

BAL 005-1 R17 Interpretation Drafting Team Meeting

September 5, 2007 — 1:30–3:30 p.m. Eastern Daylight Time

Web Conference Agenda

Consortium conference server: 1(732)694-2061

Conference code: 12080090507.

Web Ex Meeting Number: 710 731 552

Meeting password: BAL005

- 1) Administrative
 - a) Introduction of Participants
 - b) Review Antitrust Guidelines (Attachment 1)
 - c) Review Meeting Objectives:
 - i) Prepare Interpretation Response
- 2) Review & Revise Interpretation Response
 - a) Review PGE Request for Interpretation (Attachment 2)
 - b) Prepare Response (Attachment 3)
- 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.



Portland General Electric Company
121 SW Salmon Street • Portland, Oregon 97204

July 31, 2007

Via Electronic Mail and Overnight Delivery

Gerard Adamski
Director of Standards
North American Electric Reliability Corporation
116-390 Village Boulevard
Princeton, New Jersey 08540-5721

Re: Portland General Electric Company
Request for Interpretation of NERC Standard BAL-005-0 R.17

Dear Mr. Adamski:

Portland General Electric Company (PGE) is seeking interpretation of Requirement 17 of North American Electric Reliability Corporation (NERC) Reliability Standard BAL-005-0. This requirement is applicable to PGE in its registered role as a Balancing Authority by FERC Order No. 693.¹ PGE is submitting this request for interpretation under the guidelines set out in “Interpretations of Standards” under the “Special Procedures” section of Version 6.1 of NERC’s Reliability Standards Development Procedure.

Requirement 17 of BAL-005-0 reads as follows:

R17. Each Balancing Authority shall at least annually check and calibrate its time error and frequency devices against a common reference. The Balancing Authority shall adhere to the minimum values for measuring devices as listed below:

Device	Accuracy
Digital frequency transducer	≤ 0.001 Hz
MW, MVAR, and voltage transducer	≤ 0.25 % of full scale
Remote terminal unit	≤ 0.25 % of full scale
Potential transformer	≤ 0.30 % of full scale
Current transformer	≤ 0.50 % of full scale

¹ Mandatory Reliability Standards for the Bulk-Power System, 118 FERC ¶ 61,218, Issued March 16, 2007.



Gerard Adamski
July 31, 2007
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PGE has reviewed the Request for Clarification of this requirement received by NERC on December 21, 2006. PGE has also reviewed the new version of the Standard, BAL-005-1, which includes the clarification proposed by NERC's Resources Subcommittee and approved by the Board of Trustees on May 2, 2007.² This clarification addresses the first sentence of the Requirement, and explains that the phrase "annually check and calibrate" applies only to devices within the operations control room. However, PGE believes that this clarification still leaves several areas of ambiguity regarding this standard, specifically:

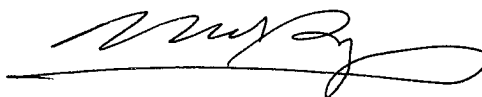
Which equipment is included in the phrase "measuring devices as listed below", in particular, does this phrase apply:

- (a) only to equipment within the operations control room?
- (b) only to equipment that provides values used to calculate AGC ACE?
- (c) only to equipment that provides values to PGE's SCADA system?
- (d) only to the equipment owned or operated by the BA?
- (e) only to new or replacement equipment?
- (f) to all such equipment that a BA owns or operates?

PGE's understanding is that this standard is intended to apply to the BA's new or replacement equipment which provides values used to calculate AGC ACE. Applying this standard more widely – for example, applying it to existing equipment – could cause PGE and other utilities within the region to spend significant amounts of money with little or no actual improvement to system reliability.

Thank you for the opportunity to seek clarification through NERC's interpretation process. If you have any questions regarding this request for interpretation, please do not hesitate to contact me.

Sincerely,



Mike Ryan
Manager, Control Area and Scheduling Operations
Portland General Electric Co.
(503) 464-8793
mike.ryan@pgn.com

² Information on Board of Trustees activity is taken from Draft Minutes of the May 2, 2007, Board of Trustees Meeting, posted on NERC's website.

Interpretation of BAL-005-1 Automatic Generation Control, R17

Request for Clarification received from PGE on July 31, 2007

PGE requests clarification regarding the measuring devices for which the requirement applies, specifically clarification if the requirement applies to the following measuring devices:

- *Only equipment within the operations control room*
- *Only equipment that provides values used to calculate AGC ACE*
- *Only equipment that provides values to its SCADA system*
- *Only equipment owned or operated by the BA*
- *Only to new or replacement equipment*
- *To all equipment that a BA owns or operates*

BAL-005-1

R17. Each Balancing Authority shall at least annually check and calibrate its time error and frequency devices against a common reference. The Balancing Authority shall adhere to the minimum values for measuring devices as listed below:

Device	Accuracy
Digital frequency transducer	≤ 0.001 Hz
MW, MVAR, and voltage transducer	≤ 0.25% of full scale
Remote terminal unit	≤ 0.25% of full scale
Potential transformer	≤ 0.30% of full scale
Current transformer	≤ 0.50% of full scale

Existing Interpretation Approved by Board of Trustees May 2, 2007

BAL-005-0, Requirement 17 requires that the Balancing Authority to check and calibrate its control room time error and frequency devices against a common reference at least annually. The requirement to “annually check and calibrate” does not address any devices outside of the operations control room.

The table represents the design accuracy of the listed devices. There is no requirement within the standard to “annually check and calibrate” the devices listed in the table, unless they are included in the control center time error and frequency devices.

Interpretation provided by NERC Frequency Task Force on September 7, 2007

As noted in the existing interpretation, BAL-005-1 Requirement 17 applies only to the time error and frequency devices that provide, or in the case of back-up equipment may provide, input into the ACE equation or provide real-time time error or frequency information to the system operator. The time error and frequency measurement devices may not necessarily be located in the operations control room or owned by the BA, however the BA has the responsibility for the accuracy of the frequency and time error measurement devices. No other devices are included in Requirement 17.

New or replacement equipment that provides the same functions noted above requires the same calibrations. We are aware that some phase angle measurement units used for time error and frequency measurement cannot be calibrated as such. In this case, these devices should be cross-checked against other properly calibrated equipment and replaced if the devices do not meet the required level of

~~accuracy. R17 was derived from Policy 1E. 5. “Calibration of measurement devices. Each CONTROL AREA shall at least annually check and calibrate its time error and frequency devices against a common reference.”~~

~~Policy 1, Appendix 1H, section E noted that there are two primary frequency measurements in a control room. “Frequency input to the chart recorder shall be an analog signal obtained from a source independent from the control system computer.”~~

~~The statements above imply that the following devices need to be checked annually against a common reference:~~

~~1. Frequency input into the ACE equation.~~

~~2. The primary frequency source, separate from 1, presented to the operator to fulfill their monitoring obligations, typically in chart form (See BAL 005 R14).~~

~~3. Time error device.~~

~~Responding to some of their specific questions~~

~~—The devices themselves might not be physically in the control rooms, but are used for the 3 item above. At least 2 of these would likely be in PGE’s EMS/SCADA system.~~

~~—Annual is annual, whether the equipment is new or replacement would not change the requirement. If the real question is whether this is a calendar year requirement or a clock year requirement, it would seem that this should be a calendar year requirement (otherwise the BA is forced to calibrate every 11 months). To avoid questions during an audit, new equipment placed in service part way through the year (which is always the case) should be calibrated prior to completion of its first year of service.~~

~~—Who owns the device does not change the BA’s obligation to meet the requirement.~~