be an inappropriate solution. A more
			appropriate solution would be to consider replacing the RRO with the planning
			coordinator.
			We also do not understand how a transmission planning standard could apply to the
			additional functional entities: Transmission Owner and Generator Owner.
Response: The SAR I	DT felt	that th	e TO & GO might potentially provide data that could come into play for some of the
requirements in TPL-0	05 & 0	06. Th	ne SAR DT wanted to provide maximum flexibility to the SDT so these entities as well as
the RC were included.	Howe	ver the	ey are only for consideration and not mandatory. Your comments will be passed on to the
SDT.			
MISO		$\overline{\mathbf{A}}$	We do not support a long-term planning standards applying to RCs. The NERC functional
			model is very clear that RCs are operational entities. Is the intent to replace RRO with
			RC for the fill-in-the-blank standards? That would be an inappropriate solution. A more
			appropriate solution would be to consider replacing the RRO with the planning
			coordinator.
Deanage The CAD I	DT folt	that th	e TO & GO might potentially provide data that could come into play for some of the

Question #2			
Commenter	Yes	No	Comment
			ne SAR DT wanted to provide maximum flexibility to the SDT so these entities as well as ey are only for consideration and not mandatory. Your comments will be passed on to the
NYISO		V	It is unclear as to what obligations the RC, TO, and GO would have in a long-term planning standard. The NERC functional model is very clear that RCs are operational entities. The RC, TO, GO, should not have a direct obligation in the process, but should be a resource for input into the process.
requirements in TPL-0 the RC were included. SDT.	05 & 0	06. Th	e TO & GO might potentially provide data that could come into play for some of the ne SAR DT wanted to provide maximum flexibility to the SDT so these entities as well as ey are only for consideration and not mandatory. Your comments will be passed on to the
IRC Standards Review Committee			We do not support a long-term planning standards applying to RCs. The NERC functional model is very clear that RCs are operational entities. Is the intent to replace RRO with RC for the fill-in-the-blank standards? That would be an inappropriate solution. A more appropriate solution would be to consider replacing the RRO with the planning coordinator.
			We also do not understand how a transmission planning standard could apply to the additional functional entities: Transmission Owner and Generator Owner.
requirements in TPL-0	05 & 0	06. Th	e TO & GO might potentially provide data that could come into play for some of the ne SAR DT wanted to provide maximum flexibility to the SDT so these entities as well as ey are only for consideration and not mandatory. Your comments will be passed on to the
ITC Transmission		V	Standard Drafting Teams should not be responding so heavily to comments made by FERC in a NOPR. The NOPR is just that "Proposed." There may be additional changes required as a result of the final Rule. The final Rule may even negate some of the proposed changes made in the NOPR. If the drafting team thinks that FERC hit on a good idea for improvement, then it would be appropriate for inclusion in the Standard, but simply to make changes to a Standard because an idea surfaced in a Proposed Rule is premature.
mentioned in the Tech	inical Is	ssues L	s from point #3 of the Supplemental SAR Purpose Statement – "consider the items is prepared by the NERC staff" (emphasis added). The intent was always to consider ecessarily mandatory changes. Directions included with the FERC Final Order must be
specifically addressed			
AEP	V		Considering the current scope, the Std DT should be encouraged to consider a major rewrite of TPL-001 thru TPL-006, possibly including a restructuring into a single standard

Question #2					
Commenter	Yes	No	Comment		
			rather than the present multiple standards.		
Response: We agree	with th	ne gene	eral concept and the SDT will be provided with this option.		
Manitoba Hydro	\square		Manitoba Hydro agrees in principle with the expanded scope, but believes that this scope should be a part of the Standards Development Procedures manual so all stakeholders have a voice in the requirements in Appendix A. We have some concern that the SAR gives the drafting team the power to add additional improvements beyond the SAR as this provides an opportunity for SDT members to forward specific owner agendas.		
Response: The material in Appendix A is excerpted from the Reliability Standards Development Work Plan 2007 – 2009 that was reviewed and approved by the Standards Committee. As stated, it represents general guidelines and not mandatory changes for the revision of existing standards. Stakeholders will receive their opportunity to vet the assumptions used in the evaluation process during comment and balloting of the standards.					
ERCOT	$\overline{\mathbf{A}}$		Please also see my response to Question #1.		
Response: Please see	the re	esponse	e to your comment on question #1.		
HQT	$\overline{\mathbf{V}}$				
IESO	$\overline{\mathbf{A}}$				
KCPL	$\overline{\mathbf{V}}$				
MRO	$\overline{\mathbf{Q}}$				
NPCC CP9 Working Group	V				
San Diego Gas & Electric	V				

3. Do you think that there are any additional revisions that should be incorporated into this set of standards, beyond those that have already been identified in the April 30, 2006 version of the original SAR and this supplemental SAR?

Summary Consideration: Only two respondents suggested revisions. In both cases the comments are more appropriately addressed at the standards drafting stage. The SAR DT believes that we have satisfactorily addressed the expressed concerns with the provided responses and that no additional changes to the SAR are required.

Question #3			
Commenter	Yes	No	Comment
Manitoba Hydro	V		The SAR should considering adding a requirements to the standards to mandate tests for robustness by doing sensitivity to critical system parameters such as load growth rate, load power factor, etc., to provide insight into the margin between the operating point and unacceptable performance. There should also be a specific requirement to assess reactive power adequacy, voltage stability and system damping.
			the interest in these items. The scope of both the original and supplemental SARs allows
	rporate	ed in th	ne standards drafting process. We will pass your comments on to the SDT.
San Diego Gas & Electric	V		SDG&E believes that there are additional revisions that need to be incorporated into this set of standards.
			The Supplemental SAR dated January 17, 2007, has an Appendix B that summarizes issues to be resolved in this new set of standards. Those issues are a collection of comments from FERC NOPR, FERC Staff Report, Industrial comments on version 0, Phase III/IV, etc.
			In order to develop a set of reliability standards for transmission planners, SDG&E believes there are a few more issues to be addressed and/or clarified in this set of standards.
			1. Critical System Conditions These "Critical System Conditions" are referring to system conditions to be studied for the transmission planning. Typically, entities deem several system conditions as critical on the basis of accumulative institutional knowledge.
			However, in recent FERC NOPR, FERC directs industry to conduct sensitivity studies to identify these critical system conditions and document the sensitivity studies. The sensitivity factors in FERC's direction include load power factors, generation

Question #3			
Commenter	Yes	No	Comment
			retirements, generation dispatch, transaction patterns, controllable loads, demand side management, transmission outages.
			As those will result in extensive scope of study, we would like to see this set of standards clearly answer following questions:
			a. How often do we required to perform such sensitivity studies to identify critical system conditions?
			b. Do we check those sensitivity factors one by one to find the worst, or do we define the worst combination as the critical? Or
			c. Do we continue to leave the "critical system conditions" determination to study performer's discretion?
			2. Contingencies In Appendix B of the latest Supplementary SAR for TPL standards, comments and modification requests were summarized. Contingencies for planning studies is one of critical elements. This can be split into three issues and SDG&E provides following comments for each of them:
			a. Study all contingencies One of the comments suggests to study "all contingencies". Clearly, "All contingencies" need to be clarified. The additional workload incurred due to the dismissal of planners' accumulative institutional knowledge may be unreasonable.
			b. Study non-common mode contingencies The issue regarding reasonable workload also applies to the "non-common mode" contingencies. The non-common mode refers to combination of unrelated elements, say one 230 kV line in CFE (Mexico) and other 230 kV line in Alberta, Canada, as one contingency. This too needs clarification.
			c. Study event-based contingencies Evaluating the impact of "event-based" contingencies makes sense. However, translating an event, such as an earthquake, into a list of elements to be taken out for power flow and stability computer simulation, will need clear guidelines.
			3. "Identification of options for reducing the probability or impacts of extreme events that cause cascading" This is a direct quote of FERC's directed modification in its NOPR.

Question #3					
Commenter	Yes	No	Comment		
			 a. If the impacts only need to be identified with conceptual methods, how do we maintain "consistency" among entities? b. If FERC intends to request the entities to identify the probability/impacts with quantitative methods, then there is a long list of issues to be addressed before a transmission planner could in reality perform such an analysis: How to define "cascading" in system simulation analysis. Reasonable and feasible probabilistic variables need to be defined. For instance, in addition to the equipment failure as probabilistic variable, other probabilistic variables need to be considered to meet FERC's direction, such as hurricanes, fires, earthquakes, lightening, flooding, landslides and even an airplane falling into a critical substation, and so on. Regional efforts need to be taken to develop a probabilistic methodology and probabilistic database that can be applied uniformly so entities can be treated equally. Regional efforts need to be taken to guide selection and/or development of probabilistic analysis software tools. Such tools have to be ready for transmission planners to use and derive quantified solutions. 		
Response: The following excerpt is from point #3 of the Supplemental SAR Purpose Statement – "consider the items mentioned in the Technical Issues Lists prepared by the NERC staff" (emphasis added). The intent was always to consider the issues and not to make them necessarily mandatory changes. Directions included with the FERC Final Order must be specifically addressed in the standards drafting process. The Supplemental SAR was intended to be a true supplement to the original SAR in every sense of the word. The SAR DT is aware of the interest in these items. The scope of both the original and supplemental SARs allows these items to be incorporated in the standards drafting process. We will pass your comments on to the SDT. We refer the commenter to the NERC web site for previous meeting notes and comments concerning related issues.					
ODEC		V	This should be more than enough to try to get into these transmission planning standards.		
Response: Most stakeholders who commented seemed to agree with you.					
MISO		$\overline{\mathbf{V}}$			
MRO		V			
NPCC CP9 Working Group		Ø			
NYISO		V			

Consideration of Comments on Supplemental Assess Transmission Future Needs SAR

Question #3				
Commenter	Yes	No	Comment	
IRC Standards Review Committee		V		
AEP		$\overline{\mathbf{A}}$		
ERCOT		$\overline{\mathbf{A}}$		
HQT		$\overline{\mathbf{A}}$		
IESO		$\overline{\mathbf{A}}$		
ISO New England		$\overline{\mathbf{A}}$		
ITC Transmission		$\overline{\mathbf{A}}$		
KCPL		$\overline{\mathbf{A}}$		