

### Background

The Resource Adequacy SAR Drafting Team thanks all those who submitted comments with the posting of a SAR for Resource Adequacy Assessments. After careful review and consideration of all comments received, the drafting team has made some changes to the SAR and will solicit additional stakeholder comments before asking the Standards Authorization Committee for approval to move forward to the standard drafting stage.

The SAR was posted from 02/18/05 - 03/21/05. The drafting team received 25 sets of comments. The comments can be viewed in their original format at:

[ftp://www.nerc.com/pub/sys/all\\_updl/standards/sar/Resource\\_Adequacy\\_Comments\\_03\\_21\\_05.pdf](ftp://www.nerc.com/pub/sys/all_updl/standards/sar/Resource_Adequacy_Comments_03_21_05.pdf)

The comments indicate there is no consensus on the revised definition. Many commenters suggested that the definition of ‘contingency’ that was approved with Version 0 is preferable, and the drafting team has decided to move forward with that definition.

All of the comments received by the drafting team are contained in the attached document. If you feel that the drafting team overlooked your comments, 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 Cauley at 609-452-8060 or at [gerry.cauley@nerc.net](mailto:gerry.cauley@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.

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1. Do you agree there is a reliability need for specifying that resource adequacy studies should be required to demonstrate that the region’s reliability is not threatened by the loss of a fuel source or other common mode failure?

Lead Commenter	Group Name	Response	Comment	Drafting Team Response
Rheault	Manitoba Hydro	Yes		
Mayo	Transmission Access Policy Study Group	Yes		
Tammar	ISO/RTO Council Review Committee	Yes/No	The question implies that planning criteria should be established around the failure of an entire fuel source in a Region. Since this type of failure, or any other common mode failure, has never occurred on a region-wide basis, it is viewed as an extreme contingency and could be studied as a sensitivity case. As such the IRC believe it is inappropriate to set criteria around it.	The wording of Question 1 implies that the focus of resource adequacy assessments should be the failure of an entire fuel source in a Region. The SAR Drafting Team agrees that this is an extreme contingency and should be studied as a sensitivity case. The team believes the SAR, as rewritten, appropriately includes fuel supply interruptions (rather than the failure of an entire fuel source) as one of a number of parameters that needs to be taken into account when assessing resource adequacy, as indicated by SAR Item #3, as rewritten.
Stanton	Calpine	No	THE QUESTION ITSELF APPEARS INCONSISTENT. NERC DEFINES RELIABILITY AS CONSISTING OF TWO COMPONENTS: RESOURCE ADEQUACY AND SECURITY. THE QUESTION REGARDING EVALUATION AND REPORTING ON COMMON MODE FAILURES APPEARS TO BE A CONTINGENCY CONSIDERATION (PERHAPS EVEN AN EXTREME CONTINGENCY) WHICH TYPICALLY IS CONSIDERED AS A SECURITY MATTER, YET THE QUESTION	As explained in the response to Tammar of the ISO/RTO Council, resource adequacy assessments are to consider fuel supply interruptions as one of a number of factors in determining operable capacity available to meet load obligations. Fuel supply interruptions purposely did not specify fuel types to allow for consideration of natural gas, coal, hydro, wind and other fuels. Given the wide variation in geographical distribution of loads and resources, resource mixes and transmission configurations in the various Regions and sub-regions, the SAR Drafting Team does not

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			<p>RELATES TO "RESOURCE ADEQUACY STUDIES". THIS RAISES A HIGHER LEVEL ISSUE OF WHETHER NERC SHOULD BE CLEARER IN DEFINING WHAT THE NATURE OF HOW GENERATING RESOURCE "CAPACITY" REQUIREMENTS SHOULD BE DETERMINED. WE BELIEVE THIS IS A NECESSARY PRE-REQUISITE TO ADDRESSING ANY LOWER LEVEL DETAIL. IN ADDITION, WHILE WE SUSPECT THE SPECIFIC REFERENCE TO A LOSS OF FUEL SOURCE MAY BE NARROWLY FOCUSED ON THE NATURAL GAS DELIVERY SYSTEM, THE RISK OF LOSS OF FUEL SUPPLY CAN EXIST FOR ALL FUEL UNDER VARIOUS CONDITIONS. SHIPS CARRYING OIL AND COAL CAN (AND IN FACT HAVE) SUNK. SIMILARLY, COAL AND OIL TRANSPORT BY RAIL IS SUBJECT TO ACCIDENTS, WEATHER, AND LABOR ACTIONS. IN ADDITION, EVEN ONCE ON SITE, FUEL HANDLING METHODS CAN ALSO ENCOUNTER DELIVERY PROBLEMS FROM THE COAL PILE OR THE OIL TANK TO THE BURNER TIP. THESE INCLUDE CHUTE PLUGS, SILO BRIDGING AND FREEZING, EXCESSIVE WATER CONTENT, CONVEYOR MALFUNCTION, ETC. ALSO, THERE ARE NO MINIMUM INVENTORY REQUIREMENTS ON OIL-FIRED OR COAL-FIRED UNITS. EVEN ONCE DELIVERED TO THE BURNER TIP, THERE ARE EFFLUENT CONSIDERATIONS AND</p>	<p>believe NERC is the appropriate entity to define resource capacity, rather that is more appropriately left to the Region and sub-regions, as provided for in the SAR.</p> <p>With respect to defining the deliverability constraints of natural gas, the SAR Drafting Team agrees that NAESB is the appropriate entity to deal with issues of coordinating the scheduling of natural gas for electricity and direct uses. However, the team believes it is appropriate to incorporate provisions into resource adequacy assessments to address whether natural gas will be available/deliverable for electricity generation purposes when it is needed most to meet peak needs, if natural gas is a significant part of a Region's or sub-region's resource mix. A number of areas in NERC have witnessed competition for natural gas between direct uses and electricity production, especially in the wintertime.</p>

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			<p>ENVIRONMENTAL CONSTRAINTS. SOME THERMAL STATIONS HAVE COOLING WATER DISCHARGE LIMITATIONS THAT COINCIDE WITH PEAK SUMMER NEEDS. THEN, THERE ARE LIMITED FUEL GENERATING RESOURCES SUCH AS HYDRO. BOTH PONDAGE AND RUN-OF-RIVER FACE SHORTAGES AND CONSTRAINTS IN THEIR DELIVERY. THIS IS NOT AN EXHAUSTIVE LIST. HENCE, Assessing the risk of a loss of fuel supply is going to be extremely difficult. FURTHER, WITH RESPECT TO NATURAL GAS FIRED UNITS, WE BELIEVE THE FOCUS ON DELIVERABILITY OF NATURAL GAS (TYPICALLY DISCUSSED IN TERMS OF LONG TERM FIRM TRANSPORTATION CONTRACTS) IS A MISPLACED FOCUS. VERY ACTIVE AND LIQUID TRADING MARKETS EXIST AND ITS CONTRIBUTION CAN BE ENHANCED THROUGH IMPROVED COORDINATION BETWEEN THE SCHEDULING OF GAS AND THE SCHEDULING OF ELECTRICITY. SPECIFICALLY, THE DEFINITION OF THE ELECTRIC AND GAS DAYS AND THE SCHEDULING TIMELINES FOR EACH OF THOSE RESPECTIVE MARKETS ARE INCONSISTENT AND POORLY ALIGNED. We believe the concerns over mismatched gas nomination and energy scheduling deadlines will be addressed by the NAESB Energy Day initiative. A Standard that would encompass these parameters, and many more which we could envision,</p>	

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			would likely be hundreds of pages long and take years to develop. We do not believe a need for such a Standard, above and beyond good utility practice, has been demonstrated.	
Nicely	TVA Generation	Yes	TVA Generation believes it is good electric industry practice to perform resource adequacy studies as part of the resource planning process. A Resource Adequacy Assessment standard, if developed, should promote an assessment of resource adequacy by the appropriate entities, without being overly prescriptive with regard to the methodology / criteria applied. Resource adequacy assessments generally involve consideration of available resources to serve forecast demands, and the reliability implications of unavailability of resources and forecast demand deviations. Unavailability of generating resources at any given time can result from many factors. The implication in question 1 above is that "loss of a fuel source or other common mode failure" would interrupt multiple generating resources at the same time within a region. The risk of such "common mode failures" should be considered, but a low probability of occurrence may preclude them from routine resource adequacy studies.	The SAR Drafting Team concurs with the comments from TVA Generation and notes that the Resource Adequacy Assessment SAR, as rewritten, is not overly prescriptive, but rather requires the Regions to establish resource adequacy frameworks appropriate for their particular circumstances. SAR Item #3 has been rewritten to clarify that fuel supply interruptions (not the common mode failure of an entire fuel supply for a Region) is only one of a number of factors, which should be considered in assessing the resource adequacy of a Region.
Vongkhamchanh	SERC EC Planning Standards Subcommit-	No	Establishing resource adequacy criteria on a regional (i.e., RRO) level is not practical. As proposed, the regional criteria may be in conflict with local, state,	The following excerpt from the SAR, as rewritten, shows the intended linkage between a Region's resource adequacy criteria and the jurisdictional authorities of local, state or

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
	tee		or provincial regulatory agency requirements. NERC should not pursue development of this standard.	provincial regulatory agencies, "Each NERC Regional Reliability Organization (Region) shall establish a framework by which to assess the resource adequacy of the Region. Such framework shall recognize applicable local/state/province or multi-state/province resource adequacy criteria or requirements, where such criteria/requirements exist." The SAR Drafting Team disagrees with the assertion that there is no need for this standard. Generation and transmission "go hand in glove." Adequacy must be assessed on both fronts to achieve NERC's reliability mission and the mandates of the Energy Policy Act of 2005.
Horakh	MAAC	Yes		
Davis	TVA Electric System Operations	Yes/No	This may be a good idea, but NOT from a regional standpoint due to the diversity of systems	The SAR, as rewritten, provides the flexibility for the Regions to establish multiple resource adequacy criteria through the formulation of a resource adequacy framework, which takes into account sub-regional diversity of systems whose adequacy is best defined through multiple criteria. The requirement is that the Region "shall periodically assess, through analysis, the resource adequacy of the Region utilizing the established framework"
Khan	IESO	Yes/No	The question implies that planning criteria should be established around the failure of an entire fuel source in a Region. Since this type of failure, or any other common mode failure, has never occurred on a region-wide basis, it is viewed as an extreme contingency and could be studied as a sensitivity case. As such the IESO believe it is inappropriate to set criteria around it.	The SAR Drafting Team concurs with these comments as noted in the response to Tammar of the ISO/RTO Council.

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Campbell	FRCC	Yes/No	<p>The premise and components of the assessment process should be determined at the Regional Reliability Organization (RRO) level as the regions are most qualified to determine the relevant issues especially when addressing fuel deliverability and vulnerabilities. As the standard is developed, prescriptive requirements with regards to the fuel factors and contingencies identified for inclusion should be retained at the Regional level. A one-size fits all standard will be difficult to develop. Regional expertise is required to establish the relevant resource adequacy assessment factors to the Region and thus the standard should remain broad-based and require that assessments be based on sound technical justification and relevant analysis.</p>	<p>Please refer to the SAR Drafting Team's comments to Nicely of TVA Generation and to Davis of TVA Electric System Operations. In a nutshell, the Region has ample flexibility to tailor its resource adequacy framework to account for the particular circumstances in the Region.</p>
DiCaprio	MAAC	No	<p>As Item #1 in the SAR's Detailed Description implies there is a need for Resource Planners to have 'a' Resource Adequacy criteria. However, there is not a need for a 'North American' Resource Adequacy criterion. To the extent that a state, province or Operating entity and its participants are satisfied with the risk level resulting from a given level of resources, then that area satisfies its Resource criteria (i.e. if an entity's loads are willing to go unserved more often than other entities' loads, then NERC should not get involved). On the other hand, to the extent that a regionally imposed criterion is not being met, then the NERC Region should</p>	<p>Please refer to the SAR Drafting Team's comments to Nicely of the SERC Subcommittee for the intended linkage between state/provincial jurisdictions and the NERC Regions in formulating resource adequacy criteria. No "one size fits all" North American Resource Adequacy Criterion is envisioned under this SAR. The rewritten version of the SAR seeks to provide additional clarity in this area.</p>



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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			have to resolve the non-compliance.	
Coish	MRO	Yes		
Zito	NPCC	No		
Lebro	National Grid	Yes/No	It is not clear from this question whether it is the intension of the SAR that the Standard would require Capacity Margin (or Reserve Margin) Requirements to take into account the simultaneous loss of all generators in a Region or sub-region that have the same type of fuel supply, or some other kind of fuel disruption or extreme common mode failure scenario affecting several generating units. A requirement to provide sufficient Reserve Margins for meeting these extreme conditions, as this question could be interpreted may be an overly stringent requirement for establishing Reserve Margin Requirements within ISO/RTOs or sub-region. Furthermore, developing models to measure the simultaneous impact on multiple Regions (ISO/RTOs) from a common mode failure may be impractical for most if not all ISO/RTO. Therefore, the assessment and mechanism to mitigate the impact of a loss of fuel supply would be best left to the ten NERC Regional Reliability Councils to consider and should not transcend down to the ISO/RTO level.	The SAR Drafting Team concurs with these comments as noted in the response to Tammar of the ISO/RTO Council. The SAR, as rewritten, provides for the ten reliability councils and their sub-regions, not NERC, to formulate all of the components of resource adequacy assessments appropriate for their areas including the assessment of and mechanisms to mitigate the impact of fuel supply interruptions.
Rana	AEP	Yes	.The detailed description in the SAR proposal refers to the demonstration of possible fuel supply deliverability interruptions to be studied. However, Question 1 above, refers to the loss of	The wording of Question #1 is misleading. Please refer to the SAR, as rewritten, which correctly indicates that fuel supply interruptions need to be evaluated to ascertain whether they pose a credible to resource adequacy. If so,

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			fuel source. Which one should be evaluated?	then mitigation mechanisms need to be described.
Bolbrock	LIPA	Yes/No	It is not clear from this question whether it is the intension of the SAR that the Standard require that base case studies for establishing Regional or sub-Regional capacity margin or reserve margin requirements must assume the simultaneous loss of all generators in a Region or sub-Region that have the same type of fuel supply, or some other kind of fuel disruption or extreme common mode failure scenario affecting several generating units. A requirement to provide sufficient reserve margins for meeting these extreme conditions, as this question could be interpreted, would be an overly stringent requirement for establishing reserve margin requirements. On the other hand, we do recommend that loss of fuel supply be considered in sensitivity cases or extreme condition assessments, and that such assessments describe measures or mechanisms that would be implemented to mitigate the reliability impact of loss of fuel supply. These extreme condition assessments would be comparable to assessment of "Extreme Contingencies" in transmission planning studies for measuring the robustness of the transmission system. The Region should specify guidelines for conducting such assessments. To the extent that individual generators have been forced out of service historically because of loss of fuel supply or other common mode failures, this data should certainly be	The SAR Drafting Team concurs with these comments as noted in the response to Tammar of the ISO/RTO Council. The SAR, as rewritten, provides for the ten reliability councils and their sub-regions, not NERC, to formulate all of the components of resource adequacy assessments appropriate for their areas including the assessment of and mechanisms to mitigate the fuel supply interruptions.

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			recognized in development of forced outage rates used in reliability studies for establishing reserve requirements (see our response to Question #2).	
Waters	Progress Energy	No	The assessment of fuel supply impacts can generally only be made in a subjective manner. This proposal seems to reflect the concern that some regions are nearly totally dependent on natural gas. Several very complex studies have been attempted to look at gas failures with only limited success and with the constants changes in infrastructure such studies have a very short shelf life. Any such assessment requirement must recognize these facts. Further, in regions such as SERC, gas plays only a minor role and the efforts to conduct extensive studies would not be worth the cost. Assessments of other fuels such as hydro and coal supplies are equally complex and require a great deal of subjective judgement. See also the comments under question 2.	As explained in the response to Tammar of the ISO/RTO Council, the resource adequacy assessment methodology should consider fuel supply interruptions as one of a number of factors in determining operable capacity available to meet load obligations. Fuel supply interruptions purposely did not specify fuel types to allow for consideration of natural gas, coal, hydro, wind and other fuels since, as these comments indicate, natural gas is not always the fuel of concern. Although the assessment of fuel supply interruptions may be complex, it is important from a resource adequacy perspective.
Helyer	Tenaska	Yes		
Carter	Southern Co Generation	Yes		
Besier	TXU Electric Delivery Co	Yes		
Adamson	NYSRC	Yes/No	It is not clear from this question whether it is the intension of the SAR that the Standard require that base case studies for establishing Regional or sub-Regional capacity margin or reserve margin requirements must assume the	The SAR Drafting Team concurs with these comments as noted in the response to Tammar of the ISO/RTO Council. The SAR, as rewritten, provides for the ten reliability councils and/or their sub-regions, not NERC, to formulate all of the components of the resource adequacy

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			<p>simultaneous loss of all generators in a Region or sub-Region that have the same type of fuel supply, or some other kind of fuel disruption or extreme common mode failure scenario affecting several generating units. A requirement to provide sufficient reserve margins for meeting these extreme conditions, as this question could be interpreted, would be an overly stringent requirement for establishing reserve margin requirements. On the other hand, we do recommend that loss of fuel supply be considered in sensitivity cases or extreme condition assessments, and that such assessments describe measures or mechanisms that would be implemented to mitigate the reliability impact of loss of fuel supply. These extreme condition assessments would be comparable to assessment of "Extreme Contingencies" in transmission planning studies for measuring the robustness of the transmission system. The Region should specify guidelines for conducting such assessments. To the extent that individual generators have been forced out of service historically because of loss of fuel supply or other common mode failures, this data should certainly be recognized in development of forced outage rates used in reliability studies for establishing reserve requirements (see our response to Question #2).</p>	<p>framework appropriate for their areas including the assessment of and mechanisms to mitigate the impact of fuel supply interruptions.</p>
Alford	CenterPoint Energy	Yes		
Davis	Entergy	No	The structure of this question leads one to	The SAR Drafting Team disagrees with the

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			<p>believe the responder is almost required to answer YES, otherwise it could be interpreted that the responder is against "reliability". That is not a correct interpretation of our response. We agree there is a reliability need to evaluate the impact of the loss of a fuel source. However, that evaluation should be done by the LSEs and the owners of the generators under contract to serve the load of those LSEs. Those studies are done today by LSEs. However, if there is a loss of fuel source it is the responsibility of the LSE to explain how he will serve his load if that loss occurs. Of course one possible explanation may be that the LSE may not be able serve his load. That possible response then is the purview of the LSE and his local regulator. Please define the term "common mode failure" - common mode failure of what, and how is it meant to be interpreted for this potential standard. Also, please see our response to Question # 5 below.</p>	<p>assertion that there is no need for this standard. Generation and transmission "go hand in glove." Adequacy must be assessed on both fronts to achieve NERC's reliability mission and the mandates of the Energy Policy Act of 2005. Given the interconnected nature of the electricity grid, it is not solely the LSEs responsibility to ensure resource adequacy; it is NERC's and the Regions' responsibility to assess that the sum of the LSEs efforts results in an adequate system.</p> <p>Please disregard the wording of Question #1; the SAR itself does not use the term, "common failure mode."</p>
Brown	NYISO	No	<p>The question implies that planning criteria should be established around the failure of an entire fuel source in a Region. Since this type of failure, or any other common mode failure, has never occurred on a region-wide basis, it is inappropriate to set criteria around it. A Region wide loss of a fuel source is considered by NYISO as a extreme contingency and could be studied as a sensitivity case. It should be noted that a proper accounting of these events in a resource adequacy study occurs when these outages are recorded</p>	<p>Please refer to the SAR Drafting Team's comments to Tammar of the RTO/ISO Council. In short, The SAR Drafting Team agrees that this is an extreme contingency and should be studied as a sensitivity case. The team believes the SAR, as rewritten, appropriately includes fuel supply interruptions (rather than the failure of an entire fuel source) as one of a number of parameters that needs to be taken into account when assessing resource adequacy.</p>

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<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
			in a mechanism such as GADS.	
Riley	CAISO	Yes		

2. Do you agree with the scope and applicability of the proposed standard?

Lead Commenter	Group Name	Response	Comment	Drafting Team Response
Rheault	Manitoba Hydro	Yes		
Mayo	Transmission Access Policy Study Group	No		
Tammar	ISO/RTO Council Review Committee	Yes/No	Item 6 of the detailed description suggests NERC and the Region will conduct periodic reviews concerning deliverability of resources to load. It is the IRC's view that demonstration of "deliverability" may pose some Regions difficulty due to the ambiguity in its definition.	The SAR Drafting Team recommends that the issue of deliverability be addressed in the Standard Drafting Phase, if the SAC approves this SAR to proceed to that phase. Many of the terms in the SAR were purposely left vague to allow the Regions working with NERC to tailor the definitions to fit their own particular circumstances.
Stanton	Calpine	No	The scope IS TOO NARROW AND would have to be greatly expanded to be useful. FURTHER, THERE ARE HIGHER LEVEL RELIABILITY REQUIREMENT QUESTIONS THAT REQUIRE ANSWERS SOON. SEE ABOVE FOR FURTHER DETAIL.	The SAR Drafting Team believes that the scope of the SAR is sufficiently broad to accomplish the purposes described in the Purpose/Industry Need section. Specific issues should be addressed in the Standard Drafting Phase, if the SAC approves this SAR to proceed to that phase.
Nicely	TVA Generation	No	TVA Generation believes establishing a resource adequacy criterion at our NERC Region (SERC) level is not necessary. Historically, the SERC region has reviewed/reported capacity resource margins based on data submittals by member systems for both near-term (peak season assessments) and long-term (10-year assessments) horizons. Member systems are also	The SAR Drafting Team revised the SAR to provide additional flexibility to the Regions in establishing a resource adequacy framework. The SAR, as rewritten, also provides significant linkages to current sub-regional practices in assessing and implementing resource adequacy criteria, as demonstrated by the following two excerpts from the SAR:  <input type="checkbox"/> "Such framework shall recognize applicable local/state/province or multi-state/province

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			<p>surveyed to identify any reliability issues they may be experiencing (such as resource unavailability). If a Resource Adequacy Assessment standard is developed, we would like to see more flexibility in accommodating current Regional practices.</p>	<p>resource adequacy criteria or requirements, where such criteria/requirements exist.”</p> <ul style="list-style-type: none"> <li>□ “The Region or sub-regions should establish assessment methodologies to determine whether the adequacy criteria are met.”</li> </ul> <p>The intent of the SAR Drafting Team in including the above provisions is to provide a conduit in the proposed Standard for sub-regional resource adequacy practices to substantially influence the development of regional criteria. It is entirely possible that the Regions will have a number of different resource adequacy criteria reflecting the criteria of the various sub-regions, but developed in a coordinated fashion.</p>
Vongkhamchanh	SERC EC Planning Standards Subcommittee	No	See response to Question # 1.	Please refer to response above to Nicely of TVA Generation for an explanation of the linkages between sub-regional and regional resource adequacy processes.
Horakh	MAAC	No	<p>First, the Detailed Description does not follow the format of the four points in the Purpose/Industry Need. In itself, this is not necessarily wrong, but it is, at best, confusing. Point #4 in the Purpose/ Industry Need, make data available to NERC, does not appear to be addressed in the Detailed Description. And points # 5 and 6 in the Detailed Description, NERC audits and reviews, do not appear in the Purpose/Industry Need. Second, the distinction between resource adequacy CRITERION, such</p>	<p>The SAR Drafting Team concurs with these comments, in general. The team agrees that there is a need to distinguish between criteria for establishing resource adequacy requirements and criteria for assessing resource adequacy. With the enactment of EPA 05, the scope of the revised SAR is limited to requiring Regions to develop criteria by which to assess resource adequacy. Although SAR Item #2 encourages entities such as RTOs, ISOs, etc. to “establish resource adequacy requirements so as to comply with the resource adequacy criterion (or criteria) of the Region,” the scope of</p>



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			<p>as LOLE, and resource adequacy REQUIREMENTS, such as reserve margin, is not clear. Definitions are needed here or in the standard to be developed. And it is not clear that criterion and requirements can be properly developed in the manner described here. Detailed Description #1 has the region developing the criterion, which is fine. But Detailed Description #2 has RTO's etc developing the requirements. Multiple ISO's etc in a region could then derive different requirements based on a common criterion. And the individually derived requirements, when aggregated, would not match the overall regional criterion, because they did not account for the mutual help provided when connected together. It would seem that the region would have to develop both the criterion and the requirements. The requirements would then be allocated to the ISO's etc. Third, points #4 and 5 in the Detailed Description should be reversed in order. It is not logical to talk about assessments performed by NERC in #4 before indicating that NERC might do assessments in #5. Fourth, the statement in Detailed Description #3 which states have no ADVERSE impact on system reliability should be changed to state have no UNACCEPTABLE impact on system reliability. See the answer to Question #1.</p>	<p>this standard cannot be so broad as to potentially create a situation in which NERC (as the ERO heir apparent) could compel entities to construct generation infrastructure. EPA 05 makes it clear that NERC's role is to make transparent resource adequacy problems through assessments.</p> <p>Given the wide variation in institutional mechanisms for resource adequacy across the NERC regions, the SAR allows for both a bottoms-up approach in starting with sub-regional adequacy metrics to develop regional resource adequacy criteria, or top-down approach.</p> <p>Item #3 in the detailed description has been rewritten as follows to address this and similar comments: "The assessment should identify risks to resource adequacy, such as the impacts, if any, of fuel supply interruptions and describe available mechanisms to mitigate such impacts."</p>
Davis	TVA Electric System	No	TVA would like to see some flexibility for either the RRO, subregion or	The SAR, as rewritten, provides the desired flexibility, but also requires coordination at the

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
	Operations		reserve sharing group to set their own margins.	regional level by requiring the Region to establish a resource adequacy framework.
Khan	IESO	Yes/No	Item 6 of the detailed description suggests NERC and the Region will conduct periodic reviews concerning deliverability of resources to load. It is the IRC's view that demonstration of "deliverability" may pose some Regions difficulty due to the ambiguity in its definition.	The SAR Drafting Team believes there needs to be some flexibility in the definition of terms to accommodate the different circumstances around North America, but agrees with the need for common definitions. The team recommends that the issue of definitions be resolved during the drafting of the standard, assuming the SAC approves this SAR to proceed to that phase.
Campbell	FRCC	Yes/No	As written, the FRCC feels the scope of this SAR is too large and needs to be refined.	The SAR Drafting Team believes that the scope of the SAR, as revised, is sufficiently broad, but not too broad, to accomplish the purposes described in the Purpose/Industry Need section.
DiCaprio	MAAC	No	As noted in the response to Question #1, the scope is not clear. Is the scope to ensure that there is a criterion of some kind or is the scope to ensure that North America is imposing a common Resource Planning criterion, with a common method to calculate that Planning criteria, and 'operationally' imposing that criteria. The SAR should make clear what it means by "demonstrate fuel supply interruptions have no adverse impact" or why NERC needs anything more than the current required Emergency Procedures to document "available mechanisms to mitigate the impacts of fuel interruptions".	<p>The enactment of EPA 05 has helped to clarify the scope of the SAR. The scope of the revised SAR is limited to requiring Regions to develop criteria by which to assess resource adequacy. Although SAR Item #2 encourages entities such as RTOs, ISOs, etc. to "establish resource adequacy requirements so as to comply with the resource adequacy criterion (or criteria) of the Region," the scope of this standard cannot be so broad as to potentially create a situation in which NERC (as the ERO heir apparent) could compel entities to construct generation infrastructure.</p> <p>Fuel supply interruptions are included as a factor that needs to be considered in developing a regional resource adequacy framework because recent events underscore the interdependency between electricity production and gas supply and the potential impact to resource adequacy if this interdependency is not addressed.</p>

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
Coish	MRO	No	The resource adequacy should be designed from the bottom up. For example, all levels, starting from individual load serving entity up to the NERC region should meet the resource adequacy criterion. There should be some enforcement mechanism in place so that no one entity violates the criterion.	As explained in the response to Horakh of MACC above, the SAR provides flexibility for a bottoms-up approach to developing resource adequacy criteria.
Zito	NPCC	Yes/No		
Lebro	National Grid	Yes		
Rana	AEP	No	In general, we agree with the scope and applicability of the proposed standard. However, the proposed SAR requires the region to create reliability criteria based on probabilistic analysis. Such regional criteria will have to be interpreted for application to entities within the region, such as RTOs, perhaps by being translated into reserve margin requirements. However, one size does not fit all. It is not clear as to how this translation would be done equitably; it also is not clear whether the region or the entities will do it. The proposed standard should address this issue to avoid confusion.	The intent of both the SAR Drafting Team and the Resource and Transmission Adequacy Task Force is to provide flexibility in the relationship between regional criteria and sub-regional resource adequacy requirements. The SAR was rewritten to provide additional flexibility through the requirement for each Region to establish a framework by which to assess resource adequacy. The SAR does now, however, require the inclusion of “a probability-based evaluation of whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties.” This type of evaluation was specified in response to the overwhelming number of comments suggesting that this type of analysis is needed.
Bolbrock	LIPA	Yes		
Waters	Progress Energy	No	Resource adequacy ( or the lack thereof) is not a threat to the interconnection reliability and therefore is not an appropriate function for NERC or Regional standards. If any entity is faced with insufficient resources to	The SAR Drafting Team disagrees with the assertion that there is no need for this standard. Generation and transmission “go hand in glove.” Adequacy must be assessed on both fronts to achieve NERC’s reliability mission and to satisfy the mandates of EPA 05. Given the

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			<p>serve its load in real time, NERC standards require that entity to shed sufficient load to re-establish the balance between load and generation. This assures that only the local entity is impacted and that the interconnection reliability is protected. NERC Standard TPL-005-0 already requires the Regions to conduct an annual assessment of resource adequacy. THE NERC Reliability Assessment Subcommittee (RAS) also conducts Long Term and Summer/Winter seasonal assessments each year. These assessments typically consider fuel supply conditions to the extent practicable. These assessments recognize regional differences and provide the appropriate balance in a complex area. This SAR proposes to require the regions to set specific adequacy criteria and further to enforce compliance with those criteria on industry participants. This is an inappropriate intrusion into the relationship between state utility commissions and regulated utilities. The determination of appropriate resource requirements requires a balancing of cost and reliability. In areas that have not adopted retail access, this is normally accomplished through a least-cost integrated planning process whereby resource plans (including resource adequacy) are developed by the utilities and reviewed and approved by their state regulators. NERC and the Regions are not the appropriate bodies for establishing resource requirements</p>	<p>interconnected nature of the electricity grid, it is not solely the LSEs responsibility to ensure resource adequacy; it is NERC's and the Regions' responsibility to assess whether the sum of the LSEs' efforts results in an adequate system.</p> <p>The commenter correctly points out that TPL-005-0 currently requires adequacy assessments. However, it is unclear to which criteria these assessments are currently conducted since not all of the Regions have established resource adequacy criteria. The Standard resulting from this SAR requires that each Region formally establish a framework for assessing resource adequacy. Each Region also needs to work with sub-regional entities responsible for ensuring resource adequacy to determine if the sum of resource adequacy requirements of these entities satisfies the regional resource adequacy criteria. The standard resulting from this SAR will provide criteria for the resource adequacy assessments performed pursuant to TPL-005-0.</p> <p>The SAR recognizes the jurisdiction of state utility commissions as well as local and provincial regulators and provides for a linkage between a Region's criteria and state/provincial resource adequacy requirements through the following provision. Each Region is to "establish a framework by which to assess the resource adequacy of the Region. Such framework shall recognize applicable local/ state/province or multi-state/province resource adequacy criteria or requirements, where such criteria/ requirements exist."</p>

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			in these areas. To the extent that areas that have adopted retail access are unable to provide adequate resources, that is an issue that must be resolved by the affected states and FERC.	
Helyer	Tenaska	Yes		
Carter	Southern Co Generation	No	Southern Generation can not agree with the scope of this SAR due to open-ended nature of question #1. The SAR needs to be very clear about the types of "common mode failure" will be evaluated. Additionally, this Standard should emphasize consistency in reporting and not the establishment of requiring specific reserve levels or resource adequacy specifics. This SAR should accommodate differences among the regions. This SAR and subsequent standard should provide "what" requirements or data the resource adequacy plan should report, and allow the regions and sub-regions to provide "how" the requirements are to be met. This Standard should emphasize consistency in reporting and not the establishment of requiring specific reserve levels or resource adequacy specifics.	<p>The wording of Question #1 is misleading. Please refer to the Item #3 of the Detailed Description Section of the SAR. This item has been rewritten to clarify that fuel supply interruptions is only one of the factors which need to be considered in resource adequacy assessments.</p> <p>The SAR, as rewritten, provides flexibility to accommodate regional differences. Comments such as these were addressed by revising the SAR to require the Regions to establish a framework to assess resource adequacy</p>
Besier	TXU Electric Delivery Co	Yes		
Adamson	NYSRC	Yes		
Alford	CenterPoint Energy	Yes		
Davis	Entergy	No	Please see our response to Question #	The SAR Drafting Team's response is also

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			5 below.	found at Question #5.
Brown	NYISO	No	Item 6 of the detailed description suggests NERC and the Region will conduct periodic reviews concerning deliverability of resources to load. Many entities are struggling with the definition and demonstration of 'deliverability'. The NYISO believes it is not appropriate to include this requirement at this time.	The SAR Drafting Team recommends that the issue of deliverability be addressed in the Standard Drafting Phase, if the SAC approves this SAR to proceed to that phase. Many of the terms in the SAR were purposely left vague to allow the Regions working with NERC to tailor the definitions to fit their own particular circumstances.
Riley	CAISO	No	CAISO supports the fundamental objectives of this proposal. However, rather than establishing specific resource adequacy criterion (or criteria), each Regional Reliability Organization ("Region") should develop general resource adequacy principles. Principles would be more effective than specific criterion because entities within each Region have unique characteristics that must be recognized in any resource adequacy assessment, such as generation fueled by hydro versus coal. Principles should be structured to accommodate inter-Regional variations. Further, NERC should provide maximum deference to each Region in implementing the principles. The regulatory authority with jurisdiction should make the determination of whether an entity is "resource adequate." In California, the California Public Utilities Commission is currently establishing resource adequacy requirements for load serving entities. Assessments of the extent to which an entity has followed	<p>In order to address comments such as this one, the SAR was rewritten to require the Regions to "establish a framework by which to assess the resource adequacy of the Region. Such framework shall recognize applicable local/ state/province or multi-state/province resource adequacy criteria or requirements, where such criteria/ requirements exist."</p> <p>The intent of the SAR Drafting Team in drafting/revising the SAR is to provide a conduit in the proposed Standard for sub-regional resource adequacy practices to substantially influence the development of regional criteria. It is entirely possible that the Regions will have a number of different resource adequacy criteria reflecting the criteria of the various sub-regions, but developed in a coordinated fashion.</p>

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<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
			methodologies such as is described in the SAR Form can be made by the applicable Region (WECC in the case of the CAISO), and then reported to NERC.	

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**3. Are there additional sensitivities that should be included as part of the resource adequacy requirements that are not explicitly included in the SAR?**

<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
Rheault	Manitoba Hydro	Yes	The additional risks that should be incorporated are the following: analysis of possible transmission bottlenecks which might restrict the flow of energy from the generation resources to the load centres. The impact of non dispatchable energy technologies on the resource adequacy the impact of variable fuel sources such as wind and hydraulic on the resource adequacy.	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all of the risks that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the standard drafting stage of the SAR process, assuming SAC approval to proceed to this stage.
Mayo	Transmission Access Policy Study Group	No		
Tammar	ISO/RTO Council Review Committee	Yes	See Item #1 of our response to Question #2 as to which sensitivities should be included, i.e., loss of fuel supply, environmental restrictions, higher loads than forecast, and loss of interconnections. Others could include reduced transmission capabilities; reduced value of emergency procedures (e.g., voltage reductions); higher than projected outage rates; and the possible addition of new resources with low availabilities, such as wind power.	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all of the sensitivities that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.
Stanton	Calpine	Yes	See answer to No. 1	
Nicely	TVA Generation	Yes	Sensitivities to demand variations that may result from weather extremes	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all of the



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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
				<p>sensitivities that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.</p>
Vongkhamchanh	SERC EC Planning Standards Subcommittee	No		
Horakh	MAAC	Yes	<p>Risks of higher than expected demand growth and/or lower than expected future resource additions should be evaluated, at least as sensitivities, which planners should be aware of.</p>	<p>The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all of the sensitivities that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.</p>
Davis	TVA Electric System Operations	Yes	<p>Take into account the uniqueness of each subregion for things like Interruptible Products and other Demand-side Management options, quick-start Combustion Turbines and alternate fuel sources.</p>	<p>The SAR Drafting Team appreciates these comments. As shown in the SAR form, a related SAR is MOD-0016-1, which if developed into a standard would require documentation of controllable DSM. The intention is that the standards resulting from the SAR and MOD-0016-1 would be implemented in a coordinated fashion. In addition, if this SAR proceeds to the standard drafting stage, a more detailed list of sensitivities will be defined at that time.</p>
Khan	IESO	Yes		

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<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
Campbell	FRCC	No		
DiCaprio	MAAC	No		
Coish	MRO	Yes	In addition to fuel supply restrictions, non-dispatchable energy technologies should be adequately modeled. Transmission limitations and forced outage rate uncertainty for a particular unit type should also be included. Different energy-limited unit types should be modeled with appropriate models. Load forecast uncertainty and capacity contracts should be modeled realistically.	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all of the sensitivities that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.
Zito	NPCC	Yes	See Item #1 of the NPCC response to Question #2 as to which sensitivities should be included, i.e., loss of fuel supply, environmental restrictions, higher loads than forecast, and loss of interconnections. Others could include reduced transmission capabilities; reduced value of emergency procedures (e.g., voltage reductions); higher than projected outage rates; and the possible addition of new resources with low availabilities, such as wind power.	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all of the sensitivities that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.
Lebro	National Grid	Yes	Resource adequacy requirements should include, but not limited to, sensitivities such as loss of fuel supply and planned resources not being available within the study time horizon	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all of the sensitivities that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR

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<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
				process.
Rana	AEP	Yes	Dependence upon specific fuel sources. Geographical/electrical network balance between generation and load has always been an important system planning principal. It should be incorporated in this standard.	The SAR has been rewritten to require each Region to “establish a framework by which to assess the resource adequacy of the Region.” The SAR Drafting Team purposely chose the word “framework” to allow for the incorporation of principles such as the one suggested by the commenter into the assessment methodology, if desired by the Region.
Bolbrock	LIPA	Yes	See Item #1 of our response to Question #2 as to which sensitivities should be included, i.e., loss of fuel supply, environmental restrictions, higher loads than forecast, and loss of interconnections. Others could include reduced transmission capabilities; reduced value of emergency procedures (e.g., voltage reductions); higher than projected outage rates; and the possible addition of new resources with low availabilities, such as wind power.	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all, of the sensitivities that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.
Waters	Progress Energy	No		
Helyer	Tenaska	No		
Carter	Southern Co Generation	No		
Besier	TXU Electric Delivery Co	No		
Adamson	NYSRC	Yes	See Item #1 of our response to Question #2 as to which sensitivities should be included, i.e., loss of fuel supply, environmental restrictions, higher loads than forecast, and loss of	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all of the sensitivities that need to be considered in regional resource adequacy assessments.

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			interconnections. Others could include reduced transmission capabilities; reduced value of emergency procedures (e.g., voltage reductions); higher than projected outage rates; and the possible addition of new resources with low availabilities, such as wind power.	Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.
Alford	CenterPoint Energy	Yes	Each Region should also describe its maximum import capability under both n-0 and n-1 outage criteria and to what extent the Region depends on import amounts to meet its system peak. The quantification of this amount should be both in terms of expected MW during system peak as well as the amount modeled in meeting the Region's resource adequacy criteria	The SAR Drafting Team appreciates these comments. The commenter appears to be suggesting a sensitivity analysis that combines elements of resource and transmission adequacy assessments. Although such an analysis would be desirable, the methodology and tools to combine these assessments may not yet be available.
Davis	Entergy	No	Please see our response to Question # 5 below.	
Brown	NYISO	Yes	We agree with the NYSRC comments on this question	
Riley	CAISO	Yes	Loss of fuel supply, environmental restrictions, higher loads than forecast, and loss of interconnections, reduced transmission capabilities, reduced value of emergency procedures (e.g. voltage reductions), higher than projected outage rates, and the possible addition of new resources with low availabilities, such as wind power.	The SAR Drafting Team appreciates these comments. Element # 3 of the SAR has been revised to specify some, but not all, of the sensitivities that need to be considered in regional resource adequacy assessments. Individual Regions should perform the additional sensitivities that are appropriate for their systems. A more detailed list of sensitivities will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.

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**4. Are there additional considerations or restriction that should be included as part of the public availability of these adequacy results?**

<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
Rheault	Manitoba Hydro	No		
Mayo	Transmission Access Policy Study Group	No		
Tammar	ISO/RTO Council Review Committee	Yes	The IRC members agree that the results of all Regional and sub-Regional assessments be made public. However, it should be recognized that certain data and assumptions used in these studies may be confidential. Any parties that have access to confidential data should be bound by non-disclosure agreements.	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4. Non-disclosure agreements may be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.
Stanton	Calpine	No		
Nicely	TVA Generation	No		
Vongkhamc hanh	SERC EC Planning Standards Subcommittee	No		
Horakh	MAAC	No		
Davis	TVA Electric System Operations	No		
Khan	IESO	Yes	The IESO agree that the results of all Regional and sub-Regional	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4.

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			<p>assessments be made public. However, it should be recognized that certain data and assumptions used in these studies may be confidential. Any parties that have access to confidential data should be bound by non-disclosure agreements.</p>	<p>Non-disclosure agreements may be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.</p>
Campbell	FRCC	Yes	<p>There are increasing security concerns and associated procedures in place governing the safeguarding of information related to electric transmission, electric distribution and fuel delivery system infrastructure and operation. Information utilized in the resource adequacy review process, and certain findings of a resource adequacy review, that deal with the interrelationships between electric generation, transmission, distribution and fuel delivery infrastructure would necessarily be governed by these procedures and requirements. Limitations on the distribution of reports that contain this type of information should be carefully considered prior to development of a standard that may, in effect, reduce the ability of utilities, Sub-Regions and Regions to demonstrate resource adequacy in a public forum. Although we agree with the concept of Regional aggregate reporting of resource adequacy, the development of a Resource Adequacy Assessment standard should carefully address public disclosure requirements (if any) and keep specific study inputs at the</p>	<p>The SAR Drafting Team concurs with these comments. The specific data to be kept confidential and the nature of the confidentiality agreements will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.</p>

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			Regional level as stated in SAR description item #4. The inclusion of fuel and transmission system dependency information may add additional confidentiality concerns which will have to be addressed in the development of the specific requirements of the standard. The standard will need to allow the Regions to maintain the confidentiality of this information as they deem necessary. Reporting requirements should protect any sensitive strategic or security related information and maintain the confidentiality of assessment inputs to ensure the accuracy and security of assessment results.	
DiCaprio	MAAC	No		
Coish	MRO	Yes	Individual generation, load and other data types should not be in public domain.	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4.
Zito	NPCC	Yes	We agree that the results of all Regional and sub-Regional assessments be made public. However, it should be recognized that certain data and assumptions used in these studies may be confidential. Any parties that have access to confidential data should be bound by non-disclosure agreements.	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4. The specific data to be kept confidential and the nature of the confidentiality agreements will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.
Lebro	National Grid	Yes	We agree that the results of all Regional and sub-Regional assessments be made public. However, it should be recognized that	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4.

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<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
			certain data and assumptions used in these studies may be confidential.	
Rana	AEP	No		
Bolbrock	LIPA	Yes	We agree that the results of all Regional and sub-Regional assessments be made public. However, it should be recognized that certain data and assumptions used in these studies may be confidential.	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4.
Waters	Progress Energy	Yes	Any information releases should be aggregated to Regional or Sub regional levels. Any information on vulnerabilities such as fuel supply must be treated as CEII.	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4.
Helyer	Tenaska	No		
Carter	Southern Co Generation	Yes	It is acceptable to make the aggregate results of the audit public, but not appropriate to make proprietary information available to the public. We agree the standard shall not require the public disclosure of commercially sensitive information.	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4.
Besier	TXU Electric Delivery Co	No		
Adamson	NYSRC	Yes	We agree that the results of all Regional and sub-Regional assessments be made public. However, it should be recognized that certain data and assumptions used in these studies may be confidential.	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4.
Alford	CenterPoint Energy	No		



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<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
Davis	Entergy	Yes	Please see our response to Question # 5 below.	Please see the SAR Drafting Team's response at Question #5.
Brown	NYISO	Yes	Any parties that have access to confidential data should be bound by non-disclosure agreements.	The SAR Drafting Team concurs with these comments. This is the intent of Element # 4. The specific data to be kept confidential and the nature of the confidentiality agreements will be defined in the drafting stage of the SAR process, assuming SAC approval to proceed to that stage.
Riley	CAISO	No		

**5. Do you have any additional comments regarding the SAR that you believe should be addressed?**

<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
Rheault	Manitoba Hydro	No	Manitoba Hydro believes that NERC's role in enforcing this standard should be principally related to the Regional Reliability Organization elements of the Standard. The portions applying to the RTO/ISO(s), generation reserve sharing pool(s) and /or other appropriate entities should be enforced by the Regional Reliability Organization based on their established assessment methodologies. These methodologies should be reviewed by NERC.	The SAR Drafting Team believes this recommendation is consistent with the provisions of the SAR.

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<b>Lead Commenter</b>	<b>Group Name</b>	<b>Response</b>	<b>Comment</b>	<b>Drafting Team Response</b>
Mayo	Transmission Access Policy Study Group	No		
Tammar	ISO/RTO Council Review Committee	Yes	The IRC strongly supports the notion and the need for recognizing the Regional Diversity in establishing an international resource adequacy standard. The Standard should require the Regions or sub-Regions to prepare procedures or guidelines for meeting the Standard. These should include methodologies for conducting installed reserve margin requirement studies and assessments, factors to that must be considered, source of assumptions, reliability models, deliverability issues, inter-Regional coordination, sensitivities, etc. With regards to paragraph items 5) and 6), there is a need to prescribe associated compliance measures.	The SAR Drafting Team recommends that the specific issues raised by these comments be addressed through the Standard Drafting process, assuming the SAC approves this SAR to proceed to that phase. The team believes any compliance measures should be region-specific.
Stanton	Calpine	Yes	SEE #1 ABOVE.	See Response to #1
Nicely	TVA Generation	No		
Vongkhamc hanh	SERC EC Planning Standards Subcommittee	No		
Horakh	MAAC	No		
Davis	TVA Electric System Operations	No		
Khan	IESO	Yes	With regards to paragraph items 5)	The SAR Drafting Team believes any compliance

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			and 6), there is a need to prescribe associated compliance measures.	measures should be region-specific.
Campbell	FRCC	Yes	<p>FRCC encourages the development of a Resource Adequacy Assessment standard. However, in the development of the standard a wide range of discretion should be incorporated in order to enable Regions and Sub-Regions to continue to shape current Resource Adequacy Assessment processes that appreciate and accommodate unique features of specific systems. An overly prescriptive standard may not be fully applicable or completely sufficient in all areas and may inhibit the development of best practices. The standard should remain broad-based and require that assessments be based on sound technical justification and relevant analysis. Additional questions/comments were developed for the Committee's consideration. 1) SAR description item #1 addresses taking into account "transmission constraints", yet the SAR does not list "Transmission Planner" as an applicable function. Is this intentional, and why? 2) SAR description items #3 indicates periodic assessments. The standard should not address specific time frames and allow the Regions to self-determine the periodicity of assessments. 3) The standard should also have the flexibility to allow for alternate analysis or reliability assessment</p>	<p>The SAR Drafting Team believes these recommendations are consistent with the provisions of the SAR, as rewritten. Following are suggested responses to the specific questions, which should be considered in the standard drafting stage:</p> <ul style="list-style-type: none"> <li>□ Resource planner needs to coordinate with transmission planner, but not in a main role.</li> <li>□ NERC standard should have a minimum time interval that Regions need to assess resource adequacy.</li> <li>□ Standard could include itemization of resource adequacy methodologies, as long as it is not limited to these methodologies.</li> </ul>

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			<p>methods that conservatively envelope previous (specific criterion) analysis and establish resource adequacy without requiring repetitive non-productive studies. 4) SAR description item # 5, indicates that periodic reviews of assessments would be performed to "validate compliance" and "confirm the consistent application of standard resource adequacy assessment methodologies". Will the standard describe what is currently considered representative of "standard resource adequacy assessment methodologies, including appropriate Regional variations"? As previously noted, the SAR needs additional details and clarification for more substantial comments to be developed.</p>	
DiCaprio	MAAC	Yes	<p>Resource Adequacy criteria are not and should not be common. The acceptable level of risk associated with the level of resource adequacy that a Region, a state or even an individual is willing to accept is not a North American reliability matter. To have a common general criterion would require specificity about handling demand side resources, forecasting loads, base case assumptions et al, a specificity that NERC generally does not involve itself. The focus of this SAR seems to waver between fuel-supply disruptions specifically, and</p>	<p>SAR Drafting Team agrees with the suggested approach that Regions/sub-regions need to determine acceptable levels of risk for the various components of a resource adequacy assessment, of which fuel interruptions is one factor to consider. The team recommends that these comments be addressed through the Standard Drafting process, assuming the SAC approves this SAR to proceed to that phase.</p>

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Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			<p>“adequacy obligations” in the general planning environment. The Industry and the SAR requestor should decide whether or not NERC needs a standard for each and every possible condition (Solar Magnetic disturbances, hurricanes, and earthquakes as well as coal-miner strikes and droughts) or to rely on RPs to consider the proper mix of conditions and events that are relevant to that RP? We favor the latter option. The requestor should be clear which is intended by this SAR.</p>	
Coish	MRO	Yes	<p>In order to guarantee cost effective supply reliability to ultimate customers, the NERC reliability standards should be enforceable with some type of penalty structure for non-compliance. There should be guidance on how penalties should be applied. For example, should penalties be applied if someone disagrees with the reserve criteria, failure of the methodology to predict events that cause a temporary reserve shortfall, late submission of data, etc.. Since it's proposed NERC is given the right to audit the criterion, it appears that it gives NERC some say or reserve levels (which have historically been state/provincial/Regional issues).</p>	<p>Given the language of EPA 05, compliance with this standard will be in the form of the Regions formulating a resource adequacy framework in a timely manner and Load Serving Entities and other sub-regional entities providing information to perform resource adequacy assessments. The SAR Drafting Team recommends a phase-in of this standard and any compliance measures, which should be region-specific. NERC should only step in if one Region is leaning on another Region. Again, the Standard Drafting Stage is the appropriate forum to address these issues further.</p>
Zito	NPCC	Yes	<p>With regards to paragraph items 5) and 6), there is a need to prescribe associated compliance measures.</p>	<p>The SAR Drafting Team believes any compliance measures should be region-specific. The SAR Drafting Team recommends that the specific</p>

**Consideration of Comments on First Posting of Resource Adequacy Assessments SAR**

Lead Commenter	Group Name	Response	Comment	Drafting Team Response
			<p>The Standard should require the Regions or sub-Regions to prepare procedures or guidelines for meeting the Standard. These should include methodologies for conducting installed reserve margin requirement studies and assessments, factors to that must be considered, source of assumptions, reliability models, deliverability issues, inter-Regional coordination, sensitivities, etc. The Standard should state that Regions and sub-Regions may adopt more stringent standards, if appropriate, to provide higher levels of reliability than provided by the NERC Standard. As background for preparing the Standard, it is recommended that the drafting team consult existing Regional and sub-Regional resource adequacy studies and reports.</p>	<p>issues raised by these comments be addressed through the Standard Drafting process, assuming the SAC approves this SAR to proceed to that phase.</p>
Lebro	National Grid	Yes	<p>Additional comments are as follows:            1. The Standard should require the Regions or sub-Regions to prepare procedures or guidelines for meeting the Standard.            2. Methodologies for conducting Capacity Margin Requirements (Reserve Margin Requirements) and Resource Adequacy Assessments should be consistent and meet the same reliability metric.            3. The impact of transmission constraints on Capacity Margin Requirements (Reserve Margin Requirements) and methods used to mitigate the impact constraints have on reliability metrics</p>	<p>The SAR Drafting Team finds that the recommendations are consistent with the steps a Region may wish to take in formulating its resource adequacy framework. The specific suggestions will be considered during the Standard Drafting process, assuming the SAC approves this SAR to proceed to that phase. The team agrees that the NYSRC report is a good reference report that a Region may wish to use in establishing its resource adequacy framework.</p>

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			<p>must be considered and documented. 4. The Standard should state that Regions and sub-Regions may adopt standards, if appropriate, to provide higher levels of reliability than provided by the NERC Standard. 5. As background for preparing the Standard, the National Grid USA recommends that the drafting team consult with existing Regional and sub-Regional resource adequacy studies and reports. It would be helpful to the drafting team if it were to review a recently published NYSRC report, "New York Control Area Installed Capacity Requirements for the Period May 2005 through April 2006," issued December 10, 2004. This report is located on the NYSRC web site at <a href="http://www.nysrc.org/documents.html">www.nysrc.org/documents.html</a>. The report covers criteria, study procedure, key factors and parameters that influence study results, sensitivities, and study assumptions, issues that may be considered in the NERC Standard.</p>	
Rana	AEP	Yes	<p>A few particular comments on the "Detailed Description" of the SAR as proposed:: Paragraph 2) The first sentence is a requirement on the entities, while the second sentence is a requirement on the region. Suggest the second sentence be split off into a new paragraph or be combined with paragraph 1. Also, add the words at the end "... to determine whether the</p>	<p>The Standard Drafting revised the SAR to address these and similar comments:</p> <ul style="list-style-type: none"> <li>□ Element #1 of the Detailed Description now only references the Region's requirement to establish a resource adequacy framework.</li> <li>□ Element #2 states that sub-regional resource adequacy requirements should satisfy regional resource adequacy criteria. The standard drafting stage is the appropriate</li> </ul>

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			<p>adequacy criteria are met as a whole, and by entity if appropriate for the regional criteria." That would leave room for the regions to adopt and assess to entity-level criteria or not, as they see fit. Paragraph 3) Several problems. 1st sentence: Paragraphs (1) and (2) talk about regional criteria and entity requirements, but this sentence talks about regional requirements. If the region does not do the interpretation from criteria to requirements, then this sentence should say something like, "Each Region should be required to demonstrate periodically, through analysis, that entity resource adequacy requirements (such as reserve margins...) satisfy the applicable regional criteria (in total for the region or separately by entity, as established by the regional criteria)." 2nd sentence: It would be extremely unlikely that any study could "demonstrate that possible fuel supply interruptions have no adverse impact on system reliability." That would have to be an extremely overbuilt system. A better option would be to, "As a part of the demonstration, each Region should describe the expected resource capacity characteristics for the study period. [no change so far] The demonstration should study the impact of possible fuel supply interruptions on system reliability." 3rd sentence: regarding available mechanisms to mitigate the impact of</p>	<p>forum to address whether these requirements should just satisfy the criteria on an overall basis, thus taking advantage of regional diversity, or on an individual entity basis, or if this should be a decision left to the Region.</p> <ul style="list-style-type: none"> <li>□ Element #3 has been revised as follows: "The assessment should identify risks to resource adequacy, such as the impacts, if any, of fuel supply interruptions and describe available mechanisms to mitigate such impacts."</li> </ul>



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			fuel interruptions... This information would have to be provided by the entities, probably from the generating company level, but the region could pull the answer together.	
Bolbrock	LIPA	Yes	<p>Additional comments are as follows:</p> <p>1. The Standard should require the Regions or sub-Regions to prepare procedures or guidelines for meeting the Standard. These should include methodologies for conducting installed reserve margin requirement studies and assessments, factors to that must be considered, source of assumptions, reliability models, deliverability issues, inter-Regional coordination, sensitivities, etc.</p> <p>2. The Standard should state that Regions and sub-Regions may adopt more stringent standards, if appropriate, to provide higher levels of reliability than provided by the NERC Standard.</p> <p>3. As background for preparing the Standard, the LIPA recommends that the drafting team consult existing Regional and sub-Regional resource adequacy studies and reports. It would be helpful to the drafting team if it were to review a recently published New York State Reliability Council, LLC. (NYSRC) report, "New York Control Area Installed Capacity Requirements for the Period May 2005 through April 2006," issued December 10, 2004. This report is located on the NYSRC web site at <a href="http://www.nysrc.org/documents.html">www.nysrc.org/documents.html</a>. The</p>	<p>The SAR Drafting Team finds that the recommendations are consistent the steps a Region may wish to take in formulating its resource adequacy framework. The specific suggestions will be considered during the Standard Drafting process, assuming the SAC approves this SAR to proceed to that phase. The team agrees that the NYSRC report is a good reference report that a Region may wish to use in establishing its resource adequacy framework.</p>

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			report covers criteria, study procedure, key factors and parameters that influence study results, sensitivities, and study assumptions, issues that may be considered in the NERC Standard.	
Waters	Progress Energy	Yes	An individual load serving entity is accountable to their state regulator for planning the resources needed to serve the load and energy needs of its customers in a reliable and cost-effective manner. The resource planning process considers the unique characteristics of a utility system including load shape, capacity mix, fuel supply, unit availabilities and the strength of transmission interconnections in balancing cost and reliability of service. There is no one standard measure of reliability that is appropriate for all systems since these characteristics are specific to each individual utility. In general, it is not appropriate for a reliability organization (Region) to establish a reliability criterion (or criteria) for that region. Further, any imposed regional standard should not shape an entity's resource adequacy standard since the region is not responsible or accountable for the resource planning process. A regional standard may lead to discord among reliability organizations, power suppliers, and regulators should a region not satisfy its resource adequacy standard and enforcement	<p>The SAR Drafting Team believes there is a need for regional resource adequacy assessment criteria. Generation and transmission “go hand in glove.” Adequacy must be assessed on both fronts to achieve NERC’s reliability mission and the mandates of EPA 05. Given the interconnected nature of the electricity grid, it is not solely the LSEs responsibility to ensure resource adequacy; it is NERC’s and the Regions’ responsibility to assess whether the sum of the LSEs efforts results in an adequate system.</p> <p>The SAR recognizes the jurisdiction of state utility commissions as well as local and provincial regulators and provides for a linkage between a Region’s criteria and state/provincial resource</p>

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			<p>issues arise. Based on NERC’s definition of adequacy, an electric system should supply the electrical demand and energy requirements of customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements. Although the system may be designed to satisfy resource adequacy under reasonably expected unscheduled outages of system elements, it is not practical to provide redundancies such that reliability will be satisfied under all possible scenarios, including the extended loss of a fuel source or other common mode failures that have extremely low probabilities of occurrence. While a typical utility planning process may quantitatively or qualitatively consider factors such as fuel supply and transmission constraints, a comprehensive probabilistic assessment that incorporates such additional constraints would create a highly complex reliability assessment challenge, and loses focus on the need to balance costs to customers against the costs of marginally improving system reliability. The expertise, resources, tools, and methodologies needed to conduct such an assessment do not exist and the development and implementation of such a process would be unwieldy. New standards of resource adequacy would need to be developed,</p>	<p>adequacy requirements through the following provision. Each Region is to “establish a framework by which to assess the resource adequacy of the Region. Such framework shall recognize applicable local/ state/province or multi-state/province resource adequacy criteria or requirements, where such criteria/ requirements exist.”</p> <p>The team agrees that the risk of a common failure of a fuel supply across an entire Region is a very low probability event and should be studied as a sensitivity case, if warranted. Element #3 has been rewritten to clarify that fuel supply interruptions is just one risk among numerous uncertainties which needs to be considered in assessing resource adequacy. The SAR does not even mention a common failure of a fuel supply across an entire Region as a factor that should be considered.</p>

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			<p>displacing standards that have served the industry and its customers very well to date. The majority of customer outages has not, and will not, result from inadequacy of the supply system using current standards employed by individual utilities. There is no reason to fix a system that is not broken. It is recommended that NERC not require the development of resource adequacy standards or requirements for regions or other entities. Resource adequacy standards should be addressed individually by an entity and its state regulator.</p>	
Helyer	Tenaska	No		
Carter	Southern Co Generation	Yes	<p>With respect to requirement #6 of the SAR, to what extent does the regional resource adequacy criteria have to be consistent with adjacent regions? Each region and sub-region should have the flexibility to develop their resource adequacy plan in a manner, which best fits their region. Is the review "informal" or is it an enforceable type audit? 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 plans should be recognized by NERC in the development of this resource adequacy SAR. The components and</p>	<p>The SAR Drafting Team agrees that each Region or sub-region should have the flexibility to develop resource adequacy criteria appropriate for their area. The intent of Element #6 is to ensure that Regions in an interconnected system, while having the flexibility to develop their own criteria, do not lean on each other inappropriately. The team recommends that the specific issues raised in these comments be addressed during the Standard Drafting Phase to assure that there is no conflict among a resource adequacy standard, the NERC Functional Model and the jurisdictions of such entities as state Public Utility Commissions.</p>

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			<p>requirements of this SAR should be cross-referenced with the tasks and responsibilities of the Resource Planner and Planning Authority of the Functional Model. There should not be a conflict between the language within the SAR and the Functional Model.</p>	
Besier	TXU Electric Delivery Co	No		
Adamson	NYSRC	Yes	<p>Additional comments are as follows:            1. The Standard should require the Regions or sub-Regions to prepare procedures or guidelines for meeting the Standard. These should include methodologies for conducting installed reserve margin requirement studies and assessments, factors to that must be considered, source of assumptions, reliability models, deliverability issues, inter-Regional coordination, sensitivities, etc.            2. The Standard should state that Regions and sub-Regions may adopt more stringent standards, if appropriate, to provide higher levels of reliability than provided by the NERC Standard.            3. As background for preparing the Standard, the NYSRC recommends that the drafting team consult existing Regional and sub-Regional resource adequacy studies and reports. It would be helpful to the drafting team if it were to review a recently published NYSRC report, "New York Control Area Installed Capacity Requirements</p>	<p>The SAR Drafting Team finds that the recommendations are consistent with the steps a Region may wish to take in formulating its resource adequacy framework. The specific suggestions will be considered in detail during the Standard Drafting process, assuming the SAC approves this SAR to proceed to that phase. The team agrees that the NYSRC report is a good reference report that a Region may wish to use in establishing its resource adequacy framework.</p>

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			<p>for the Period May 2005 through April 2006," issued December 10, 2004. This report is located on the NYSRC web site at <a href="http://www.nysrc.org/documents.html">www.nysrc.org/documents.html</a>. The report covers criteria, study procedure, key factors and parameters that influence study results, sensitivities, and study assumptions, issues that may be considered in the NERC Standard.</p>	
Alford	CenterPoint Energy	No		
Davis	Entergy	Yes	<p>GENERAL COMMENT Entergy suggests that Load Serving Entities (LSEs) should establish and publish their own resource adequacy criterion which should be consistent with all criterion or requirements set by local regulators. The LSEs should then conform to that criterion. Local regulators include city, state PUCs, and provincial regulators, but do not include RTO/ISO, RROs, nor reserve sharing pools. NERC and/or the Regions should not establish any resource adequacy criterion, requirements, guidelines, best practices, or any other suggestion of specific level of resource adequacy. NERC and/or the Regions should only audit the LSEs conformance to the LSEs own criterion. SPECIFIC COMMENTS ON "DETAILED DESCRIPTION" Items 1) and 2) should be deleted from the Detailed</p>	<p>The SAR Drafting Team believes there is a need for regional resource adequacy assessment criteria. Generation and transmission “go hand in glove.” Adequacy must be assessed on both fronts to achieve NERC’s reliability mission and the mandates of EPA 05. Given the interconnected nature of the electricity grid, it is not solely the LSEs responsibility to ensure resource adequacy; it is NERC’s and the Regions’ responsibility to assess whether the sum of the LSEs efforts results in an adequate</p>

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			<p>Description as they are circular, do not include all regulators of LSEs, and are inconsistent with Entergy's position stated above in the General Comments. Circularity: item 1) states each RRO will establish a criterion consistent with state/province resource adequacy criterion and Item 2) states the states/provinces and others will establish criterion consistent with the Regional criterion. Item 3) should be revised to state that Regions will audit regional LSEs to ensure they are conforming to the criterion published by that LSE. Each LSE, not the Region, should evaluate the possible impact of fuel supply interruptions, transmission constraints and/or environmental restrictions on reliable service to load. Each LSE should then be required to explain how that LSE is going to serve load reliably. The remainder of Item 3) should be deleted. Item 4) should be changed to state that any and all assessments by NERC and/or the Regions should be considered Critical Infrastructure information and should be held as confidential and not made public. Item 5) – no comment.</p>	<p>system.</p> <p>The team disagrees with the assertion that circular logic is contained in the write-ups of Items 1 and 2 under the Detailed Description. These write-ups have been revised to make it clear that each Region needs to take into account any <b>existing criteria and requirements that local, state and provincial jurisdictional entities have in-place</b> when formulating their resource adequacy criteria, to assure consistency with applicable state/province or multi-state/ province resource adequacy criteria or requirements. The intent of Item 2 is that, to the extent that entities including local, state and provincial jurisdictional entities <b>do not</b> have resource adequacy criteria or requirements in place, at the time Regions or sub-regions formulate their criteria or requirements, that these entities tailor their resource adequacy criteria or requirements in such a way as to satisfy the criteria of the Region.</p>
Brown	NYISO	Yes	<p>The NYISO would like to see the standard written to be more far reaching in some areas and less far reaching in others. For example, we believe the standard should be written based on the criteria of the 0.1 days/year Loss of Load Expectation</p>	<p>The SAR has been revised to address these and similar comments. Element #1 of the Detailed Description now includes a requirement for a “probability-based evaluation of whether projected resources will be sufficient to meet forecasted load taking into account relevant uncertainties” in the formulation of a Region's</p>

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			<p>(LOLE). In addition, the factors to be considered should include demand uncertainty, scheduled outages and deratings, forced outages and deratings, assistance from neighboring entities, transmission system transfer capabilities, and load relief measures. In terms of less far reaching concepts, the idea of a region-wide common mode failure is too remote to be appropriate, while the demonstration of deliverability is too broad and as yet, undefined, to be part of the standard.</p>	<p>resource adequacy framework. Element #3 has been rewritten to make it clear that a region-wide common mode fuel failure is not one of the factors, which needs to be addressed. Instead only the risk of fuel supply interruptions needs to be considered; these are likely to be specific to one or a group of plants, but not the entire Region.</p>
Riley	CAISO	Yes	<p>In its Standard Market Design, FERC has noted the importance of resource adequacy but has deferred to the states in developing resource adequacy requirements. The State of California is deeply involved in developing resource adequacy requirements and has already established numerous obligations on market participants in California. NERC should not attempt to establish specific resource adequacy obligations on market participants. State and local authorities should develop these kinds of obligations. Further, state and local authorities will be developing assessment methodologies and reporting mechanisms that market participants must follow. NERC needs to be careful that its efforts do not conflict with state and local efforts. Regional resource adequacy assessments can</p>	<p>The SAR, as rewritten, makes it clear that the Region is responsible for formulating a framework by which to assess resource adequacy, which “recognize(s) applicable local/state/province or multi-state/province resource adequacy criteria or requirements, where such criteria/requirements exist.” The SAR Drafting Team believes that the coordination which already is underway between WECC’s establishment of resource adequacy criteria for the Western Interconnection and such sub-regional processes as the California PUC establishment of an Enforceable Resource Adequacy Standard is very consistent with the approach envisioned in this SAR.</p>



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			<p>be a valuable tool. Not only can they provide important data to Planning Authority and Resource Planner functions, they also can provide valuable data to planners and policy makers that perform local resource adequacy assessments. State and local regulatory authorities will, in turn, use local assessments to develop resource adequacy obligations. Data reported to the Region and NERC can play an important role in ensuring sound operation of the electrical system and responsible actions by industry participants. The WECC is in the process of developing a resource adequacy assessment methodology. The CAISO is an active participant in that process. The focus of the resource adequacy assessment is the appropriate principles for measuring adequacy. Therefore, reporting and the mechanisms to create such reports should be the primary mode for changing behavior. Any form of enforcement mechanism should be phased it in after a reasonable start-up or "gain experience" period such as was done with the WECC RMS system.</p>	