

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

This form is to be used to submit comments on the proposed Resource Adequacy Assessments Standard Authorization Request. Comments must be submitted by **March 21, 2005**. You may submit the completed form by emailing it to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with the words “Resource Adequacy Assessments SAR Comments” in the subject line. If you have questions please contact Mark Ladrow at [mark.ladrow@nerc.net](mailto:mark.ladrow@nerc.net) or by telephone at 609-452-8060.

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Alan Adamson
Organization:	New York State Reliability Council (NYSRC)
Telephone:	(518) 355-1937
Email:	aadamson@nycap.rr.com
NERC Region	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 - Transmission Owners
<input type="checkbox"/> ECAR	<input checked="" type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils
<input type="checkbox"/> FRCC	<input type="checkbox"/> 3 - Load-serving Entities
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<input type="checkbox"/> NA - Not Applicable	

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

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact Email:**

Additional Member Name	Additional Member Organization	Region*	Segment*

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

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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 recognized in development of forced outage rates used in reliability studies for establishing reserve requirements (see our response to Question #2).

**Comments**

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

The New York State Reliability Council (NYSRC) strongly supports establishment of a new NERC Resource Adequacy Standard, and is in general agreement with the proposed scope of the Standard as described in the SAR. The 2003 Blackout demonstrates that there is a need to strengthen NERC Standards. We do, however, have comments concerning the scope of the proposed standard, and have recommendations for specific details of the standard, as follows:

1. It is important that the Standard clearly distinguish between (a) criteria for establishing capacity margin or reserve margin requirements (the Region should be given the option of using either one of these measures), and (b) criteria for the conduct of resource adequacy assessments by the Region or NERC. Such assessments should demonstrate whether there is sufficient planned capacity to meet the required reserve margin established by criteria in (a) over an appropriate assessment period. Assessments should cover a wide range of scenarios, such as fuel supply interruptions (see our response to Question #1), environmental restrictions, higher load than forecast, loss of interconnections, etc. We recommend that the Regions or sub-Regions specify the extreme conditions to be tested or sensitivities, since they have a better understanding of which issues are important to its area.

2. The NYSRC recommends that the Resource Adequacy criteria be based on a LOLE metric. Nine of the ten Regions use a LOLE or LOLP criterion; and of the nine that do, six utilize LOLE and one uses both LOLE and LOLP. We further recommend that the LOLE of disconnecting firm load will be specified in the standard as “no more than 0.1 days per year”. Many Regions now specify this requirement. This criterion should be the basis for determining Regional or sub-Regional installed reserves requirements.

3. The NYSRC recommends that the Resource Adequacy criterion specify various factors that must be considered in the analysis for establishing installed reserve requirements.. As a minimum, we recommend that resource availability, e.g., forced outage rates and maintenance; transmission constraints; and load forecast uncertainty factors be specified in the Standard. To the extent that a particular resource’s expected future resource availability recognizes historical fuel supply and environmental restrictions, these factors would be included in the forced outage rate. The standard should allow consideration of capacity or reserve sharing assistance from neighboring Regions and sub-Regions. The Regions should specify additional factors, if appropriate, for their areas.



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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

### **Comments**

Although we have identified possible sensitivities above, we recommend that the Regions have the responsibility defining sensitivity case requirements for their areas. However, we agree that the NERC Standard could require certain basic sensitivities, such as loss of fuel supply, if appropriate.

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

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.

**Comments**



## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 for the Period May 2005 through April 2006," issued December 10, 2004. This report is located on the NYSRC web site at [www.nysrc.org/documents.html](http://www.nysrc.org/documents.html). 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.

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	John Horakh - 03-14-2005	
Organization:	MAAC	
Telephone:	609-625-6014	
Email:	john.horakh@conectiv.com	
NERC Region	Registered Ballot Body Segment	
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 - Transmission Owners	
<input type="checkbox"/> ECAR	<input checked="" type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils	
<input type="checkbox"/> FRCC	<input type="checkbox"/> 3 - Load-serving Entities	
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Group Comments (Complete this page if comments are from a group.)

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**Contact Organization:**  
**Contact Segment:**  
**Contact Telephone:**  
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Additional Member Name	Additional Member Organization	Region*	Segment*

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## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

The word THREATENED is ambiguous. The question should be worded to state there is a reliability need to demonstrate that the region's reliability is not DECREASED TO AN UNACCEPTABLE DEGREE by the loss of a fuel source, etc. Such a loss will always decrease the region's reliability, but as long as it remains within the criterion, that is acceptable. On that basis, the answer to the question is yes.

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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 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.

**Comments**

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

**Comments**

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**

The statement in the SAR referring to confidential data is very general, and needs to be fleshed out in the standard.



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

Yes

No

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Name:		
Organization:		
Telephone:		
Email:		
NERC Region		Registered Ballot Body Segment
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<input type="checkbox"/> NA - Not Applicable	<input type="checkbox"/>	

## Comment Form – Proposed Resource Adequacy Assessments Standard



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

**Group Name:** SERC EC Planning Standards Subcommittee  
**Lead Contact:** Kham Vongkhamchanh  
**Contact Organization:** Entergy Services, Inc.  
**Contact Segment:** 1  
**Contact Telephone:** (504) 310-5812  
**Contact Email:** kvongkh@entergy.com

Additional Member Name	Additional Member Organization	Region*	Segment*
Arthur E. Brown	SCPSA	SERC	1
Pat Huntley	SERC	SERC	2
Bob Jones	Southern Company Services, Inc.	SERC	1
Brian Moss	Duke Power Company	SERC	1
Darrell Pace	Alabama Electric Cooperative	SERC	1
David Till	Tennessee Valley Authority	SERC	1
David Weekley	MEAG Power	SERC	1
Clay Young	SC Electric and Gas	SERC	3

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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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, or provincial regulatory agency requirements. NERC should not pursue development of this standard.

**Comments**

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

See response to Question # 1.

**Comments**

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Yes

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**

See response to Question # 1. Any study results relating to the loss of fuel source and common mode failures should be classified as confidential because of its national security nature as it relates CEII.



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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Richard J. Bolbrock	
Organization:	Long Island Power Authority (LIPA)	
Telephone:	(516) 719-9833	
Email:	rbolbrock@lipower.org	
NERC Region	Registered Ballot Body Segment	
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 - Transmission Owners
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Yes

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### **Comments**

The Long Island Power Authority (LIPA) strongly supports establishment of a new NERC Resource Adequacy Standard, and is in general agreement with the proposed scope of the Standard as described in the SAR. The 2003 Blackout demonstrates that there is a need to strengthen NERC Standards. We do, however, have comments concerning the scope of the proposed standard, and have recommendations for specific details of the standard, as follows:

1. It is important that the Standard clearly distinguish between (a) criteria for establishing capacity margin or reserve margin requirements (the Region should be given the option of using either one of these measures), and (b) criteria for the conduct of resource adequacy assessments by the Region or NERC. Such assessments should demonstrate whether there is sufficient planned capacity to meet the required reserve margin established by criteria in (a) over an appropriate assessment period. Assessments should cover a wide range of scenarios, such as fuel supply interruptions (see our response to Question #1), environmental restrictions, higher load than forecast, loss of interconnections, etc. We recommend that the Regions or sub-Regions specify the extreme conditions to be tested or sensitivities, since they have a better understanding of which issues are important to its area.

2. LIPA recommends that the Resource Adequacy criteria be based on a LOLE metric. Nine of the ten Regions use a LOLE or LOLP criterion; and of the nine that do, six utilize LOLE and one uses both LOLE and LOLP. We further recommend that the LOLE of disconnecting firm load will be specified in the standard as “no more than 0.1 days per year”. Many Regions now specify this requirement. This criterion should be the basis for determining Regional or sub-Regional installed reserves requirements.

3. LIPA recommends that the Resource Adequacy criterion specify various factors that must be considered in the analysis for establishing installed reserve requirements.. As a minimum, we recommend that resource availability, e.g., forced outage rates and maintenance; transmission constraints; and load forecast uncertainty factors be specified in the Standard. To the extent that a particular resource’s expected future resource availability recognizes historical fuel supply and environmental restrictions, these factors would be included in the forced outage rate. The standard should allow consideration of capacity or reserve sharing assistance from neighboring Regions and sub-Regions. The Regions should specify additional factors, if appropriate, for their areas.



## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

### **Comments**

Although we have identified possible sensitivities above, we recommend that the Regions have the responsibility defining sensitivity case requirements for their areas. However, we agree that the NERC Standard could require certain basic sensitivities, such as loss of fuel supply, if appropriate.



**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 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 [www.nysrc.org/documents.html](http://www.nysrc.org/documents.html). 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.

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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  - Do not use quotation marks in any data field.
  - Do not submit a response in an unprotected copy of this form.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Anthony Alford
Organization:	CenterPoint Energy
Telephone:	(713) 207-2265
Email:	anthony.alford@centerpointenergy.com
NERC Region	Registered Ballot Body Segment
<input checked="" type="checkbox"/> <b>ERCOT</b>	<input checked="" type="checkbox"/> 1 - Transmission Owners
<input type="checkbox"/> <b>ECAR</b>	<input type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils
<input type="checkbox"/> <b>FRCC</b>	<input type="checkbox"/> 3 - Load-serving Entities
<input type="checkbox"/> <b>MAAC</b>	<input type="checkbox"/> 4 - Transmission-dependent Utilities
<input type="checkbox"/> <b>MAIN</b>	<input type="checkbox"/> 5 - Electric Generators
<input type="checkbox"/> <b>MAPP</b>	<input type="checkbox"/> 6 - Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> <b>NPCC</b>	<input type="checkbox"/> 7 - Large Electricity End Users
<input type="checkbox"/> <b>SERC</b>	<input type="checkbox"/> 8 - Small Electricity End Users
<input type="checkbox"/> <b>SPP</b>	<input type="checkbox"/> 9 - Federal, State, Provincial Regulatory or other Government Entities
<input type="checkbox"/> <b>WECC</b>	
<input type="checkbox"/> <b>NA - Not Applicable</b>	

**Comment Form – Proposed Resource Adequacy Assessments Standard**



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

**Group Name:**  
**Lead Contact:**  
**Contact Organization:**  
**Contact Segment:**  
**Contact Telephone:**  
**Contact Email:**

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>

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

## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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

**Comments**



**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Samuel S. Waters	
Organization:	Progress Energy	
Telephone:	919-546-7889	
Email:	samuel.waters@pgnmail.com	
NERC Region	Registered Ballot Body Segment	
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 - Transmission Owners
<input type="checkbox"/> ECAR	<input type="checkbox"/>	2 - RTOs, ISOs, Regional Reliability Councils
<input checked="" type="checkbox"/> FRCC	<input type="checkbox"/>	3 - Load-serving Entities
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<input type="checkbox"/> SPP	<input type="checkbox"/>	9 - Federal, State, Provincial Regulatory or other Government Entities
<input type="checkbox"/> WECC		
<input type="checkbox"/> NA - Not Applicable		

## Comment Form – Proposed Resource Adequacy Assessments Standard



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

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact Email:**

Additional Member Name	Additional Member Organization	Region*	Segment*

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

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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 constant 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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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 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 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.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

**Comments**



**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 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, 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.

## **Comment Form – Proposed Resource Adequacy Assessments Standard**

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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.

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
Email:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 - Transmission Owners
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<input type="checkbox"/> WECC	<input type="checkbox"/>	
<input type="checkbox"/> NA - Not Applicable	<input type="checkbox"/>	

**Comment Form – Proposed Resource Adequacy Assessments Standard**

Group Comments (Complete this page if comments are from a group.)  
**Group Name:** Transmission Access Policy Study Group  
**Lead Contact:** Gayle Mayo  
**Contact Organization:** Indiana Municipal Power Agency  
**Contact Segment:** 4  
**Contact Telephone:** 317-573-9955  
**Contact Email:** mayo@impa.com

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Robert Claussen	Ala. Municip. Electric Authority	SERC	4
Marc Gerken	American Muni. Power -OHIO	ECAR	4
Duane Dahlquist	Blue Ridge Power Agency, VA	SERC	4
Kenneth Stone	Braintree Elec. Lt. Dept, MA	NPCC	4
Barbara Grimes	Burlington Elec. Dept., VT	NPCC	4
Terry Huval	Lafayette Utilities Syst., LA	SPP	4
Charles Guerry	City of Newberry, SC	SERC	4
Bill Burks	City Util. of Springfield, MO	SPP	4
Robert Priest	Clarksdale/MS Delta Energy	SPP	4
Daniel Sack	Concord Muni. Lt. Plant, MA	NPCC	4
Maurice Scully	CT Muni. Elec. Energy Coop	NPCC	4
Charlie Higley	Citizens Utility Board, WI	-----	0
Patrick McCullar	Delaware Muni. Elec. Corp. Inc.	MAAC	4
Jesse Tilton III	ElectriCities of NC Inc.	SERC	4
Roger Fontes	Florida Muni. Power Agency	FRCC	4
Tom Talsma	Geneva Elec. Dept., IL	MAIN	4
Wayne Snow	Georgetown Muni. Lt. Dept., MA	NPCC	4
Leonard Mediavilla	Groton Elec. Lt. Dept., MA	NPCC	4
Michael York	Harrisonburg Elec. Comm, VA	SERC	4
Brian Bullock	Holden Muni. Lt. Dept., MA	NPCC	4
Ronald Earl	Illinois Muni. Electric Agency	MAIN	4
Raj Rao	Indiana Municipal Power Agency	ECAR	4
Anne Kimber	Iowa Assoc. of Muni. Utilities	MRO	4
Colin Hanson	Kansas Municipal Utilities	SPP	4

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

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

### Background Information:

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The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

1. TAPS members strongly support the adoption of clear and enforceable resource adequacy standards in order to maintain reliability of the bulk electric system. A bulk electric system that is not adequate is not reliable in the sense that the public should and will demand. We also believe that any generation resource adequacy standard adopted must be based on an inclusive, non-discriminatory regional reserve-sharing model.

We find the currently proposed standard deficient and unclear in a number of respects. The detailed description in section 1 states that every region must have adequacy criteria based on "some metric" consistent with applicable state or multi-state resource adequacy requirements or criteria. There is no description of the intended result of the metric or what is to be achieved by the standard. Would a metric that uses one day's loss of load in two weeks be sufficient? As drafted, the standard is so vague as to be almost meaningless.

Second, the description does not define "resource adequacy." We believe that the standard is intended to address planning or capacity reserves, as opposed to transmission adequacy or operating reserves. Therefore, our comments are limited to capacity or planning reserve requirements. We do believe, however, that there may be a need for a transmission adequacy standard going forward and suggest that this issue be addressed separately. We note that the FERC has recently commented on the pending reliability legislation to the effect that a provision should be added to the bill that would give NAESB the authority to order the construction of transmission. We think it is more important for NERC/NAESB to be able to set adequacy standards that must be complied with than to order construction.

Every effort should be made by NERC and its regions to have consistent standards that are as uniform as possible, with differences based only on bona fide differences in electric system configuration or other legitimate factors. This objective should be reflected in each SAR. In contrast, the proposed standard would allow every region to have a different metric and appears to encourage inconsistency rather than move NERC and its regions to the maximum consistency obtainable. Consistency in standards is particularly important within an interconnection. For this reason, at least for the Eastern Interconnection, we believe that adequacy standards should require use of a uniform metric with a specific defined minimum adequacy outcome on a consistent basis premised on regional reserve-sharing and mutual back-up.



## Comment Form – Proposed Resource Adequacy Assessments Standard

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In section 2 of the detailed description, it states that RTOs, ISOs and generation reserve sharing pools should set resource adequacy requirements that comply with the criteria of the region. We believe that instead the regions should set the adequacy requirements consistent with NERC-approved criteria. RTOs may institute markets that allow utilities to purchase and sell the capacity needed to meet regional requirements, but RTOs should not themselves set the adequacy requirements. Similarly, we believe generation reserve-sharing pools should be viewed as mechanisms to enable utilities to meet regional requirements, but should not be the entities that establish the reliability requirements.

As noted above, we strongly believe that the bulk system will be much more reliable if reserves are calculated on a regional basis, assuming reserve-sharing. This is done in most regions today where, for instance, each load-serving entity is required to carry 12% or 15% reserves, an amount that is calculated on a regional basis and should be shared in a non-discriminatory manner. As a result of the integrated electric system, all utilities require significantly less reserves than if they operated on an isolated basis. Whether we like it or not we all are very interdependent for reliability purposes. In order to achieve the most economic system possible for end-users, maximum coordination and back-up is essential and each utility should be required to carry its proportionate share of the costs of an adequate regional system. Moving instead to criteria that would be applied to each individual system is likely to result in significantly very high reserve requirements overall and would drastically penalize small systems.

In this regard, we note that some regions, such as MAPP, have generation reserve-sharing pools today for both operating and planning reserves that are open to all entities required to carry reserves within the region, whether they operate a control area or are transmission owner or not. Other regions restrict reserve-sharing on a discriminatory basis to control areas, even though others are required by rule or tariff to carry reserves. NERC's standard should set the metric and require that regional reserves be calculated, assigned and shared on a non-discriminatory basis through a pool or other RTO mechanism.

The detailed description does not deal with the issue of deliverability of reserves, perhaps, because it does not address the need for reserve-sharing. Assured deliverability is important and ties to issues raised by the lack of clear definition and consistency in the calculation and reservation of TRM and CBM. It is TAPS' understanding that under NERC's definition, CBM is supposed to be available for reserve-sharing. However, in some areas reserve-sharing transmission requirements are taken into account in calculating TRM instead, although this is in conflict with NERC's definitions. TRM should not be permitted to be used for this purpose, particularly where reserve-sharing is not open to all entities with reserve requirements. CBM should be reserved on a non-discriminatory basis for reserve-sharing by all entities within a region.

Section 4 deals with regional resource adequacy assessments and the public nature of the data underlying them. While this section raises important issues, we do not believe that it belongs in the resource adequacy standard. NERC's policies with respect to public information with respect to adequacy assessments, as well as other matters related to the assessments done by NERC in reliance on regional input should be dealt with in a separate policy.

With respect to public information, we would err on the side of making information public with respect to the adequacy of the electric system, while ensuring that assessments are done carefully and professionally. We believe that if a utility does not meet a regional adequacy requirement, that information should be public. Making such information public is the most effective sanction available.



**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Sharon Staz	Kennebunk Light & Power, ME	NPCC	4
Terry Bundy	Lincoln Electric System, NE	MRO	4
Gary Mathis	Madison Gas & Electric Company, WI	MAIN	4
Nilaksh Kothari	Manitowoc Public Utilities, WI	MAIN	4
Joe Pacovsky	Marshfield Electric & Wtr. Dept., WI	MAIN	4
Gary Zimmerman	Michigan Public Power Agency	ECAR	4
Jack Kegel	Minnesota Municipal Utilities Assoc.	MRO	4
Duncan Kincheloe	MO Jt. Muni. Elec. Util. Commission	SPP	4
Tom Heller	Missouri River Energy Services, SD	MRO	4
Libby Marshall	Municipal Electric Power Assoc. of KY	ECAR	4
David Benforado	Municipal Electric Utilities of WI	-----	
Geoffrey Wilson	Municipal Energy Agency of MS	SERC	4
William Leung	Municipal Energy Agency of NE	MRO	4
Chris Dibbern	NMPP Energy	MRO	4
Randall Medicine Bear	Navajo Tribal Util. Authority, AZ	WECC	4
Steve Kaminski	New Hampshire Elec. Coop., Inc.	NPCC	4
Bob Ellston	North Attleborough Electric, MA	NPCC	4
Patrick Hyland	Northeast Public Power Assoc.	NPCC	4
Jim Pope	Northern California Power Agency	WECC	4
Jolene Thompson	Ohio Municipal Electric Assoc.	ECAR	4
Harry Dawson	Oklahoma Muni. Power Authority	SPP	4
Mike Frazier	Piedmont Muni. Power Agency, SC	SERC	4
Jimmy Wever	Publ. Serv. Comm. Of Yazoo City, MS	SPP	4
Larry Koshire	Rochester Public Utilities, MN	MRO	4
Thomas Josie	Shrewsbury Elec. & Cable Oper., MA	NPCC	4
Raymond Hayward	So. Minnesota Muni. Power Agency	MRO	4
Joseph Blain	Taunton Muni. Lighting Plant, MA	NPCC	4
Ray Shockey	Town of Ipswich, MA	NPCC	4
William Gallagher	VT Public Power Supply Authority	NPCC	4
John Scirpoli	W. Boyston Muni. Ltg. Plant, MA	NPCC	4
Roy Thilly	Wisconsin Public Power Inc.	MAIN	4

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Peter Lebro	
Organization:	National Grid USA	
Telephone:	(315) 428-3434	
Email:	peter.lebro@us.ngrid.com	
NERC Region	Registered Ballot Body Segment	
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 - Transmission Owners	
<input type="checkbox"/> ECAR	<input type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils	
<input type="checkbox"/> FRCC	<input type="checkbox"/> 3 - Load-serving Entities	
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<input type="checkbox"/> MAPP	<input type="checkbox"/> 6 - Electricity Brokers, Aggregators, and Marketers	
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/> 7 - Large Electricity End Users	
<input type="checkbox"/> SERC	<input type="checkbox"/> 8 - Small Electricity End Users	
<input type="checkbox"/> SPP	<input type="checkbox"/> 9 - Federal, State, Provincial Regulatory or other Government Entities	
<input type="checkbox"/> WECC		
<input type="checkbox"/> NA - Not Applicable		

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact Email:**

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>

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



## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

National Grid USA strongly supports establishment of a new NERC Resource Adequacy Standard. We do, however, have comments concerning the scope of the proposed standard, and have recommendations for specific details of the standard and the analysis, as follows:

1. The Standard needs to clearly define time horizon requirements that consider the intended purpose for establishing Capacity Margin Requirements (Reserve Margin Requirements) and conducting a Resource Adequacy Assessment. Furthermore, these time horizons should overlap so that no one sub-Region and/or Regions have an unidentified future reliability need that can ultimately impact neighboring areas (See 2 below).

2. Resource Adequacy criterion specifies various factors that must be considered in the analysis for establishing Capacity Margin Requirements (Reserve Margin Requirements). As a minimum, we recommend that resource availability, e.g., forced outage rates and maintenance, transmission constraints, load forecast levels (or applicable time horizon), and load forecast uncertainty factors be specified in the Standard. The standard should allow consideration of capacity or reserve sharing assistance from neighboring Regions and sub-Regions.

3. Resource Adequacy criteria should be based on a LOLE metric. We further recommend that the LOLE of disconnecting firm load should be specified in the standard as “no more than 0.1 days per year on average”. Many Regions now specify this requirement. This criterion should also be the basis for determining Regional or sub-Regional installed reserve requirement. We suggest this assessment be expanded to consider re-examination of the appropriateness of this standard under the new market structures.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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

### **Comments**

Although we have identified possible sensitivities that should be performed, we recommend that the Regions have the responsibility defining additional sensitivity case requirements for their areas. However, we agree that the NERC Standard could require certain basic sensitivities, such as loss of fuel supply and planned resources not being available within the study time horizon.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 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 [www.nysrc.org/documents.html](http://www.nysrc.org/documents.html). 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.

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
Email:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 - Transmission Owners
<input type="checkbox"/> ECAR	<input type="checkbox"/>	2 - RTOs, ISOs, Regional Reliability Councils
<input type="checkbox"/> FRCC	<input type="checkbox"/>	3 - Load-serving Entities
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<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	8 - Small Electricity End Users
<input type="checkbox"/> SPP	<input type="checkbox"/>	9 - Federal, State, Provincial Regulatory or other Government Entities
<input type="checkbox"/> WECC	<input type="checkbox"/>	
<input type="checkbox"/> NA - Not Applicable		





## Comment Form – Proposed Resource Adequacy Assessments Standard

---

### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

Southern Generation agrees that a resource adequacy plan is necessary for the long term reliability of each region. We also recognize that the needs and requirements of the resource plan vary from region to region.

However, we are concerned about the potential conflict that may develop between local/regional regulatory agency obligations and any potential NERC resource adequacy standard. In no case, should any NERC standard impose a greater Resource Adequacy requirement than that required by local/regional regulatory agencies. In addition, the last phrase of this question "loss of a fuel source or other common mode failure" raises the issue of the intended scope of the SAR. See question #2 below.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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 subregions 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.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 subregion 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 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.

There should be opportunity for periodic review of the resource adequacy criteria for continued applicability, and not just for periodic resource adequacy assessments.

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Ed Davis	
Organization:	Entergy Services	
Telephone:	504-310-5884	
Email:	edavis@entergy.com	
NERC Region	Registered Ballot Body Segment	
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 - Transmission Owners
<input type="checkbox"/> ECAR	<input type="checkbox"/>	2 - RTOs, ISOs, Regional Reliability Councils
<input type="checkbox"/> FRCC	<input type="checkbox"/>	3 - Load-serving Entities
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<input type="checkbox"/> WECC		
<input type="checkbox"/> NA - Not Applicable		





## Comment Form – Proposed Resource Adequacy Assessments Standard

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## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

The structure of this question leads one to 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.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

Please see our response to Question # 5 below.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

Please see our response to Question # 5 below.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

Please see our response to Question # 5 below.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

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, nor 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 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.

## **Comment Form – Proposed Resource Adequacy Assessments Standard**

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Item 6) should be deleted. Neither NERC nor the Regions should review a LSEs methodology for establishing its own criterion or requirements.

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<b>Individual Commenter Information</b>		
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Name:		
Organization:		
Telephone:		
Email:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 - Transmission Owners
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<input type="checkbox"/> WECC	<input type="checkbox"/>	
<input type="checkbox"/> NA - Not Applicable	<input type="checkbox"/>	





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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

In metric calculations, such as LOLE, all relevant issues and factors that can have a significant impact on calculated LOLE values should be taken into account. Important factors include, but are not limited to generating unit outage data uncertainty, load forecast data uncertainty, seasonal capability of generating units, dispatchability of generating units, operating and scheduling ownership of generating units, primary energy source limitations, transmission limitations between source, load, and operating areas, environmental considerations, drought conditions, load diversity among areas, etc.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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.

### **Comments**

The SAR does not conform well with the NERC Reliability Functional Model. The SDT should be directed to make the standard conform as much as possible to the Functional Model and where this is not possible, describe an implementation plan to move to the Functional Model.

There are a couple things that are confusing about the SAR.

The Purpose/Industry Need section says "This SAR would establish requirements for various entities to:..." The section "The standard will apply to the following functions" says this would apply to planning authorizes and resource planners. The "Detailed Description" portion says the RRO will establish a criterion to measure adequacy.

It appears that the Region sets the standard and the Planning Authority and Resource Planner would be held to the standard. The Region also appears to have the obligation to share the information with NERC. Since the Planning Authority and Resource Planner are the applicable parties, they would be the ones subject to the penalties.

It should be made clear that this standard also applies to the Regions, as it appears to be the intent.

It should be considered that this standard should also apply to, for example, the Load Serving Entity, Generator Owner and Market operators to establish the obligations to provide information, such as firmness of fuel supply, required by the Functional Model functions (Planning Authority, Resource Planner, Regions) doing the Resource Adequacy Assessments. If the obligations of these entities are to be established through the Regional adequacy assessment Methodologies then this should be made clear in the SAR.

Coordination of the Resource Adequacy Assessment processes should be done at the Regional level. Coordination should not only be assessed "after the fact" by NERC.



## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

Individual generation, load and other data types should not be in public domain.

**Comments**

Only aggregate level results should be in public domain. Individual company information should not be posted for public consumption.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please share those comments in the space provided below.**

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).



**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization: 1		
Telephone:		
Email:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 - Transmission Owners
<input type="checkbox"/> ECAR	<input checked="" type="checkbox"/>	2 - RTOs, ISOs, Regional Reliability Councils
<input type="checkbox"/> FRCC	<input type="checkbox"/>	3 - Load-serving Entities
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<input type="checkbox"/> MAPP	<input type="checkbox"/>	6 - Electricity Brokers, Aggregators, and Marketers
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<input type="checkbox"/> WECC		
<input type="checkbox"/> NA - Not Applicable		



## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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.

### **Comments**

The IRC participating members agree that resource adequacy is a key component of reliability and that there is a need for this standard. We also agree that associated criteria should reflect the impacts such as transmission constraints, fuel delivery limitations, environmental restrictions, and other relevant factors. In addition to specifying the time horizon such criterion applies to.

The resource adequacy assessments and criteria should consider the Regional diversity since the associated needs vary from Region to Region and from jurisdiction to jurisdiction. We agree that each Region should assess the resource adequacy requirements of its sub-Region entities to ensure that the adequacy requirements for the Region are met.

With regards to the statement outlined in item 3) of the SAR (re: "the region should describe available mechanisms to mitigate the impacts of fuel interruptions on ability to serve load reliably"), we are of the opinion that the "sub-regions" rather than "region" should identify and develop the specific process/mechanisms to mitigate the impacts of fuel interruption(s) on its ability to serve load reliably, based on its specific needs. The region should however, provide overall guidelines.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Question 2: Do you agree with the scope and applicability of the proposed standard?

Yes

No

#### If no, please explain in the space provided below.

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..

#### Comments

The IRC members strongly supports establishment of a Resource Adequacy Standard, and is in general agreement with the proposed scope of the Standard as described in the SAR. We do, however, have comments concerning the scope of the proposed standard, as follows:

1) It is important that the Standard clearly distinguish between (a) criteria for establishing capacity margin or reserve margin requirements (the Region should be given the option of using either one of these measures), and (b) criteria for the conduct of resource adequacy assessments by the Region or NERC. Such assessments should demonstrate whether there is sufficient planned capacity to meet the required reserve margin established by criteria in (a) over an appropriate assessment period. Assessments should cover a wide range of scenarios, such as fuel supply interruptions (see our response to Question #1), environmental restrictions, higher load than forecast, loss of interconnections, etc. The IRC recommend that the Regions or sub-Regions specify the extreme conditions to be tested or sensitivities, since they have a better understanding of which issues are important to their individual area.

2) The IRC recommends that the Resource Adequacy criterion specify the various factors that must be considered in the analysis for establishing installed reserve requirements. As a minimum, it is recommended that resource availability, e.g., forced outage rates and maintenance; transmission constraints; and load forecast uncertainty factors be specified in the Standard. To the extent that a particular resource's expected future resource availability recognizes historical fuel supply and environmental restrictions, these factors would be included in the forced outage rate. The standard should allow consideration of capacity or reserve sharing assistance from neighboring Regions and sub-Regions. The Regions should specify additional factors, if appropriate, for their areas.

3) The IRC further recommends that the Resource Adequacy criteria be based on a metric such as LOLE. It is NPCC's understanding that nine of the ten Regions use a LOLE or LOLP criterion; and of the nine that do, six utilize LOLE and one uses both LOLE and LOLP. It is further recommended that the LOLE of disconnecting firm load will be specified in the standard as "no more than 0.1 days per year". Many Regions now specify this requirement. This criterion should be the basis for determining Regional or sub-Regional installed reserves requirements.



## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

### **Comments**

Although we have identified possible sensitivities above, we recommend that the Regions have the responsibility of defining sensitivity case requirements for their areas. However, we agree that the NERC Standard could require certain basic sensitivities, such as loss of fuel supply, if and where appropriate.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

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.

### **Comments**

It is our understanding that the confidentiality of documents/data (where applicable) would be strictly maintained. We suggest that item # 4) should be revised to clearly specify that critical security related information and data requiring confidentiality will not be made public.

Only aggregate level results could/should be in public domain. Individual company information should not be posted for public consumption.



## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please share those comments in the space provided below.**

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.

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Raj Rana - Coordinator
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NERC Region	Registered Ballot Body Segment
<input checked="" type="checkbox"/> <b>ERCOT</b>	<input checked="" type="checkbox"/> 1 - Transmission Owners
<input checked="" type="checkbox"/> <b>ECAR</b>	<input type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils
<input type="checkbox"/> <b>FRCC</b>	<input checked="" type="checkbox"/> 3 - Load-serving Entities
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<input type="checkbox"/> <b>SERC</b>	<input type="checkbox"/> 8 - Small Electricity End Users
<input checked="" type="checkbox"/> <b>SPP</b>	<input type="checkbox"/> 9 - Federal, State, Provincial Regulatory or other Government Entities
<input type="checkbox"/> <b>WECC</b>	
<input type="checkbox"/> <b>NA - Not Applicable</b>	



## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

**Comments**

.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 fuel source. Which one should be evaluated?

## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**



## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

A few particular comments on the "Detailed Descripton" 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 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 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.

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Linda Campbell
Organization:	FRCC
Telephone:	813-289-5644
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<b>NERC Region</b>	<b>Registered Ballot Body Segment</b>
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 - Transmission Owners
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## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

The premise and components of the 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.

### **Comments**

We do agree that fuel interdependency needs to be considered as part of any regional reliability assessment. However, as stated in the question, "other common mode failure" lends itself to many interpretations and we are not clear on the full intent of this question. Additional clarification addressing "common mode failure" should be included when developing this standard request further.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

As written, the FRCC feels the scope of this SAR is too large and needs to be refined.

**Comments**

Overall, additional details and clarification are required prior to submittal as an "authorized standard".

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

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 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.

**Comments**



## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 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.

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Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Kathleen A. Davis	
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Telephone:	423-751-617kadavis@tva.gov	
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NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 - Transmission Owners
<input type="checkbox"/> ECAR	<input type="checkbox"/>	2 - RTOs, ISOs, Regional Reliability Councils
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<input type="checkbox"/> MAAC	<input type="checkbox"/>	4 - Transmission-dependent Utilities
<input type="checkbox"/> MAIN	<input type="checkbox"/>	5 - Electric Generators
<input type="checkbox"/> MAPP	<input type="checkbox"/>	6 - Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> NPCC	<input type="checkbox"/>	7 - Large Electricity End Users
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	8 - Small Electricity End Users
<input type="checkbox"/> SPP	<input type="checkbox"/>	9 - Federal, State, Provincial Regulatory or other Government Entities
<input type="checkbox"/> WECC	<input type="checkbox"/>	
<input type="checkbox"/> NA - Not Applicable	<input type="checkbox"/>	



## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

This may be a good idea, but NOT from a regional standpoint due to the diversity of systems

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

TVA would like to see some flexibility for either the RRO, subregion or reserve sharing group to set their own margins.

TVA believes that the current standards by which we operate are adequate.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**



**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
Email:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 - Transmission Owners
<input type="checkbox"/> ECAR	<input checked="" type="checkbox"/>	2 - RTOs, ISOs, Regional Reliability Councils
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<input type="checkbox"/> SERC	<input type="checkbox"/>	8 - Small Electricity End Users
<input type="checkbox"/> SPP	<input type="checkbox"/>	9 - Federal, State, Provincial Regulatory or other Government Entities
<input type="checkbox"/> WECC		
<input type="checkbox"/> NA - Not Applicable		



## Comment Form – Proposed Resource Adequacy Assessments Standard

---

### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

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## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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 have to resolve the non-compliance.

### **Comments**

As proposed the intent of this SAR is not clear.

1. Does it intend to propose that each Resource Planner (RP) have "AN" Adequacy criterion in place; or does the SAR intend to impose "a single North American" criterion?
2. Does the SAR intend that each RP have a method to measure compliance to the above criteria; or does the SAR intend to impose a specific common methodology?
3. Does the SAR (Item #3) really intend to require that RPs demonstrate no ‘adverse impacts’? (1st how is adverse impact defined? 2nd, won’t the currently mandated Emergency Operating Plans already serve that purpose?)
4. What time frame is covered by this SAR? Greater than 1 year? 1 month? 1 day?

The subjective nature of the definition of Resource Adequacy really is the question. Items #1 and #2 properly reference the subjective impacts on Adequacy criteria. Item #6 implies common ‘consistency’, ‘interdependency’ of criteria.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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".

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**



## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 “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.

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Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Garry Brown
Organization:	New York Independent System Operator
Telephone:	518-356-6191
Email:	gbrown@nyiso.com
<b>NERC Region</b>	<b>Registered Ballot Body Segment</b>
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 - Transmission Owners
<input type="checkbox"/> ECAR	<input checked="" type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils
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<input type="checkbox"/> SERC	<input type="checkbox"/> 8 - Small Electricity End Users
<input type="checkbox"/> SPP	<input type="checkbox"/> 9 - Federal, State, Provincial Regulatory or other Government Entities
<input type="checkbox"/> WECC	
<input type="checkbox"/> NA - Not Applicable	



## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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 in a mechanism such as GADS.

### **Comments**

The performing and presenting of resource adequacy studies should be required for reasons other than those stated in the question.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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.

**Comments**

The NYISO strongly supports the establishment of a NERC Resource Adequacy Standard and agrees with the comments provided by the NYSRC on this question.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

We agree with the NYSRC comments on this question

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

Any parties that have access to confindial data should be bound by non-disclosure agreements.

**Comments**



## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 (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 regionwide 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.

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Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Khaqan Khan/Ron Falsetti
Organization:	Independent Electricity System Operator (IESO)
Telephone:	905-855-6288
Email:	khaqan.khan@ieso.ca
NERC Region	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 - Transmission Owners
<input type="checkbox"/> ECAR	<input checked="" type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils
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## Comment Form – Proposed Resource Adequacy Assessments Standard

---

### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

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## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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.

### **Comments**

We agree that resource adequacy is a key component of reliability and that there is a need for this standard. We also agree that associated criteria should reflect the impacts such as transmission constraints, fuel delivery limitations, environmental restrictions, and other relevant factors. In addition to specifying the time horizon such criterion applies to.

The resource adequacy assessments and criteria should consider the Regional diversity since the associated needs vary from Region to Region and from jurisdiction to jurisdiction. We agree that each Region should assess the resource adequacy requirements of its sub-Region entities to ensure that the adequacy requirements for the Region are met.

With regards to statement outlined in item 3) of the SAR (re: "the region should describe available mechanisms to mitigate the impacts of fuel interruptions on ability to serve load reliably"), we are of the opinion that the "sub-regions" rather than "region" should identify and develop the specific process/mechanisms to mitigate the impacts of fuel interruption(s) on its ability to serve load reliably, based on its specific needs. The region should however, provide overall guidelines.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Question 2: Do you agree with the scope and applicability of the proposed standard?

Yes

No

#### If no, please explain in the space provided below.

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.

#### Comments

The IESO strongly supports establishment of a Resource Adequacy Standard, and is in general agreement with the proposed scope of the Standard as described in the SAR. We do, however, have comments concerning the scope of the proposed standard, as follows:.

It is important that the Standard clearly distinguish between (a) criteria for establishing capacity margin or reserve margin requirements (the Region should be given the option of using either one of these measures), and (b) criteria for the conduct of resource adequacy assessments by the Region or NERC. Such assessments should demonstrate whether there is sufficient planned capacity to meet the required reserve margin established by criteria in (a) over an appropriate assessment period. Assessments should cover a wide range of scenarios, such as fuel supply interruptions (see our response to Question #1), environmental restrictions, higher load than forecast, loss of interconnections, etc. The IRC recommend that the Regions or sub-Regions specify the extreme conditions to be tested or sensitivities, since they have a better understanding of which issues are important to their individual area.

a). With regards to paragraph item #3) of proposed SAR, we suggest to revise the second sentence. A suggested revision/wording is as follows: " As a part of the demonstration, each Region should describe the expected resource capacity characteristics for the study period and demonstrate that adequacy criteria can be met despite possible fuel supply interruptions".....

b). In order to examine/assess the impact of common mode failures in the Region's resource adequacy assessments, we suggest to revise the existing sentence of item 3 (re: Other factors such as expected transmission constraints and/or environmental restrictions that may impact the Region's resource adequacy should be examined) with following sentence i.e. "Other factors such as expected transmission constraints and/or environmental restrictions and/or applicable common mode failures that may impact the Region's resource adequacy should be examined."

c). Paragraph item 3 refers to "Regional resource adequacy requirements" whereas, Paragraph items 1 and 2 which refer to regional resource adequacy criteria and resource adequacy requirements applicable to ISO/RTO's and other sub-regional entities. Is it intentional?

## **Comment Form – Proposed Resource Adequacy Assessments Standard**

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d). This needs to be clarified whether the intent of this SAR is that the case studies for establishing Regional or sub-Regional capacity or reserve margin must assume "extreme scenarios" such as impact of loss of fuel supply that may result in affecting several generating units. We suggest that resource adequacy assessments should consider extreme scenarios (where applicable) based on a balance between applicable risk and consequences and the impacts of associated costs involved.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

### **Comments**

Although we have identified possible sensitivities above, we recommend that the Regions have the responsibility of defining sensitivity case requirements for their areas. However, we agree that the NERC Standard could require certain basic sensitivities, such as loss of fuel supply, if and where appropriate.



## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

The IESO 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.

### **Comments**

It is our understanding that the confidentiality of documents/data (where applicable) would be strictly maintained. We suggest that item # 4) should be revised to clearly specify that critical security related information and data requiring confidentiality will not be made public.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please share those comments in the space provided below.**

With regards to paragraph items 5) and 6), there is a need to prescribe associated compliance measures.

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Gerald Rheault	
Organization:	Manitoba Hydro	
Telephone:	204-487-5423	
Email:	gnrheault@hydro.mb.ca	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
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Yes

No

**If no, please explain in the space provided below.**

**Comments**

Manitoba Hydro believes that there is a reliability need for a resource adequacy standard. This is part of the reliability requirements for the region and should be coordinated at the regional and local level. This Standard is required to ensure that the region's resource requirements are adequate to meet the long term and short term requirements for the region and should include elements such as loss of fuel source and other common mode failure as well as generation expansion requirements.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

The scope defined in the SAR to establish requirements for various entities is the proper way to approach the development of the standard. The Regional Reliability Organization should develop a criteria or standard which should be followed by the other regional entities, consisting of the Load Serving Entity, the Planning Authorities and Resource Planners within the Region. These entities, which have the primary responsibility for ensuring generation adequacy, should be responsible to establish resource adequacy requirements in accordance with the criterion/standard established by the Regional Reliability Organization. The Regional Reliability Organization will be responsible to enforce this criterion/standard.

The Regional Reliability Organization could define a minimum resource adequacy requirement with which each entity must comply.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

**Comments**



## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

### **Comments**

Manitoba Hydro believes that as stated in item 3 of the detailed description contained in the SAR document, only aggregate data should be reported, not individual electric utility supply/demand data. An adequacy assessment should be published at least yearly if not seasonally similar to the NERC seasonal assessment. The data contained in this report should be generic only.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please share those comments in the space provided below.**

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.

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Proposed Resource Adequacy Assessments Standard**

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Name:		
Organization:		
Telephone:		
Email:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 - Transmission Owners
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<input type="checkbox"/> WECC		
<input type="checkbox"/> NA - Not Applicable		



## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.

## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

NPCC participating members agree that resource adequacy is a key component of reliability. We also agree that associated criteria should reflect the impacts such as transmission constraints, fuel delivery limitations, environmental restrictions, and other relevant factors.

The resource adequacy assessments and criteria should consider the Regional diversity since the associated needs vary from Region to Region and from jurisdiction to jurisdiction. We agree that each Region should assess the resource adequacy requirements of its sub-Region entities to ensure that the adequacy requirements for the Region are met. In addition, there might be local, state or provincial regulatory requirements that sub-Regional entities may need to comply with.

With regards to statement outlined in item 3) of the SAR (re: "the region should describe available mechanisms to mitigate the impacts of fuel interruptions on ability to serve load reliably"), we are of the opinion that the "sub-regions"(Areas) rather than "region" should identify and develop the specific process/mechanisms to mitigate the impacts of fuel interruption(s) on its ability to serve load reliably, based on its specific needs. The region should however, provide overall criteria and guidelines.

Region wide loss of fuel source is considered to be an extreme contingency/condition and is looked at in NPCC as a "sensitivity" and it is inappropriate to establish NERC criteria around this.

It is not clear from this question whether it is the intention of the SAR that the resulting 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, it is recommended 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

## **Comment Form – Proposed Resource Adequacy Assessments Standard**

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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).

## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

In order to examine/assess the impact of common mode failures in the Region's resource adequacy assessments, we suggest to revise the existing sentence of item 3 (re: Other factors such as expected transmission constraints and/or environmental restrictions that may impact the Region's resource adequacy should be examined) with following sentence i.e. "Other factors such as expected transmission constraints and/or environmental restrictions and/or applicable common mode failures that may impact the Region's resource adequacy should be examined."

Paragraph item 3 refers to "Regional resource adequacy requirements" whereas, Paragraph items 1 and 2 which refer to Regional resource adequacy criteria and resource adequacy requirements applicable to ISO/RTO's and other sub-regional entities. Is it intentional?

This needs to be clarified whether the intent of this SAR is that the case studies for establishing Regional or sub-Regional capacity or reserve margin must assume "extreme scenarios" such as impact of loss of fuel supply that may result in affecting several generating units. We suggest that resource adequacy assessments should consider extreme scenarios (where applicable) based on a balance between applicable risk and consequences.

In bullet 6 of the detailed description NPCC does not believe it is appropriate to include "deliverability of resources" at this time.

It is important that the Standard clearly distinguishes between (a) criteria for establishing capacity margin or reserve margin requirements (the Region should be given the option of using either one of these measures), and (b) criteria for conducting of resource adequacy assessments by the Region or NERC. Such assessments should demonstrate whether there is sufficient planned capacity to meet the required reserve margin established by criteria in (a) over an appropriate assessment period. Assessments should cover a wide range of scenarios, such as fuel supply interruptions (see our response to Question #1), environmental restrictions, higher load than forecast, loss of interconnections, etc. NPCC participating members recommend that the Regions or sub-Regions specify the extreme conditions to be tested or sensitivities, since they have a better understanding of which issues are important to their individual area.



## **Comment Form – Proposed Resource Adequacy Assessments Standard**

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NPCC participating members recommend that the Resource Adequacy criteria be based on a LOLE metric. It is NPCC's understanding that nine of the ten Regions use a LOLE or LOLP criterion; and of the nine that do, six utilize LOLE and one uses both LOLE and LOLP. It is further recommended that the LOLE of disconnecting firm load will be specified in the standard as “no more than 0.1 days per year”. Many Regions now specify this requirement. This criterion should be the basis for determining Regional or sub-Regional installed reserves requirements.

NPCC participating members recommend that the Resource Adequacy criterion specify various factors that must be considered in the analysis for establishing installed reserve requirements.. As a minimum, it is recommended that resource availability, e.g., forced outage rates and maintenance; transmission constraints; and load forecast uncertainty factors be specified in the Standard. To the extent that a particular resource’s expected future resource availability recognizes historical fuel supply and environmental restrictions, these factors would be included in the forced outage rate. The standard should allow consideration of capacity or reserve sharing assistance from neighboring Regions and sub-Regions. The Regions should specify additional factors, if appropriate, for their areas.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

### **Comments**

Although we have identified possible sensitivities above, we recommend that the Regions have the responsibility defining sensitivity case requirements for their areas. However, we agree that the NERC Standard could require certain basic sensitivities, such as loss of fuel supply, if appropriate.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

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.

### **Comments**

It is our understanding that the confidentiality of documents/data (where applicable) would be strictly maintained. It is suggested that item # 4) should be revised to clearly specify that critical security related information and data requiring confidentiality will not be made public.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please share those comments in the space provided below.**

With regards to paragraph items 5) and 6), there is a need to prescribe associated compliance measures.

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.

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Proposed Resource Adequacy Assessments Standard**

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	James Stanton	
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Email:	jstanton@calpine.com	
NERC Region	Registered Ballot Body Segment	
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## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

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## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

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 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 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



## **Comment Form – Proposed Resource Adequacy Assessments Standard**

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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, 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.

### **Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

See answer to No. 1

### **Comments**

We would also add that the security aspect of resource adequacy is much more important than the rabbit trail that fuel deliverability could take us down. Pure capacity numbers mean little if constraints prevent the effective sharing of the reserve margin within the specified region.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please share those comments in the space provided below.**

SEE #1 ABOVE.

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Scott Helyer
Organization:	Tenaska
Telephone:	817-462-1512
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NERC Region	Registered Ballot Body Segment
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## Comment Form – Proposed Resource Adequacy Assessments Standard

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## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

When establishing the standard, we need to be careful that we do not overemphasize this issue. Loss of a fuel source or other common mode failure is just one of many sensitivities that should be considered when evaluating resource adequacy.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

**Comments**

This proposal is absolutely applicable to reliability. The NERC definition of reliability includes both security and adequacy. This includes not only the adequacy of the transmission system, but also the adequacy of supplies to meet demand.

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

---

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

Yes

No

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Ed Riley	
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NERC Region	Registered Ballot Body Segment	
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 - Transmission Owners	
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<input checked="" type="checkbox"/> WECC		
<input type="checkbox"/> NA - Not Applicable		



## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

This SAR would lead to the establishment of requirements for various entities to: 1) create a metric(s) to assess resource adequacy that takes into account various factors, including, but not limited to, fuel deliverability, 2) perform resource adequacy assessments, 3) make the results of the assessments available to the industry and appropriate regulatory agencies, and 4) make the assessments and associated data available to NERC for their review.

The requestor would like to receive industry comments on this SAR and to obtain the input of the industry prior to determining the final scope and requirements of the SAR. Accordingly, we request your comments included on this form, emailed with the subject “Resource Adequacy Assessments SAR Comments” by March 21, 2005.



## Comment Form – Proposed Resource Adequacy Assessments Standard

---

**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

The requirement for resource adequacy studies is appropriate for reliability needs. However, the question, as stated above, assumes that reliability is threatened as a result of loss of a fuel source or common mode failure. The reality is that reliability deficiencies could be for a host of reasons and should not be focused on just loss of a fuel source or common mode failure.

It is important to identify and plan for major contingencies, including fuel supply interruptions, transmission constraints and environmental restrictions. However, criterion should not be as prescriptive as identifying specific mitigation measures.

It should also be noted that the resource adequacy criterion (or criteria) may vary greatly by region.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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 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.

### **Comments**

CAISO supports many of the recommendations from the Resource and Transmission Adequacy Task Force report and the Gas/Electricity Interdependency Task Force report. For example, one of the recommendations is that, “NERC shall develop assessment practices and reporting processes to verify that resources identified by load serving entities (LSEs) to meet resource adequacy requirements are simultaneously deliverable to the LSEs’ loads. The assessment practices shall also determine whether the simultaneous import capabilities are sufficient to satisfy the import capability assumptions included in the resource adequacy assessments.” The CAISO supports this recommendation.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

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.

**Comments**

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

### **Comments**

Data confidentiality and confidentiality agreements are very important issues for the sharing of data and the public posting of data.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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

Yes

No

**If yes, please share those comments in the space provided below.**

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 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 in after a reasonable start-up or "gain experience" period such as was done with the WECC RMS system..

**COMMENT FORM  
Proposed Resource Adequacy Assessments Standard**

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**ALL DATA ON THIS FORM WILL BE TRANSFERRED AUTOMATICALLY TO A DATABASE AND IT IS THEREFORE IMPORTANT TO ADHERE TO THE FOLLOWING REQUIREMENTS:**

- DO:**
- Do enter text only, with no formatting or styles added.
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  - Do not use quotation marks in any data field.
  - Do not submit a response in an unprotected copy of this form.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Jerry Nicely
Organization:	TVA - Generation
Telephone:	423-751-8236
Email:	glnicely@tva.gov
NERC Region	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 - Transmission Owners
<input type="checkbox"/> ECAR	<input type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils
<input type="checkbox"/> FRCC	<input type="checkbox"/> 3 - Load-serving Entities
<input type="checkbox"/> MAAC	<input type="checkbox"/> 4 - Transmission-dependent Utilities
<input type="checkbox"/> MAIN	<input checked="" type="checkbox"/> 5 - Electric Generators
<input type="checkbox"/> MAPP	<input type="checkbox"/> 6 - Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> NPCC	<input type="checkbox"/> 7 - Large Electricity End Users
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/> 8 - Small Electricity End Users
<input type="checkbox"/> SPP	<input type="checkbox"/> 9 - Federal, State, Provincial Regulatory or other Government Entities
<input type="checkbox"/> WECC	
<input type="checkbox"/> NA - Not Applicable	



## Comment Form – Proposed Resource Adequacy Assessments Standard

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### Background Information:

The purpose of this standard is to implement certain recommendations from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report* related to resource adequacy. Both reports were approved by the NERC Board on June 15, 2004.

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## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 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?**

Yes

No

**If no, please explain in the space provided below.**

### **Comments**

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.

## Comment Form – Proposed Resource Adequacy Assessments Standard

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

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 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 accomodating current Regional practices.

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional risks that should be considered.**

Sensitivities to demand variations that may result from weather extremes

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

Yes

No

**If yes, please indicate additional considerations or restrictions.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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Yes

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Travis Besier or Ellis Rankin
Organization:	TXU Electric Delivery Company
Telephone:	214-812-4917 or 214-743-6825
Email:	tbesier1@txued.com or erankin@txued.com
NERC Region	Registered Ballot Body Segment
<input checked="" type="checkbox"/> <b>ERCOT</b>	<input checked="" type="checkbox"/> 1 - Transmission Owners
<input type="checkbox"/> <b>ECAR</b>	<input type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils
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No

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**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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**Question 2: Do you agree with the scope and applicability of the proposed standard?**

Yes

No

**If no, please explain in the space provided below.**

**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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

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**Comments**

**Comment Form – Proposed Resource Adequacy Assessments Standard**

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