

Consideration of Comments on 2nd Draft of Resource Adequacy SAR

The Resource Adequacy SAR Drafting Team thanks all commenters who submitted comments on the 'second draft of the SAR that was posted for comment from March 1-30, 2006. The drafting team asked stakeholders to provide feedback on the SAR through a special comment form. There were 17 sets of comments, including comments from more than 60 different people from more than 40 companies representing 7 of the 9 Industry Segments¹ as shown in the table on the following pages.

Based on the comments received, the drafting team is recommending that the SAR proceed to standards drafting stage according to the schedule in the NERC Standards Development Work Plan as current changes to the SAR do not significantly change the scope or content.

In this 'Consideration of Comments' document stakeholder comments have been organized so that it is easier 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/Resource_Adequacy.html

Based on stakeholder comments, the drafting team:

- Revised the language concerning resource adequacy assessment framework to allow a broader range of approaches for assessing whether projected resources will be sufficient by adding the text shown in red below:
 - The regional resource adequacy framework should include a probability-based evaluation **or some other systematic approach for assessing** whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties
- Confirmed that it is appropriate to include the Load-serving Entity as a reliability function that may be responsible for complying with requirements in the proposed standard
- Added the Generator Owner and Generator Operator as reliability functions that may be responsible for complying with requirements in the proposed standard
- Revised the definition of resource adequacy to add the text shown in red below:
 - Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements **(including losses)** of the end-use customers at a specified degree of reliability **not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria.**
- Confirmed that there aren't any new NAESB Business Practices needed to coordinate with the proposed standard

¹ At the time this SAR was posted, there were 9 Industry Segments.

The drafting team also updated the SAR form to reflect the terminology in the latest approved version of the Functional Model.

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 gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.

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Commenter	Organization	Industry Segment								
		1	2	3	4	5	6	7	8	9
1. Anita Lee	AESO		X							
2. William J. Smith	Allegheny Power	x								
3. Ken Goldsmith	Alliant Energy									
4. Jason Shaver	ATC	x								
5. Dave Rudolph	BEPC									
6. Lisa Szot	CAISO		X							
7. Grace Anderdson	California Energy Commission									x
8. Mike Jaske	California Energy Commission									x
9. Karl Kohlrus	City Water, Light & Power					x				
10. Bill Brjorquez	ERCOT		x							
11. Sam Jones	ERCOT		X							
12. Dan Huffman	FirstEnergy Solutions				x					
13. Dick Pursley	GRE									
14. David Kiguel	Hydro One Networks	x								
15. Ron Falsetti	IESO		X							
16. Kathleen Goodman	ISO-NE		x							
17. Pete Brandien	ISO-NE		X							
18. William Shemley	ISO-NE		x							
19. Dennis Florum	LES									
20. Shashi Parekh	Mass Dept of Tel and Energy									x
21. Tom Mielnik	MEC									
22. Robert Coish	MHEB									
23. Bill Phillips	MISO		X							
24. Terry Bilke	MISO		x							
25. Joe Knight	MRO		x							
26. Peter Lebro	National Grid	x								
27. Greg Campoli	New York ISO		x							
28. Ralph Rufrano	New York Power Authority	x								
29. Al Adamson	New York State Reliability Council		x							
30. Murale Gopinathan	Northeast Utilities	x								
31. John Leland	NorthWestern Energy	x								
32. David Little	Nova Socktia Power	x								
33. Guy Zito	NPCC		x							
34. Alan Boesch	NPPD									
35. Michael Calimano	NYISO		x							
36. Alan Adamson	NYSRC		x							

Index to Questions, Comments and Responses:

1. Do you agree with the scope of the revised SAR? In particular, does the substitution of the word "framework" for "criterion" in the first detailed element broaden the scope sufficiently for all manner of resource adequacy arrangements in the Regions to be accommodated in the regional methodologies to assess resource adequacy? 6

2. Do you agree with the addition of the LSE as an entity that should be required to comply with proposed reporting requirements (to be defined in the Standard Drafting Process) to allow regional resource adequacy assessments to be performed? 12

3. Do you agree with the proposed definition of Resource Adequacy? 17

4. Do you agree with the language added requiring the regional resource adequacy framework to include a probability-based evaluation of whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties? 22

5. Are you aware of any associated NAESB Business Practices that should be developed to coordinate with this SAR? 26

6. Please provide any other comments on this SAR that you haven't already provided..... 29

1. Do you agree with the scope of the revised SAR? In particular, does the substitution of the word "framework" for "criterion" in the first detailed element broaden the scope sufficiently for all manner of resource adequacy arrangements in the Regions to be accommodated in the regional methodologies to assess resource adequacy?

Summary Consideration: Most commenters disagreed with the revision made. Based on stakeholder comments, the SAR Drafting Team revised the SAR to define resource adequacy assessment framework as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..."

Question 1			
Commenter	Yes	No	Comment
Salt River Project (1) Shirley McKean Daniel Brickley James Peterson			It is unclear what is meant by "Framework". "Assessment Methodologies" would be clearer. It is also unclear what is meant by "shall recognize" [p. SAR-4, #1), 2 nd sentence]. Is this suggesting the NERC RRO shall assess reliability using all applicable criteria?
<p>Response: In response to this and similar comments, the SAR Drafting Team revised the SAR to define resource adequacy assessment framework as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..."</p> <p>The SAR retains the language: "Such framework needs to recognize applicable local/state/provincial or multi-state/provincial resource adequacy criteria or requirements, where such criteria/requirements exist." There needs to be a nexus between the regional resource adequacy assessment framework and local/state/provincial resource adequacy requirements because the regional assessments, which provide transparency whether there are sufficient resources to reliably meet load, need to be connected to the metrics and targets employed by the entities responsible for assuring resource adequacy going forward.</p>			
Ohio PUC (9) Fred Heizer		✓	The term "framework" is too broad a term to be used in this standard which specifically speaks to assessing regional resource adequacy and not simply setting up a "framework" to assess regional resource adequacy. We recommend using the term "rules and criterion" in place of "framework" in order to be clear about the intent of the standard.
<p>Response: In response to this and similar comments, the SAR Drafting Team revised the SAR to define resource adequacy assessment framework as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..."</p>			
ISO/RTO Council (2) Anita Lee – AESO (2) Al DiCaprio – PJM (2) Sam Jones – ERCOT (2) Ron Falsetti – IESO (2) Pete Brandien – ISONE (2) Bill Phillips – MISO (2) M. Calimano – NYISO (2) Lisa Szot – CAISO (2)		✓	<p>We agree with the substitution of "framework" for "criterion" as framework covers such other elements as methodology, assumptions and approach. However, it is equally important that criterion be also included. By this replacement, we are concerned that some Regions would simply develop the methodology, guideline, etc. but not the criterion, which we believe is of paramount importance as it is the "specified degree of reliability" as stipulated in the proposed definition for resource adequacy. We therefore suggest the wording in (1) be revised to "Each NERC Regional Reliability Organization shall establish a framework and the criterion by which to assess the resource adequacy of the Region." With this change, the rest of (1) may need to be revised accordingly, particularly the phrase "...resource adequacy criteria or requirements, where such criteria/requirements exist" since the criteria/requirements will exist.</p> <p>Since the jurisdiction over resource adequacy lies outside of FERC and the statutory authority of</p>

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Question 1			
Commenter	Yes	No	Comment
			the EAct 2005, there should not be a concern that this particular NERC standard takes on a "fill-in-the-blank" approach. We understand NERC intends to move away from reliability standards that rely on the Regional Councils to complete the standards and that this is driven by the FERC statutory authority over reliability, not resources adequacy.
<p>Response: The SAR Drafting Team discussed this and similar comments and decided that, in addition to methodology, assumptions and approach, framework also encompasses criteria. Therefore, the team revised the SAR as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..."</p> <p>In response to the second comment, the team believes that version 3 of the NERC functional model now includes the appropriate function related to resource adequacy assessment, i.e. the regional reliability assurance function. Given that the October 30, 2006 NERC <i>Reliability Standards Development Plan: 2007–2009</i> calls for the resource adequacy assessment standard to be developed starting in 2008, the team believes there is sufficient time for FERC and NERC to sort out the role of the Regional Reliability Councils in implementing this standard. For now the SAR specifies the regional reliability assurance functional entity as the entity with responsibility for establishing a resource adequacy framework.</p>			
NERC Standards Evaluation Committee Bill Bojorquez		✓	While the use of "framework" in this context refers to the assessment of resource adequacy, there is no specific resource adequacy requirement at the level of the Region upon which a framework can be established. A number of entities in the Region - but not the region itself - have the option of establishing a resource adequacy requirement as per Paragraph 2. Thus, the Region will, it appears, conduct its analysis without reference to any standard other than those established by a variety of entities in the Region. (Note, also, that the "criterion" language still appears in Paragraph 2.)
<p>Response: In response to this and similar comments, the SAR drafting team developed the following comprehensive definition of framework to clarify that it not only refers to developing a methodology, but also includes establishing resource adequacy criteria: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..."</p>			
MRO (2) Jim Maenner Al Boesch – NPPD (2) Terry Bilke – MISO (2) Bob Coish – MHEB (2) Dennis Florom – LES (2) Ken Goldsmith – ALT (2) Todd Gosnell – OPPD (2) W. Guttormson – SPC (2) Tom Mielnik – MEC (2)		✓	It's not necessary to include the word "framework" within this SAR as it does not define it more clearly. Each RRO can establish criteria which satisfy the eventual standard. It could be simplified and reworded to say "Each NERC Regional Reliability Organization (Region) shall establish a methodology to assess the resource adequacy of the region. This methodology shall include local/state/province or multi-state/province requirements, where they exist. The methodology should include a probability-based evaluation (taking into account defined, relevant uncertainties) of whether projected resources will be sufficient to meet forecasted load".

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Question 1			
Commenter	Yes	No	Comment
Darrick Moe – WAPA (2) P. Oreschnick – XEL (2) Dick Pursley – GRE (2) Dave Rudolph – BEPC (2) Joe Knight – MRO (2) 27 additional MRO members not listed above.			
Response: In response to this and similar comments, the SAR drafting team developed the following comprehensive definition of framework to clarify that it not only refers to developing a methodology, but also includes establishing resource adequacy criteria: “Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)...”			
NPCC CP9, Reliability Standards Working Group David Kiguel – Hydro One K. Goodman – ISONE Alan Adamson – NYSRC Pete Lebro – National Grid David Little – AESO Ralph Rafrano – NYPA Ron Falsetti – IESO R. Pellegrini – United Illumin. W. Shemley – ISONE Greg Campoli – NYISO Shashi Parekh – MA Dept. of Tel. and Energy Guy Vito – NPCC		✓	Participating members of NPCC believe Region specific resource adequacy criterion be required for each Region. We note that the proposed definition of Resource Adequacy includes the requirement to meet "a specified degree of reliability", which is a criterion. We also note that Part 2 of the SAR refers to "the resource criterion of the Region". It is unclear why the need for a Regional criterion has been removed from Part 1, but retained in Part 2. Use of the term framework is unclear, and subject to interpretation and it is recommended that it should be removed.
Response: In response to this and similar comments, the SAR drafting team developed the following comprehensive definition of framework to clarify that it not only refers to developing a methodology, but also includes establishing resource adequacy criteria: “Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)...”			
New York ISO (2) Michael Calimano		✓	The word framework allows for entities to conduct assessments that are not based on any measurable criteria that can be tied directly to system reliability. Although the last sentence of

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Question 1			
Commenter	Yes	No	Comment
			this first section tries to bring it back into focus by including a probability based evaluation, such an evaluation would be relatively meaningless without consistant measurable criteria.
<p>Response: In response to this and similar comments, the SAR Drafting Team revised the SAR to define resource adequacy assessment framework as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..." Thus, the revised SAR recognizes that the evaluation requires measurable criteria.</p>			
NYRSC (2) Alan Adamson		✓	The NYSRC strongly believes that is important that a Regional or Region-specific resource adequacy criterion be required for each Region. We note that the proposed definition of Resource Adequacy includes the requirement to meet "a specified degree of reliability", which IS a measureable reliability criterion. We also note that Part 2 of the SAR refers to "the resource criterion of the Region". It is unclear then why the requirement for a Region-specific criterion has been removed from Part 1of the SAR and replaced with "framework", but retained in Part 2. We disagree, therefore, that the term "framework" replace "criterion". Also, a regional criterion should not be confused with a regional methodology for evaluating reliability as suggested by the question.
<p>Response: In response to this and similar comments, the SAR drafting team developed the following comprehensive definition of framework to clarify that it not only refers to developing a methodology, but also includes establishing resource adequacy criteria: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..."</p>			
IESO (2) Ron Falsetti	✓	✓	We agree with the substitution of "framework" for "criterion" as framework covers such other elements as methodology, assumptions and approach. However, it is equally important that criterion be also included. By this replacement, we are concerned that some Regions would simply develop the methodology, guideline, etc. but not the criterion, which we believe is of paramount importance as it is the "specified degree of reliability" as stipulated in the proposed definition for resource adequacy. We therefore suggest the wording in (1) be revised to "Each NERC Regional Reliability Organization shall establish a framework and the criterion by which to assess the resource adequacy of the Region." With this change, the rest of (1) may need to be revised accordingly, particularly the phrase"...resource adequacy criteria or requirements, where such criteria/requirements exist" since the criteria/requirements will exist.
<p>Response: The SAR Drafting Team discussed this and similar comments and decided that, in addition to methodology, assumptions and approach, framework also encompasses criteria. Therefore, the team revised the SAR as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..."</p>			
WECC Loads and Resources Subcommittee John Leland – NW Energy Mike Jaske – CA Energy Com	✓		In paragraph #1, the word framework is a critical improvement upon the previous phrases of criterion (or criteria) used in earlier drafts of the SAR. We strongly support the use of the word framework and encourage that the meaning of a framework be elaborated upon to be clear what is included within the required framework. For example, an RA framework encompasses the metric and benchmark (numerical

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Question 1			
Commenter	Yes	No	Comment
G. Anderson – CA Energy Com Joni Zenger – UT Division of Public Utilities			guideline/target) that is being used for analysis and for judging success, but it also includes: (1) the procedures by which capacity is counted for various types of resources, (2) the protocols for forecasting load, (3) what uncertainties are to be addressed through sensitivity cases and what ones through scenario analyses, and, (4) criteria for determining what resource additions ought to be included based upon degree of certainty about commitments, etc.
Response: In response to this and similar comments, the SAR Drafting Team revised the SAR to define resource adequacy assessment framework as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..." The standard development process, which is expected to begin in 2008, will address the specific criteria, methodologies, assumptions and approaches by which to assess resource adequacy in detail.			
Southern Company Generation (6) Roman Carter Roger Green Terry Crawley Tom Higgins Clifford Shepard Garey Rozier Wayne Moore	✓		However, this Standard should emphasize consistency in reporting and not the establishment of requiring specific reserve levels or resource adequacy specifics. This SAR and subsequent standard should provide "what" requirements or data the resource adequacy plan should report, and allow the regions and subregions to provide "how" the requirements are to be met.
Response: The SAR, as revised, assigns responsibility for establishing a resource adequacy framework, which includes the selection of a resource adequacy criterion, to the regional reliability assurance functional entity. Thus, the SAR does not envision the development of a one-size-fits-all resource adequacy criterion for the NERC footprint.			
FirstEnergy Solutions (5) Dan Huffman	✓		This broadening of the scope appears to be more appropriate, in recognition of Section 1211 of the Energy Policy of 2005 which states... (2) This section does not authorize the ERO or the Commission to order the construction of additional generation or transmission capacity or to set and enforce compliance with standards for adequacy or safety of electric facilities or services.
Response: The SAR Drafting Team agrees that the scope of this SAR is limited to the assessment of resource adequacy.			
ATC LLC (1) Jason Shaver	✓		
City Water, Light & Power (2) Karl Kohlrus	✓		
Allegheny Power (1) William J. Smith	✓		
Northeast Utilities (1) Murale Gopinathan	✓		
PJM Mark Kuras Bruce Balmat	✓		

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Question 1			
Commenter	Yes	No	Comment
Joseph Willson Albert DiCaprio			

2. Do you agree with the addition of the LSE as an entity that should be required to comply with proposed reporting requirements (to be defined in the Standard Drafting Process) to allow regional resource adequacy assessments to be performed?

Summary Consideration: Most stakeholders agreed with the addition of the LSE as an entity that should be required to comply with the proposed reporting requirements. Stakeholders suggested adding the Generator Owner and Generator Operator and these have been added to the revised SAR.

Question 2			
Commenter	Yes	No	Comment
ISO/RTO Council (2) Anita Lee – AESO (2) Al DiCaprio – PJM (2) Sam Jones – ERCOT (2) Ron Falsetti – IESO (2) Pete Brandien – ISONE (2) Bill Phillips – MISO (2) M. Calimano – NYISO (2) Lisa Szot – CAISO (2)		✓	This SAR should only apply to Regional Reliability Organizations (see Purpose). There is no check box on the SAR for them. If the standard is intended to require the Regions to establish criteria, methodology, guideline and procedure to perform the assessment, and the ISO/RTOs to establish their requirements according to the Regional criteria, then the requirements for information provision should be stipulated in the Regional requirements, rather than in a NERC standard. NERC is then strictly in an oversight role due to States and Canadian Provincial jurisdiction with respect to dealing with Resource Adequacy and FERC's restrictions on NERC dealing with Resource Adequacy.
<p>Response: Version 3 of the NERC functional model now includes the appropriate function related to resource adequacy assessment, i.e. the regional reliability assurance function (Regional Entity). The SAR Drafting Team revised the proposed SAR to assign responsibility for establishing the resource adequacy framework as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..." The SAR form has been updated and now includes a Regional Entity box to check.</p> <p>However, the team also discussed that the Regions cannot perform these assessments in a vacuum; they require information and assistance in performing these assessments from entities responsible for the checked functions of the NERC functional model. The revised SAR clarifies that frameworks consist of criteria, guidelines, methodologies, assumptions, approaches, and reporting requirements. Entities performing all, or a part, of the following functions of the NERC functional model as planning coordinator, resource planner, generation owners/operators and load serving entity need to provide forecasted loads and resource information, transmission and other pertinent assumptions and/or analyses for these assessments.</p> <p>In response to the comments regarding the prohibition on FERC and the ERO in the Energy Policy Act of 2005 to compel construction of power system infrastructure to address resource adequacy or other needs, the SAR has been revised to explicitly recognize that the entities charged with implementing resource adequacy are the state and local regulator. However, there needs to be a nexus between the Region's resource adequacy assessment framework and the resource adequacy requirements of the state and local regulators. The pertinent excerpt from the SAR is: "RTO/ISO(s), generation planning reserve sharing pool(s) and/or other appropriate entity(ies) to comply with the Region's resource adequacy framework, consistent with the applicable local/state/provincial or multi-state/provincial entities' requirements."</p>			
PJM Mark Kuras Bruce Balmat		✓	This SAR should only apply to Regional Reliability Organizations (see Purpose). There is no check box on the SAR for them. Otherwise, if this standard is to apply to more than just the RROs, then both resources and load entities must be tasked to comply. Generation Owners

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Question 2			
Commenter	Yes	No	Comment
Joseph Willson Albert DiCaprio			or Generation Operators and Transmission Service Providers should be added to the existing checks.
<p>Response: Version 3 of the NERC functional model now includes the appropriate function related to resource adequacy assessment, i.e. the regional reliability assurance function (Regional Entity). The SAR Drafting Team revised the proposed SAR to assign responsibility for establishing the resource adequacy framework as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..." The SAR form has been updated and now includes a Regional Entity box to check.</p> <p>The SAR has been revised to include Generator Owners and Generator Operators as functions to which this standard will apply. The entity, or entities, responsible for the NERC functions associated with the checked boxes are responsible for providing data, assumptions and/or analyses needed for the resource adequacy assessments to the Regions. The SAR DT does not believe that the TSP needs to be designated as a responsible entity for data reporting purposes given this change.</p>			
Northeast Utilities (1) Murale Gopinathan	✓	✓	Yes, BUT ONLY IF an LSE is not covered by a planning authority or resource planner. Otherwise, no, if the LSE is a member of a tight pool/RTO because the tight power pool/RTO will do the resource adequacy assessment.
<p>Response: This comment confuses the LSE function in the NERC functional model with the LSE entity. It is not uncommon that an entity other than the actual Load-Serving Entity performs some LSE functions such as forecasting loads and resources. It is the entity, which performs the LSE functions, that has the responsibility for providing information and assumptions for the Regions' resource adequacy assessments. If the LSE is a member of a power pool or RTO/ISO, then it is quite conceivable that the power pool or RTO/ISO is the entity performing such NERC functions as LSE (in terms of loads & resources forecasting), resource planner and/or planning coordinator.</p>			
IESO (2) Ron Falsetti	✓	✓	Depending on the intent of the standard and specific information requirements. If the standard is intended to require the Regions to establish criteria, methodology, guideline and procedure to perform the assessment, and the ISO/RTOs to establish their requirements according to the Regional criteria, then the requirements for information provision should be stipulated in the Regional requirements, rather than in a NERC standard. NERC's role is strictly an oversight of the Regions methodology and procedures due to States and Canadian Provincial jurisdiction with respect to dealing with Resource Adequacy
<p>Response: The SAR Drafting Team concurs that the specific informational requirements will be established by the Region as it develops its resource adequacy framework. The NERC Standard will provide high level guidance to the Regions to aid in the establishment of their frameworks.</p> <p>The SAR has been revised as follows to more clearly recognize the jurisdiction of the States and Canadian Provinces in setting resource adequacy requirements: "RTO/ISO(s), generation planning reserve sharing pool(s) and/or other appropriate entity(ies) to comply with the Region's resource adequacy framework, consistent with the applicable local/state/provincial or multi-state/provincial entities' requirements."</p>			
New York ISO (2) Michael Calimano		✓	This SAR should only apply to Regional Reliability Organizations (see Purpose). There is no check box on the SAR for them. If the standard is intended to require the Regions to establish criteria, methodology, guideline and procedure to perform the assessment, and the ISO/RTOs to establish their requirements according to the Regional criteria, then the

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Question 2			
Commenter	Yes	No	Comment
			requirements for information provision should be stipulated in the Regional requirements, rather than in a NERC standard. NERC is then strictly in an oversight role due to States and Canadian Provincial jurisdiction with respect to dealing with Resource Adequacy and FERC's restrictions on NERC dealing with Resource Adequacy.
<p>Response: Version 3 of the NERC functional model now includes the appropriate function related to resource adequacy assessment, i.e. the regional reliability assurance function (Regional Entity). The SAR Drafting Team revised the proposed SAR to assign responsibility for establishing the resource adequacy framework as follows: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..." The SAR form has been updated and now includes a regional reliability functional entity box to check.</p> <p>However, the team also discussed that the Regions cannot perform these assessments in a vacuum; they require information and assistance in performing these assessments from entities responsible for the checked functions of the NERC functional model. The revised SAR clarifies that frameworks consist of criteria, guidelines, methodologies, assumptions, approaches, and reporting requirements. Entities performing all, or a part, of the following functions of the NERC functional model as planning coordinator, resource planner, generation owners/operators and load serving entity need to provide forecasted loads and resource information, transmission and other pertinent assumptions and/or analyses for these assessments.</p> <p>In response to the comments regarding the prohibition on FERC and the ERO in the Energy Policy Act of 2005 to compel construction of power system infrastructure to address resource adequacy or other needs, the SAR has been revised to explicitly recognize that the entities charged with implementing resource adequacy are the state and local regulator. However, there needs to be a nexus between the Region's resource adequacy assessment framework and the resource adequacy requirements of the state and local regulators. The pertinent excerpt from the SAR is: "RTO/ISO(s), generation planning reserve sharing pool(s) and/or other appropriate entity(ies) to comply with the Region's resource adequacy framework, consistent with the applicable local/state/provincial or multi-state/provincial entities' requirements."</p>			
Southern Company Generation (6) Roman Carter Roger Green Terry Crawley Tom Higgins Clifford Shepard Garey Rozier Wayne Moore	✓		As long as the proposed reporting requirements placed on the LSE follow the tasks and functions for the LSE contained in the Functional Model and the requirements are appropriate for the resource adequacy SAR.
<p>Response: The LSE is one of a number of functions from the NERC functional model chosen by the SAR Drafting Team to aid the Region in establishing and implementing resource adequacy frameworks.</p>			
ATC LLC (1) Jason Shaver	✓		A Load Serving Entity has a key role in performing Resource Adequacy.
<p>Response: The SAR Drafting Team concurs that the aspect of the LSE function, which forecasts loads and resources, is key for providing that information for the Region's resource adequacy assessments; for this reason, this function is checked in the revised SAR.</p>			
NYRSC (2)	✓		Other parties with data required for resource adequacy assessments should have reporting

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Question 2			
Commenter	Yes	No	Comment
Alan Adamson			requirements as well. Such data should be required to be submitted only to the entity that actually performs the assessment, such as a Region, sub-Region. or ISO.
<p>Response: The SAR Drafting Team has identified entities, which perform the following NERC functions—Planning Coordinator, Resource Planner, Generation Owner, Generation Operator and Load Serving Entity—as having the responsibility to provide pertinent data, assumptions and analyses needed for resource adequacy assessments. It is recognized that various entities perform these functions in the different Regions. It is also possible that the Regions may delegate the task of preparing resource adequacy assessments to sub-regions or other entities.</p>			
FirstEnergy Solutions (5) Dan Huffman	✓		However, thought will need to be given as to how best to implement this for LSEs operating in deregulated markets.
<p>Response: As indicated in the response to Northeast Utilities above, whichever entity is responsible for forecasting loads and resources in a particular deregulated market has the LSE functional responsibility to provide data, assumptions and/or analyses needed for the resource adequacy assessments to the Regions.</p>			
Salt River Project (1) Shirley McKean Daniel Brickley James Peterson	✓		
NPCC CP9, Reliability Standards Working Group David Kiguel – Hydro One K. Goodman – ISONE Alan Adamson – NYSRC Pete Lebro – National Grid David Little – AESO Ralph Rafrano – NYPA Ron Falsetti – IESO R. Pellegrini – United Illumin. W. Shemley – ISONE Greg Campoli – NYISO Shashi Parekh – MA Dept. of Tel. and Energy Guy Vito – NPCC	✓		
MRO (2) Jim Maenner Al Boesch – NPPD (2) Terry Bilke – MISO (2) Bob Coish – MHEB (2) Dennis Florom – LES (2) Ken Goldsmith – ALT (2) Todd Gosnell – OPPD (2) W. Guttormson – SPC (2)	✓		

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Question 2			
Commenter	Yes	No	Comment
Tom Mielnik – MEC (2) Darrick Moe – WAPA (2) P. Oreschnick – XEL (2) Dick Pursley – GRE (2) Dave Rudolph – BEPC (2) Joe Knight – MRO (2) 27 additional MRO members not listed above.			
NERC Standards Evaluation Committee Bill Bojorquez	✓		
Ohio PUC (9) Fred Heizer	✓		
City Water, Light & Power (2) Karl Kohlrus	✓		
Allegheny Power (1) William J. Smith	✓		

3. Do you agree with the proposed definition of Resource Adequacy?

Summary Consideration: While many commenters agreed with the proposed definition, there were several suggestions for improvements and the drafting team adopted the following definition for Resource Adequacy:

“Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria.”

Question 3			
Commenter	Yes	No	Comment
Ohio PUC (9) Fred Heizer		✓	We recommend the definition be made more clear by deleting "with a specified degree of reliability" and replace it with "and includes reserve requirements".
<p>Response: The SAR Drafting Team chose to modify the phrase “with a specified degree of reliability” in the revised definition to connect it with both NERC’s standards and regulators’ criteria. The revised definition is: “Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria.” Reserve requirements were not specifically referenced because Region’s and/or sub-regions may establish a framework that utilizes metrics other than a reserve margin to assess resource adequacy.</p>			
ISO/RTO Council (2) Anita Lee – AESO (2) Al DiCaprio – PJM (2) Sam Jones – ERCOT (2) Ron Falsetti – IESO (2) Pete Brandien – ISONE (2) Bill Phillips – MISO (2) M. Calimano – NYISO (2) Lisa Szot – CAISO (2)		✓	The proposed definition does not capture system losses - a key component in evaluating the amount of aggregate resource needed to ensure adequacy. We therefore propose that Resource adequacy be defined as "the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements for the end-use customers and system losses with a specified degree of reliability.
<p>Response: In response to this and similar comments, the definition was revised as follows: “Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria.”</p>			
ATC LLC (1) Jason Shaver		✓	ATC thinks that the following words should be placed after the word "reliability": "... specified degree of reliability with due consideration for transmission constraints."
<p>Response: The SAR Drafting Team chose not to explicitly reference transmission constraints, but rather to incorporate losses into the revised definition because implicit in the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements of the end-use customers is the concept of deliverability. Sufficient energy must be generated not just to meet load, but to also allow for losses, transmission constraints and other contingencies. The revised definition is: “Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria.”</p>			

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Question 3			
Commenter	Yes	No	Comment
New York ISO (2) Michael Calimano		✓	<p>This definition supports the establishment of a standard based on measurable criteria. The criteria may not be sufficient if it is based solely on a single Region-wide reserve margin since diversity could allow sub-regions to meet criteria with different levels of reserve margin.</p> <p>In addition The proposed definition does not capture system losses - a key component in evaluating the amount of aggregate resource needed to ensure adequacy. We therefore propose that Resource adequacy be defined as "the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements for the end-use customers and system losses with a specified degree of reliability."</p>
<p>Response: Given the diversity of loads, resources and transmission infrastructure in the Regions, the definition does not refer to a reserve margin requirement. However, the definition was revised as follows to address the second comment: "Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria."</p>			
WECC Loads and Resources Subcommittee John Leland – NW Energy Mike Jaske – CA Energy Com G. Anderson – CA Energy Com Joni Zenger – UT Division of Public Utilities		✓	<p>In paragraph 1, definition of resource adequacy (RA), the phrase, ...with a specified degree of reliability, should be deleted and replaced with the following phrase ...along with necessary planning reserves to cover reasonable contingencies as determined by the Region.</p> <p>We support inclusion of a definition of RA in the SAR, but the current language overstates what we know resource adequacy requirements can deliver. We do not know how to compute reliability, nor do we have assurance that the actions of a planning assessment will induce resource adequacy. We can have greater assurance that we know how to compute planning reserves covering various contingencies.</p>
<p>Response: The SAR Drafting Team chose to modify the phrase "with a specified degree of reliability" in the revised definition to connect it with both NERC's standards and regulators' criteria. The revised definition is: "Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria." Planning reserves were not specifically referenced because Region's and/or sub-regions may establish a framework that utilizes metrics other than a reserve margin to assess resource adequacy.</p>			
Salt River Project (1) Shirley McKean Daniel Brickley James Peterson		✓	The phrase "specified degree of reliability" (p. SAR-4. paragraph 2) is ambiguous.
<p>Response: The SAR Drafting Team chose to modify the phrase "with a specified degree of reliability" in the revised definition to connect it with both NERC's standards and regulators' criteria. The revised definition is: "Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria."</p>			
PJM		✓	Need to mention system losses. Losses need to be planned to be supplied along with

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Question 3			
Commenter	Yes	No	Comment
Mark Kuras Bruce Balmat Joseph Willson Albert DiCaprio			customer demand.
Response: In response to this and similar comments, the definition was revised as follows: "Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria."			
IESO (2) Ron Falsetti	✓	✓	The proposed definition does not capture system losses - a key component in evaluating the amount of aggregate resource needed to ensure adequacy. We therefore propose that Resource adequacy be defined as "the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements for the end-use customers and system losses with a specified degree of reliability.
Response: In response to this and similar comments, the definition was revised as follows: "Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria."			
Northeast Utilities (1) Murale Gopinathan	✓		Yes, so long as fuel supply interruption/deliverability concerns are addressed separately from the probability-based evaluation. This is because the probability of fuel interruption is speculative at best and thus needs to be assessed in the final analysis deterministically.
Response: The issue of whether to address fuel supply interruption/deliverability concerns in the probability-based evaluation is a methodology rather than a definitional issue. Once this SAR proceeds to the standard development stage in 2008, these types of issues will be addressed.			
MRO (2) Jim Maenner Al Boesch – NPPD (2) Terry Bilke – MISO (2) Bob Coish – MHEB (2) Dennis Florom – LES (2) Ken Goldsmith – ALT (2) Todd Gosnell – OPPD (2) W. Guttormson – SPC (2) Tom Mielnik – MEC (2) Darrick Moe – WAPA (2) P. Oreschnick – XEL (2) Dick Pursley – GRE (2) Dave Rudolph – BEPC (2) Joe Knight – MRO (2) 27 additional MRO members not listed above.	✓		The definition is good. However, the term "specified" should be more detailed to describe where the specifications come from (standards and/or the RRO).

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Question 3			
Commenter	Yes	No	Comment
<p>Response: In response to this and similar comments, the SAR Drafting Team chose to modify the phrase "with a specified degree of reliability" in the revised definition to connect it with both NERC's standards and regulators' criteria. The revised definition is: "Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria."</p>			
FirstEnergy Solutions (5) Dan Huffman	✓		Consider changing the ending phrase "with a specified degree of reliability" to "at a specified degree of reliability".
<p>Response: The SAR Drafting Team concurs that the phrase "with a specified degree of reliability" should be changed to "at a specified degree of reliability". The revised definition is: "Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria."</p>			
City Water, Light & Power (2) Karl Kohlrus	✓		
Allegheny Power (1) William J. Smith	✓		
Southern Company Generation (6) Roman Carter Roger Green Terry Crawley Tom Higgins Clifford Shepard Garey Rozier Wayne Moore	✓		
NYRSC (2) Alan Adamson	✓		
NPCC CP9, Reliability Standards Working Group David Kiguel – Hydro One K. Goodman – ISONE Alan Adamson – NYSRC Pete Lebro – National Grid David Little – AESO Ralph Rafrano – NYPA Ron Falsetti – IESO R. Pellegrini – United Illumin. W. Shemley – ISONE Greg Campoli – NYISO Shashi Parekh – MA Dept. of Tel. and Energy	✓		

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Question 3			
Commenter	Yes	No	Comment
Guy Vito - NPCC			
NERC Standards Evaluation Committee Bill Bojorquez	✓		

4. Do you agree with the language added requiring the regional resource adequacy framework to include a probability-based evaluation of whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties?

Summary Consideration: Based on stakeholder comments, the drafting team further modified the language in this portion of the SAR as follows: "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties."

Question 4			
Commenter	Yes	No	Comment
NPCC CP9, Reliability Standards Working Group David Kiguel – Hydro One K. Goodman – ISONE Alan Adamson – NYSRC Pete Lebro – National Grid David Little – AESO Ralph Rafrano – NYPA Ron Falsetti – IESO R. Pellegrini – United Illumin. W. Shemley – ISONE Greg Campoli – NYISO Shashi Parekh – MA Dept. of Tel. and Energy Guy Vito – NPCC		✓	Although we agree that a probability-based evaluation should be required, the SAR should further say, as in the previous draft, that this evaluation should determine whether the applicable resource adequacy criterion (such as LOLE or LOLP) shall be satisfied. (See our comment under Question 1.)
<p>Response: In response to a number of commenters requesting flexibility regarding the specification of an evaluation approach, the SAR has been revised as follows: "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties." Item 3 of the SAR states, "Each Region to periodically assess, through analysis, the resource adequacy of the Region utilizing the established framework." Since the term framework in the revised SAR has been defined to include criteria, the implication is that the analysis needs to assess whether the regional criteria have been satisfied.</p>			
WECC Loads and Resources Subcommittee John Leland – NW Energy Mike Jaske – CA Energy Com G. Anderson – CA Energy Com Joni Zenger – UT Division of Public Utilities		✓	<p>In Paragraph #1, we support deletion of specification of a method like LOLP or LOLE, because we do not believe these kinds of analyses are meaningful for the WI. At the present time there is no method that fully addresses all of the key uncertainties facing the WI. Nor do we believe that such a methodology and the necessary data will be available anytime soon.</p> <p>The term probability-based evaluation still remains an issue of concern. To make resource adequacy assessments meaningful, probabilistic assessment methodologies should not be prescribed until all relevant uncertainties can be characterized using data applicable to the Region. To allow interconnections to develop a framework and implementation requirements that best reflect their unique physical and institutional characteristics, we request deletion of</p>

Consideration of Comments on 2nd Draft of Resource Adequacy SAR

Question 4			
Commenter	Yes	No	Comment
			<p>the term "probability-based" in the final sentence.</p> <p>Finally, the types of uncertainties called out in the previous draft SAR are relevant for the west and we would therefore recommend reinstating the list of relevant factors deleted in this draft.</p>
<p>Response: In order to address the concerns raised in this comment, but still allow flexibility for each RRO to determine its list of relevant uncertainties, the SAR has been revised as follows: "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties."</p>			
Salt River Project (1) Shirley McKean Daniel Brickley James Peterson		✓	<p>The only evaluation measures currently being used in the WECC are deterministic. Until a probability-based evaluation methodology has been agreed to and put in place, we shouldn't agree to move to a probability-based evaluation.</p>
<p>Response: In order to address the concern raised in this comment, the SAR has been revised as follows: "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties."</p>			
NYRSC (2) Alan Adamson		✓	<p>Although we strongly agree that a probability-based evaluation should be required, the SAR should further say, as in the previous draft, that this evaluation should determine whether the applicable regional resource adequacy criterion (such as LOLE or LOLP) shall be satisfied. Also, the term "framework" should be replaced by "Region-specific" or "Regional criterion". (See our comments under Question 1.)</p>
<p>Response: In response to a number of commenters requesting flexibility regarding the specification of an evaluation approach, the SAR has been revised as follows: "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties." Item 3 of the SAR states, "Each Region to periodically assess, through analysis, the resource adequacy of the Region utilizing the established framework." Since the term framework in the revised SAR has been defined to include criteria, the implication is that the analysis needs to assess whether the regional criteria have been satisfied.</p>			
NERC Standards Evaluation Committee Bill Bojorquez		✓	<p>The assessment of resource adequacy includes criteria that are inherently probabilistic. However, the language is not clear in that it makes the use of a probabilistic analysis optional, that is, the language states that the region-level analysis "...should include a probability-based evaluation...", not "shall." This language ought to require the use of probability-based analysis.</p>
<p>Response: In response to a number of commenters requesting flexibility regarding the specification of an evaluation approach, the SAR has been revised as follows: "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties."</p>			
ISO/RTO Council (2) Anita Lee – AESO (2) Al DiCaprio – PJM (2) Sam Jones – ERCOT (2)	✓	✓	<p>We agree with the inclusion but suggest that "but not limited to" after "include" since some Regions may apply a deterministic approach either in lieu of or in combination with a probabilistic approach. Further, the requirement should stipulate that the evaluation must satisfy the applicable resource adequacy criterion.</p>

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Question 4			
Commenter	Yes	No	Comment
Ron Falsetti – IESO (2) Pete Brandien – ISONE (2) Bill Phillips – MISO (2) M. Calimano – NYISO (2) Lisa Szot – CAISO (2)			
<p>Response: In order to address situations in which Regions may apply a deterministic approach in lieu of or in combination with a probabilistic approach, the SAR has been revised as follows: "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties." Item 3 of the SAR states, "Each Region to periodically assess, through analysis, the resource adequacy of the Region utilizing the established framework." Since the term framework in the revised SAR has been defined to include criteria, the implication is that the analysis needs to assess whether the regional criteria have been satisfied.</p>			
New York ISO (2) Michael Calimano	✓	✓	If that framework contains specific reliability criteria.
<p>Response: The SAR has been revised to clarify that one component of framework is the establishment of regional criteria or guidelines.</p>			
IESO (2) Ron Falsetti	✓	✓	We agree with the inclusion but suggest that "but not limited to" after "include" since some Regions may apply a deterministic approach either in lieu of or in combination with a probabilistic approach. Further, the requirement should stipulate that the evaluation must satisfy the applicable resource adequacy criterion.
<p>Response: In order to address situations in which Regions may apply a deterministic approach in lieu of or in combination with a probabilistic approach, the SAR has been revised as follows: "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties." Item 3 of the SAR states, "Each Region to periodically assess, through analysis, the resource adequacy of the Region utilizing the established framework." Since the term framework in the revised SAR has been defined to include criteria, the implication is that the analysis needs to assess whether the regional criteria have been satisfied.</p>			
Southern Company Generation (6) Roman Carter Roger Green Terry Crawley Tom Higgins Clifford Shepard Garey Rozier Wayne Moore	✓		Although the SAR needs to be very clear about the types of "common mode failure" that will be evaluated. Additionally, this Standard should emphasize consistency in reporting, and not the establishment of requiring specific reserve levels or resource adequacy specifics.
<p>Response: In response to the previous set of industry comments, the revised SAR does not use the term "common mode failure." Instead, the SAR provides the following high level direction to the Regions to allow for maximum flexibility in establishing a resource adequacy assessment framework: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..."</p>			
MRO (2) Jim Maenner	✓		The addition of probability-based evaluation is a good one. However, there needs to be more definition to what "relevant uncertainty" means. Language should be added that suggests

Consideration of Comments on 2nd Draft of Resource Adequacy SAR

Question 4			
Commenter	Yes	No	Comment
Al Boesch – NPPD (2) Terry Bilke – MISO (2) Bob Coish – MHEB (2) Dennis Florom – LES (2) Ken Goldsmith – ALT (2) Todd Gosnell – OPPD (2) W. Guttormson – SPC (2) Tom Mielnik – MEC (2) Darrick Moe – WAPA (2) P. Oreschnick – XEL (2) Dick Pursley – GRE (2) Dave Rudolph – BEPC (2) Joe Knight – MRO (2) 27 additional MRO members not listed above.			that the RRO will define what "relevant uncertainty" means.
<p>Response: The SAR now specifies that: "Each NERC regional reliability assurance functional entity (Region) to establish a framework (consisting of criteria or guidelines, methodology, assumptions, approach and reporting requirements)..." Since the revised SAR goes on to state, "The regional resource adequacy framework should include a probability-based evaluation or some other systematic approach for assessing whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties," the implication is that each Region needs to define what "relevant uncertainty" means, as a component of developing its methodology and approach in assessing resource adequacy. Furthermore, once this SAR proceeds to the standard drafting stage, it is anticipated that the Standard Drafting Team will identify the major relevant uncertainties governing these types of evaluations.</p>			
FirstEnergy Solutions (5) Dan Huffman	✓		
Ohio PUC (9) Fred Heizer	✓		
City Water, Light & Power (2) Karl Kohlrus	✓		
Allegheny Power (1) William J. Smith	✓		
ATC LLC (1) Jason Shaver	✓		
Northeast Utilities (1) Murale Gopinathan	✓		
PJM Mark Kuras Bruce Balmat Joseph Willson Albert DiCaprio	✓		

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5. Are you aware of any associated NAESB Business Practices that should be developed to coordinate with this SAR?

Summary Consideration: Commenters did not identify any new NAESB Business Practices that need to be developed to coordinate with this SAR.

Question 5			
Commenter	Yes	No	Comment
ATC LLC (1) Jason Shaver	✓		ATC is does not know the exact NAESB Business Practice that needs to be developed but the SDT should review any existing NAESB B.P. that deal with the gas transaction. How is "TLR" performed for gas transaction?
Response: The NAESB Wholesale Electric Quadrant (WEQ) Standards Review Subcommittee reviewed the latest version of the SAR, already revised to address this set of industry comments. The SAR Drafting Team has incorporated their comments.			
Southern Company Generation (6) Roman Carter Roger Green Terry Crawley Tom Higgins Clifford Shepard Garey Rozier Wayne Moore		✓	However, one could exist.
Ohio PUC (9) Fred Heizer		✓	
City Water, Light & Power (2) Karl Kohlrus		✓	
Allegheny Power (1) William J. Smith		✓	
ISO/RTO Council (2) Anita Lee – AESO (2) Al DiCaprio – PJM (2) Sam Jones – ERCOT (2) Ron Falsetti – IESO (2) Pete Brandien – ISONE (2) Bill Phillips – MISO (2) M. Calimano – NYISO (2) Lisa Szot – CAISO (2)		✓	
Northeast Utilities (1) Murale Gopinathan		✓	
New York ISO (2) Michael Calimano		✓	
WECC Loads and Resources Subcommittee		✓	

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Question 5			
Commenter	Yes	No	Comment
John Leland – NW Energy Mike Jaske – CA Energy Com G. Anderson – CA Energy Com Joni Zenger – UT Division of Public Utilities			
IESO (2) Ron Falsetti		✓	
Salt River Project (1) Shirley McKean Daniel Brickley James Peterson		✓	
NYRSC (2) Alan Adamson		✓	
FirstEnergy Solutions (5) Dan Huffman		✓	
NPCC CP9, Reliability Standards Working Group David Kiguel – Hydro One K. Goodman – ISONE Alan Adamson – NYSRC Pete Lebro – National Grid David Little – AESO Ralph Rafrano – NYPA Ron Falsetti – IESO R. Pellegrini – United Illumin. W. Shemley – ISONE Greg Campoli – NYISO Shashi Parekh – MA Dept. of Tel. and Energy Guy Vito – NPCC		✓	
MRO (2) Jim Maenner Al Boesch – NPPD (2) Terry Bilke – MISO (2) Bob Coish – MHEB (2) Dennis Florom – LES (2) Ken Goldsmith – ALT (2) Todd Gosnell – OPPD (2) W. Guttormson – SPC (2) Tom Mielnik – MEC (2)		✓	

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Question 5			
Commenter	Yes	No	Comment
Darrick Moe – WAPA (2) P. Oreschnick – XEL (2) Dick Pursley – GRE (2) Dave Rudolph – BEPC (2) Joe Knight – MRO (2) 27 additional MRO members not listed above.			
NERC Standards Evaluation Committee Bill Bojorquez		✓	
PJM Mark Kuras Bruce Balmat Joseph Willson Albert DiCaprio		✓	

6. Please provide any other comments on this SAR that you haven't already provided.

Question 6	
Commenter	Comment
Ohio PUC (9) Fred Heizer	In 3) we recommend not singling out fuel supply as a risk. We recommend removing the phrase in the third sentence "of fuel supply interruptions" be replaced with "resource unavailability"
Response: The pertinent portion of 3) of the Detailed Description has been revised to clarify the breadth of the analysis as follows: "As a part of the assessment, each Region needs to describe the resource, transmission and load assumptions for the study period; identify risks to resource adequacy, such as the impacts, if any, of fuel supply interruptions or environmental constraints; and describe available mechanisms to mitigate such impacts." Fuel supply risk is called out specifically to follow through with one of the NERC-Board approved recommendations in the <i>Gas/Electricity Interdependency Task Force Report</i> .	
City Water, Light & Power (2) Karl Kohlrus	Item 2 needs to be modified.
Response: The comment does not contain sufficient detail to allow it to be addressed in the revised SAR.	
ISO/RTO Council (2) Anita Lee – AESO (2) Al DiCaprio – PJM (2) Sam Jones – ERCOT (2) Ron Falsetti – IESO (2) Pete Brandien – ISONE (2) Bill Phillips – MISO (2) M. Calimano – NYISO (2) Lisa Szot – CAISO (2)	Requirement 6 states that a review of deliverability must take place but, no requirements up to that point in this SAR requires the existence of deliverability evaluations. Delete this requirement out of requirement 6. Load deliverability is a separate issue from Resource Adequacy and should not be addressed in this SAR.
Response: The SAR Drafting Team believes resources must be deliverable to load in order to satisfy the resource adequacy definition in the SAR. To clarify that deliverability is important, the SAR was revised as follows "As a part of the assessment, each Region needs to describe the resource, transmission and load assumptions for the study period". The SAR Drafting Team acknowledges that the Resource Adequacy Assessment Standard, once drafted and approved, needs to function with other NERC standards, which also address deliverability, in a complimentary fashion. Therefore, the following sentence was added to part 3) of the Detailed Description, which requires periodic regional resource adequacy assessments. "The analysis should demonstrate compliance with NERC Standards and any applicable more stringent Regional or Local criteria." This nexus was also included in the revised definition.	
ATC LLC (1) Jason Shaver	The SAR SDT needs to provide additional information on how items 5 and 6 will be developed into standards? ATC views numbers 5 and 6 as business practices for NERC to follow, and therefore should not be part of any SAR. For numbers 5 and 6 to have any enforcement they would have to be ordered and audited by FERC. The SAR Form should, at a minimum, list RRO as a Reliability Function. If NERC is going to continue to use this process to develop business practices then NERC should also be listed under the Reliability Functions.

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Question 6	
Commenter	Comment
	The comment form posted with this SAR did not list MRO as a NERC regional entity. When resource adequacy is used most individuals would think about MW, but will this SAR also address the issue of MVARs?
	<p>Response: The NAESB Standards Review Subcommittee reviewed this SAR and did not suggest that parts 5) and 6) of the Detailed Description as candidates for business practices. Rather, the subcommittee suggested the resource adequacy framework be developed through a stakeholder process.</p> <p>Version 3 of the NERC functional model now includes the appropriate function related to resource adequacy assessment, i.e. the regional reliability assurance function (Regional Entity). Given that the October 30, 2006 NERC <i>Reliability Standards Development Plan: 2007–2009</i> calls for the resource adequacy assessment standard to be developed starting in 2008, the SAR Drafting Team believes there is sufficient time for FERC and NERC to sort out the role of the Regional Reliability Councils in implementing this standard. For now the SAR specifies the regional reliability assurance functional entity as the entity with responsibility for establishing a resource adequacy framework.</p> <p>Although NERC’s role is not specifically called out in the functional model diagram, it is very clear from the text describing the functional model that NERC, as the ERO, is the keeper of the model and plays a key role in the development, approval and implementation of the reliability standards. NERC will need to dedicate staff to support the work described in parts 5) and 6) of the Detailed Description.</p>
New York ISO (2) Michael Calimano	Although this SAR does not provide for a nationwide criterion for resource adequacy, it should be noted that allowance of a patchwork set of assesment 'frameworks' could lead to a similar type situation that initiated the ERO legislation.
	<p>Response: Part 6) of the Detailed Description, which prescribes periodic NERC reviews of each Region’s resource adequacy framework “for general consistency, interdependency and/or impact on adjacent Regions.” These reviews are intended to assure that the various regional resource adequacy criteria are compatible at the seams.</p>
WECC Loads and Resources Subcommittee John Leland – NW Energy Mike Jaske – CA Energy Com G. Anderson – CA Energy Com Joni Zenger – UT Division of Public Utilities	<p>Throughout this SAR it is unclear whether the SAR drafting team uses shall and should consistently. We urge that shall be used only when something is being made mandatory. We urge use of should or may when some feature or provision is recommended, but not required.</p> <p>In paragraph #1, the word recognize is apparently used to mean that the establishment of resource adequacy requirements by local/state/regional governments and other policy-setting bodies should be taken into account. This is a crucial issue for WECC and some other Councils that have states or RTOs establishing RA requirements of their own. In WECC, California has established a much stronger version of RA than that contemplated by this SAR or in the development effort now underway within WECC.</p>
	<p>Response: In order to simplify the language, the SAR Drafting Team chose to revise the SAR using the infinitive “to” when specifying a mandatory requirement.</p> <p>In response to the second comment, the SAR now recommends that the resource adequacy assessment “should demonstrate compliance with NERC Standards and any applicable more stringent Regional or Local criteria.”</p>

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Question 6	
Commenter	Comment
Southern Company Generation (6) Roman Carter Roger Green Terry Crawley Tom Higgins Clifford Shepard Garey Rozier Wayne Moore	<p>We are concerned about the potential conflict that may develop between local/regional regulatory agency obligations and any potential NERC resource adequacy standard. In no case, should a NERC standard impose a greater Resource Adequacy requirement than that required by local/regional regulatory agencies.</p> <p>It is acceptable to make the aggregate results of an audit public, but it is not appropriate to make proprietary information available to the public. We believe the standard should not require the public disclosure of commercially sensitive information.</p> <p>To what extent does the regional resource adequacy criteria have to be consistent with adjacent regions? Each region and subregion should have the flexibility to develop their resource adequacy plan in a manner which best fits their region.</p> <p>Southern Generation would like to state that ultimately it is the responsibility of the local or regional appropriate regulatory body (in our case the State Public Service Commission) to establish, approve and oversee resource adequacy issues. These regulatory bodies should be recognized by NERC in the development of this resource adequacy SAR.</p> <p>The components and requirements of this SAR should be cross-referenced with the tasks and responsibilities of the Resource Planner and Planning Authority (already mentioned LSE) of the Functional Model.</p>
<p>Response: The SAR Drafting Team emphasizes that the scope of this standard is limited to the Regions establishing guidelines or criteria, methodologies, approaches and assumptions, and associated reporting processes by which to assess resource adequacy. As legislated in the Energy Policy Act of 2005, NERC, as the ERO, is to "conduct periodic assessments of the reliability and adequacy of the bulk-power system in North America." The role of regional, State and local regulatory entities in implementing resource adequacy requirements is recognized in EAct 2005 and in this SAR. Part 2) of the Detailed Description states: "RTO/ISO(s), generation reserve sharing pool(s) and/or other appropriate entity(ies) to comply with the Region's resource adequacy framework, consistent with the applicable local/state/provincial or multi-state/provincial entities' requirements."</p> <p>The SAR strives for compatibility between regional resource adequacy frameworks and regional, State and/or local resource adequacy requirements by specifying that the regional resource adequacy framework "needs to recognize applicable local/state/provincial or multi-state/provincial resource adequacy criteria or requirements." The SAR also recommends that the resource adequacy assessment "should demonstrate compliance with NERC Standards and any applicable more stringent Regional or Local criteria." Finally, the definition of resource adequacy was revised as follows: "Resource adequacy is defined as the ability of supply-side and demand-side resources to meet the aggregate electrical demand and energy requirements (including losses) of the end-use customers at a specified degree of reliability not inconsistent with NERC Standards and any applicable more stringent Regional or local criteria."</p> <p>The commenters asked, "To what extent does the regional resource adequacy criteria have to be consistent with adjacent regions?" The SAR Drafting Team refers to Part 6) of the Detailed Description, which prescribes periodic NERC reviews of each Region's resource adequacy framework "for general consistency, interdependency and/or impact on adjacent Regions." These reviews are intended to assure that the various regional resource adequacy criteria are compatible at the seams, not that there is a one-size-fits-all resource adequacy criterion.</p> <p>Finally, it is beyond the scope of the SAR to cross-reference the components of the SAR with the responsibilities described in the NERC</p>	

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Functional Model. Once the SAR proceeds to the standard development stage, such a cross-referencing exercise may be appropriate.	
Salt River Project (1) Shirley McKean Daniel Brickley James Peterson	When is this to be measured? Real time, day ahead, year ahead, 5 years ahead, 10 years ahead?
Response: Each Region will need to specify the appropriate planning horizon for resource adequacy assessments. Generally, such timeframes are more than a year out to as much as 10 years out.	
NYRSC (2) Alan Adamson	We thank the SAR drafting team for considering in this new draft SAR, many of the comments that we provided for the first draft.
Response: You are welcome.	
MRO (2) Jim Maenner Al Boesch – NPPD (2) Terry Bilke – MISO (2) Bob Coish – MHEB (2) Dennis Florom – LES (2) Ken Goldsmith – ALT (2) Todd Gosnell – OPPD (2) W. Guttormson – SPC (2) Tom Mielnik – MEC (2) Darrick Moe – WAPA (2) P. Oreschnick – XEL (2) Dick Pursley – GRE (2) Dave Rudolph – BEPC (2) Joe Knight – MRO (2) 27 additional MRO members not listed above.	It's necessary that along with the requirements for the Planning Authority, Resource Planner, and LSE to provide this information, that there is a corresponding standard for the Reliability Authority to perform the necessary analysis to consider transmission constraints to assure that alternate supplies can be delivered for generation contingencies. The term "periodically assess" in paragraph 3, should be more clearly defined. A term stating, for example, "every 3 years" would be more specific and provide greater consistency among the regions. Overall, the SAR is loosely defined and should be tightened up somewhat. During the standard development phase, it should be tightened further. As an industry, where practical, the regions should work together to create consistency among the methodologies.
Response: In response to the first comment, the revised SAR includes the following requirement for resource adequacy assessments— "each Region needs to describe the resource, transmission and load assumptions for the study period." Thus, the ability to deliver resources to load is recognized. Because the SAR is intended to define the scope of the standard in broad strokes, the requested "tightening up" is more appropriate for the standard development stage.	

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<p>NERC Standards Evaluation Committee Bill Bojorquez</p>	<p>The SAR appears to have limited applicability because of contradictions among some of the sections. The SAR requires that a region develop a framework for assessing resource adequacy while a close reading suggests that the existence of the resource adequacy requirements that are to be analyzed is optional.</p> <p>Paragraph 1, in part, states that each Region "...shall establish a framework by which to assess the resource adequacy of the Region." Paragraph 3 states that "Each Region shall periodically assess, through analysis, the resource adequacy of the Region..." These are requirements.</p> <p>However, Paragraph 2 states that "RTO/ISO(s), generation reserve sharing pool(s) and/or other appropriate entity(ies) should establish resource adequacy requirements...". This is an "ought" statement, not a requirement. The intent of the rest of this SAR appears to be that there shall be resource adequacy requirements. Accordingly, then the word "should" in the first sentence of Paragraph 2 ought to read "shall."</p> <p>Also, the language in Paragraph 2 states that "The Region or sub-regions should establish assessment methodologies...". Here, the "ought" statements appears to conflict with the language in other sections, i.e., that there shall be requirements that are analyzed, audited and reported on.</p> <p>Paragraph 4 appears to establish two distinct requirements for data confidentiality. The first sentence states that data accompanying the publication of assessments may be confidential. The second sentence establishes a clear standard for data that accompanies public reports. It is not clear that the first sentence is needed as long as the second sentence is modified to make clear that NERC will use the data aggregated by the Regions.</p> <p>Paragraph 5 appears to make optional the auditing, "NERC should perform periodic audits...", the validation of compliance, "Such audit should validate the compliance...", and the confirmation of consistent application of assessment methodologies. Again, it appears that these ought to be requirements and the wording ought to be "should", not "shall."</p> <p>Paragraph 5 indicates that the NERC review of Regional assessment approaches may use "...independent analysis by NERC." It may be intentional that there is no discussion of the methodology NERC will use in this independent analysis. However, it may prevent future confusion if this language reflects that NERC's independent analysis will be based on the Region's framework of analysis.</p> <p>Paragraph 6 also includes language that does not specifically require the performance of the indicated reviews and ought to be modified to replace "should" with "shall."</p> <p>Where is the Regional resource adequacy standard? As a generic concern, this SAR requires that each Region assess its resource adequacy. At the same time, resource adequacy requirements may - it is suggested above, must - be established by a number of different entities within a Region. These entities' requirements are "...to comply with the resource adequacy criterion (or criteria) of the Region." However, nowhere is there a requirement that the Region establish such a criterion or criteria. In practice, without a resource adequacy standard at the level of the Region, the analytical framework, the analysis itself and any NERC review appear to have a only a vague basis.</p>
<p>Response: In order to simplify the language, the SAR Drafting Team chose to revise the SAR using the infinitive "to" when specifying a</p>	

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	<p>mandatory requirement. Part 2) of the Detailed Description now specifies, "RTO/ISO(s), generation reserve sharing pool(s) and/or other appropriate entity(ies) to comply with the Region's resource adequacy framework, consistent with the applicable local/state/provincial or multi-state/provincial entities' requirements." The SAR Drafting Team revised the SAR to address the comments regarding parts 4), 5) and 6) in a similar manner.</p> <p>The commenters asked the question, "Where is the Regional resource adquacy standard?" The SAR Drafting Team made a conscious decision to limit the scope for Regions to an assessment standard (including criteria, methodology, assumptions and approach) recognizing the mandates and restrictions in the Energy Policy Act of 2005. However, as quoted from the SAR in the first paragraph of this response, the entity responsible for implementing resource adequacy requirements needs to comply with the Region's resource adequacy framework consistent with the applicable regulatory agency's requirements.</p>
PJM Mark Kuras Bruce Balmat Joseph Willson Albert DiCaprio	Requirement 6 states that a review of deliverability must take place but in this SAR no requirements up to that point require the existence of deliverability evaluations.Delete this requirement out of requirement 6. PJM considers load deliverability to be a separate issue from Resource Adequacy and should not be addressed in this SAR.
	<p>Response: The SAR Drafting Team believes resources must be deliverable to load in order to satisfy the resource adequacy definition in the SAR. To clarify that deliverability is important, the SAR was revised as follows "As a part of the assessment, each Region needs to describe the resource, transmission and load assumptions for the study period". The SAR Drafting Team acknowledges that the Resource Adequacy Assessment Standard, once drafted and approved, needs to function with other NERC standards, which also address deliverability, in a complimentary fashion. Therefore, the following sentence was added to part 3) of the Detailed Description, which requires periodic regional resource adequacy assessments. "The analysis should demonstrate compliance with NERC Standards and any applicable more stringent Regional or Local criteria."</p>
Allegheny Power (1) William J. Smith	No other comments.
FirstEnergy Solutions (5) Dan Huffman	No additional comments.