

BAL-003 R2, R2.2, R5, and R5.1 Interpretation Drafting Team Meeting

September 18, 2007 — 11 a.m. Eastern Daylight Time

Web Conference Agenda

Consortium conference server: 1(732)694-2061

Conference code: 104109182

Web Ex Meeting Number: 717 852 387

Meeting password: BAL003

- 1) Administrative
 - a) Introduction of Participants
 - b) Review Antitrust Guidelines (Attachment 1)
 - c) Review Meeting Objectives:
 - i) Prepare Response to Comments
- 2) Review & Revise Interpretation Response
 - a) Review PGE Request for Interpretation (Attachment 2)
 - b) Review Interpretation of BAL-003 (Attachment 3)
 - c) Prepare Response to Comments (Attachment 4)
- 3) Discuss Next Steps

NERC Antitrust Compliance Guidelines

I. General

It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC's antitrust compliance policy is implicated in any situation should consult NERC's General Counsel immediately.

II. Prohibited Activities

Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference calls and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.

III. Activities That Are Permitted

From time to time decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and

adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.
- Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.



May 31, 2007

Sent Via E-Mail and First-Class U.S. Mail

Ms. Maureen E. Long
Standards Process Manager
The North American Electric Reliability Corporation
Princeton Forrestal Village
115 Village Boulevard
Princeton, New Jersey 08540-5731

Subject: Request for Interpretation of NERC Standard BAL-003-0 Requirements R2, R2.2, R5, and R5.1

Dear Ms. Long:

Pursuant to the North American Electric Reliability Corporation (NERC) Reliability Standards Development Procedure (RSDP),¹ the Electric Reliability Council of Texas, Inc. (ERCOT) respectfully requests an interpretation of the above-referenced standard. ERCOT specifically requests clarification that a Balancing Authority (BA) is entitled to use a variable bias value as authorized by Requirement R2.2, even though Requirement R5 seems not to account for the possibility of variable bias settings.

Four specific requirements under NERC Standard BAL-003-0 are relevant to this request:

- NERC Standard BAL-003-0, Requirement R2 states: “Each Balancing Authority shall establish and maintain a Frequency Bias Setting that is as close as practical to, or greater than, the Balancing Authority’s Frequency Response. Frequency Bias may be calculated several ways”
- Requirement R2.2 further states: “R2.2: The Balancing Authority may use a variable (linear or non-linear) bias value, which is based on a variable function of Tie Line deviation to Frequency Deviation. The Balancing Authority shall determine the variable frequency bias value by analyzing Frequency Response as it varies with factors such as load, generation, governor characteristics, and frequency.”
- Requirement R5 states: “Balancing Authorities that serve native load shall have a monthly average Frequency Bias Setting that is at least 1% of the Balancing Authority’s estimated yearly peak demand per 0.1 Hz change.”

¹ Version 6.0, adopted by the NERC Board of Trustees on Nov. 1, 2006, at 26-27.

- Requirement R5.1 further states: “Balancing Authorities that do not serve native load shall have a monthly average Frequency Bias Setting that is at least 1% of its estimated maximum generation level in the coming year per 0.1 Hz change.”

ERCOT submits that, if a BA uses a variable bias in conformance with R2.2, it would violate R5 if the analysis results in any value less than 1% of its yearly peak demand (or maximum generation). R2.2 is a legitimate option sanctioned by NERC and by the Federal Energy Regulatory Commission, and ERCOT sets its bias using this method. We would respectfully further assert that R2.2 is only viable if NERC interprets R5 to only apply to BAs that use a fixed bias setting. The correct corresponding measure for a variable bias setting would be no less than 1% of the BA’s estimated peak (or maximum generation) for the period in which the bias setting is active.

ERCOT’s requested interpretation is consistent with a previous NERC Reliability Subcommittee (RS) interpretation, as noted in the RS’s January 2003 minutes:

Resources Subcommittee Meeting Minutes

January 29-31, 2003

Variable Non-Linear Bias

During the last subcommittee meeting, the following motion was passed: The Resources Subcommittee interprets Standard 1.1.4, “Control Area’s monthly average Frequency Bias Setting must be at least 1% of the Control Area’s estimated yearly peak demand per 0.1 Hz change” requirement to be applicable to all Control Areas that contain load and that use bias settings. The subcommittee discussed and interpreted last meeting’s motion to address only fixed bias, not variable bias. Variable bias needs to be addressed.

After discussion, Don Badley made a motion as follows:

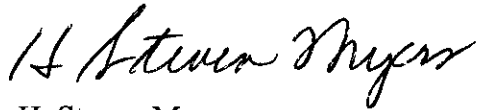
The Resources Subcommittee interprets Standard 1.1.4 for Control Areas utilizing variable bias, the Control Area’s average Bias Setting for a month must be at least 1% of the Control Area’s estimated peak load for that month (or 1% of peak generation for a generation only Control Area forecast for that month). The motion was approved.

An interpretation under NERC’s RSDP is appropriate because the lack of a variable-bias option under Requirement R5 appears to be an oversight, and the RSDP specifically provides that interpretations are appropriate to identify clarifications that correct oversights in the Standards until such time as the standard at issue can be “revised through the normal process ... to incorporate the clarifications provided by the interpretation.” This interpretation is important to ERCOT and should be important to any BA using a variable bias setting, because an incorrect interpretation would force

ERCOT to abandon its longstanding and approved practice of using a variable setting, without any corresponding improvement in reliability.

For the foregoing reasons, ERCOT respectfully requests an interpretation that clarifies the requirements of this Standard.

Sincerely,

A handwritten signature in black ink that reads "H. Steven Myers". The signature is written in a cursive style with a large, stylized initial "H".

H. Steven Myers
ERCOT
Manager, Operating Standards

Interpretation of BAL-003-0 — Frequency Response and Bias, Requirements R2, R2.2, R5, and R5.1

Request for Interpretation received from ERCOT on May 31, 2007:

ERCOT specifically requests clarification that a Balancing Authority is entitled to use a variable bias value as authorized by Requirement R2.2, even though Requirement 5 seems not to account for the possibility of variable bias settings

Interpretation provided by NERC Resources Subcommittee on July 25, 2007:

The consensus of the Resources Subcommittee is that BAL-003-0 — Frequency Response and Bias — Requirement R2 does not conflict with BAL-003-0 Requirement R5.

BAL-003-0 — Frequency Response and Bias Requirement 2 requires a Balancing Authority to analyze its response to frequency excursions as a first step in determining its frequency bias setting. The Balancing Authority may then choose a fixed bias (constant through the year) per Requirement 2.1, or a variable bias (varies with load, specific generators, etc.) per Requirement 2.2.

BAL-003-0

R2. Each Balancing Authority shall establish and maintain a Frequency Bias Setting that is as close as practical to, or greater than, the Balancing Authority's Frequency Response. Frequency Bias may be calculated several ways:

R2.1. The Balancing Authority may use a fixed Frequency Bias value which is based on a fixed, straight-line function of Tie Line deviation versus Frequency Deviation. The Balancing Authority shall determine the fixed value by observing and averaging the Frequency Response for several Disturbances during on-peak hours.

R2.2. The Balancing Authority may use a variable (linear or non-linear) bias value, which is based on a variable function of Tie Line deviation to Frequency Deviation. The Balancing Authority shall determine the variable frequency bias value by analyzing Frequency Response as it varies with factors such as load, generation, governor characteristics, and frequency.

BAL-003-0 — Frequency Response and Bias Requirement 5 sets a minimum contribution for all Balancing Authorities toward stabilizing interconnection frequency. The 1% bias setting establishes a minimum level of automatic generation control action to help stabilize frequency following a disturbance. By setting a floor on bias, Requirement 5 also helps ensure a consistent measure of control performance among all Balancing Authorities within a multi-Balancing Authority interconnection. However, ERCOT is a single Balancing Authority interconnection. The bias settings ERCOT uses do produce, on average, the best level of automatic generation control action to meet control performance metrics. The bias value in a single Balancing Authority interconnection does not impact the measure of control performance.

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R5. Balancing Authorities that serve native load shall have a monthly average Frequency Bias Setting that is at least 1% of the Balancing Authority's estimated yearly peak demand per 0.1 Hz change.

R5.1. Balancing Authorities that do not serve native load shall have a monthly average Frequency Bias Setting that is at least 1% of its estimated maximum generation level in the coming year per 0.1 Hz change.

Consideration of Comments on Initial Ballot of Interpretation of BAL-003-0 — Frequency Response and Bias, Requirements R2, R2.2, R5, and R5.1

Segment	Organization	Comment
6	Entergy Services, Inc.	The interpretation of Requirement 5 states that the floor bias setting establishes a minimum level of AGC and also ensures a consistent measure of control performance. It is not clear as to why the Resources Subcommittee believes that ERCOT need not meet the floor requirement on the bias setting - is it because they use a variable bias or is it because they are a single BA Interconnection, or both? It appears that the interpretation needs an interpretation. The interpretation of R5 should explicitly address whether or not that BAs that are either: a single BA Interconnect, or using variable bias, are subject to R5.
<p>Response: The Resources Subcommittee (RS) was just providing background on the original logic for having a minimum bias obligation. While the RS believes a bias floor makes more sense in a multi-BA environment, the intent of doing an interpretation of the standard is to interpret what was written, not what we would like the standard to be.</p>		
8	JDRJC Associates	Requirement 5 needs further clarification.
<p>Response: We agree there are better ways to say that all BAs must have a monthly average Bias greater than or equal to 1% of its projected annual peak load (or generation if it does not serve load).</p>		