

**Comment Form – Proposed Frequency Response Standard**

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**COMMENT FORM  
Proposed Frequency Response Standard**

This form is to be used to submit comments on the proposed Frequency Response Standard Authorization Request. Comments must be submitted by **February 17, 2005**. You may submit the completed form by emailing it to: [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with the words “Frequency Response 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.

**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.
  - Do use punctuation and capitalization as needed (except quotations).
  - Do use more than one form if responses do not fit in the spaces provided.
  - Do submit any formatted text or markups in a separate WORD file.

- DO NOT:**
- Do not insert tabs or paragraph returns in any data field.
  - Do not use numbering or bullets in any data field.
  - 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.)	
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<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
<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 type="checkbox"/> 5 - Electric Generators
<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	



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### Background Information:

Posted for comments is the first posting of the Frequency Response SAR. The Frequency Task Force of the NERC Resources Subcommittee has identified the transient frequency response characteristics as degrading over time and potentially threatening the reliability of the bulk electric system. This Standard Authorization Request was initiated to address this concern by developing a standard to specify a measuring convention for frequency response and by specifying a minimum required response to system disturbances based on the convention.

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 “Frequency Response SAR Comments” by February 17, 2005.

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**Question 1: Do you agree there is a reliability need for a specifying the quality and quantity of frequency response?**

Yes

No

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

### **Comments**

We agree in general that there is a reliability need to have frequency response, in order to maintain interconnection frequency and particularly during disturbances, islanding and restoration. The standard need to address both the system needs as well as island requirements for frequency response.

The standard should provide the process for a technically sound calculation of frequency response and bias.

The standard should acknowledge that some units might not provide response under normal operations (e.g. nuclear units operating at full load) and that load response is highly variable event based on time of day or year.

The standard should acknowledge smaller areas need greater response.

Where BA areas are deficient in meeting the interconnection requirement , they should be allowed a reasonable period of time to take appropriate steps to make corrections before being assessed as non compliant.

The standard should also track area response over time (years) and be reevaluated as performance changes.

Quality should be defined. For generators it should include dead-band, droop characteristics, etc.

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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.**

While we agree that the standard should not preclude market solutions (e.g. allow purchasing of response as long as deliverability and restoration criteria can be met), we have concerns with the statement *There must be a means for sale/purchase of frequency response as for any other quantity*. The scope should exclude any reference to a means for sale/purchase of frequency response as it should only address reliability requirements.

It is not clear what is meant by *A method of allocation must be developed*. Is this an allocation of Interconnection response to BAs, BA allocation to generators or something different?

The requirements should recognize the capabilities and limitations of generators (e.g. nuclear units operating at full load).

**Comments**

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**Question 3: Do you believe these standards are more appropriately additions to existing standards as opposed to creating new standards?**

Yes

No

**If yes, please identify the location you believe would be the most appropriate for the proposed standard.**

### **Comments**

If the existing Frequency Response and Bias Standard Version 0 (Bal-003-0) can not be clarified and brought in line with this proposed standard, it should be standalone .

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**Question 4: 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.**

We appreciate the opportunity to comment and believe there is a need for such a standard.

It needs to be recognized that there are two objectives for governor response, namely, to provide response on an interconnection wide basis to maintain an acceptable frequency and secondly to control frequency in island situations. The former may allow for averaging over an area of the response requirement but the latter may limit the extent of averaging.

Published studies show frequency response is declining when it should be increasing with load. The main concerns with this decreasing performance are:

There may be areas unable to withstand severe disturbances.

Following a grid separation or collapse, control areas may be unable to fulfill their blackstart and restoration responsibilities, thereby becoming a burden to neighbors.

Because engineering models use theoretical frequency response, they are likely over optimistic and may misstate grid stability limits.

This standard would allow the industry to determine whether the decline is local or global.

Rather than implementing a complicated infrastructure or process, we would suggest that NERC automate the calculation of frequency response by either:

Asking BAs to save their CPS-source data in a common format so a common tool can be used (MAPP BAs and some others use a common tool that can calculate frequency response with CPS-source data).

Embed the calculation in the NERC ACE-monitoring application.

The standard should employ a methodology that not only captures initial response (first few seconds after the event) but also the sustained response until AGC action takes over

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Providing visibility on where and when performance is substandard will likely initiate sufficient action to arrest the decline in performance. Minimum performance standards could be implemented after the industry has identified what is reasonably achievable and technically justified.