

Frequency Response Standard Drafting Team Meeting

December 11, 2007 — 8 a.m.–5 p.m. Central Time
December 12, 2007 — 8 a.m.–noon Central Time

Hyatt Regency DFW
DFW Airport
Dallas, TX
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Agenda

- 1) Introductions**
 - a) Antitrust & Administrative (**Attachment 1**)
 - b) Review Meeting Objectives:
 - i) Prepare Supporting Document
 - ii) Draft Standard
- 2) Discuss Supporting Document Components (Attachment 2)**
 - a) Determine pro-rata methodology
 - b) Determine target threshold
 - c) Discuss treatment of jointly owned units
 - d) Discuss data collection form(s)
 - e) Prepare general procedure (include RRO requirements from first draft of standard, plus 2a–2d)
- 3) Draft Standard Sections (Attachment 3)**
 - a) Section B: Requirements
 - b) Section C: Measures
 - c) Section E: Regional Variances
- 4) Electric Power Group presentation on Frequency Model Application (20 minutes)**
- 5) Summarize Action Items**
- 6) Schedule Next Meeting or WebEx**



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.

*****Note to Team: This document is a draft only and is intended to capture the items that the team removed from the draft standard. The sections are for illustration purposes only. The team will decide what information should be included in this document.*****

Background

Methodology

Note the following text was cut from the draft standard R2 to capture the frequency change mHz

R2... MW magnitude for each generation, load, and islanding event with loss within one minute greater than the following values for each Interconnection:

Eastern 750 MW or frequency change of 30 mHz add to footnote/procedure???

Western 1100 MW or a frequency change of 70 mHz add to footnote/procedure???

ERCOT 625 MW or frequency change of 100 mHz add to footnote/procedure???

Procedure

Note that the following steps were cut from the draft standard and are intended as a starting point for the team.

1. The RROs in each Interconnection shall annually establish a single Target Frequency Response (MW/Hz) for their Interconnection to analyze Frequency Response. (input to R1 and R2)
 - a. The RROs shall prorate their Interconnection's Target Frequency Response among its Balancing Authorities (Need to determine how to prorate) to determine each Balancing Authority's Frequency Response.
2. The RROs in each Interconnection shall identify a list of events for each quarter for which Frequency Response shall be analyzed by the end of the month following the end of the quarter.
3. Within 30 days of the end of the quarter, the RROs in each Interconnection shall request from all of its Balancing Authorities the archived data collected in R2 to perform the Frequency Response analysis for the list of events. (input to R3)
4. The RROs in each Interconnection shall determine the Frequency Response for each of its Balancing Authorities to identify the Balancing Authorities with less than 75% of their share of the Target Frequency Response for each quarter.
5. The RROs in each Interconnection shall prepare and publically post a quarterly report that includes the following information (input to R4):
 - a. Each Balancing Authority's calculated Frequency Response
 - b. Each Balancing Authority that has achieved less than 75% of the its share of the Target Frequency Response

Standard Development

Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Standards Drafting Team posted draft standard for comment on ??? .

Proposed Action Plan and Description of Current Draft:

This is the first posting of the proposed standard and its associated implementation plan for a - day comment period, from ??? to ???.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on the first draft of the proposed standard and post revise standard for a ?? day comment period	
2. Respond to comments on the second draft of the proposed standard	
3. Obtain the Standards Committee’s approval to move the standard forward to balloting.	
4. Post the standard and implementation plan for a 30-day pre-ballot review.	
5. Conduct an initial ballot for ten days.	
6. Respond to comments submitted with the initial ballot.	
7. Conduct a recirculation ballot for ten days.	
8. Post for a 30-day preview for board.	
9. BOT adoption.	

A. Introduction

1. **Title:** Frequency Response
2. **Number:** BAL-012
3. **Purpose:** To collect data needed to analyze Frequency Response.

The proposed standard requires entities to provide data so that Frequency Response in each of the Interconnections can be modeled, and the reasons for the decline in Frequency Response can be identified.

4. **Applicability:**
 - 4.1. Balancing Authority
 - 4.2. Generator Operator
 - 4.3. Load-Serving Entity
5. **(Proposed) Effective Date:**
 - 5.1.

B. Requirements

- R1. Each Balancing Authority shall archive for one calendar year plus the current year the following data (used when calculating and reporting ACE) needed to model the Balancing Authority's sub-minute Frequency Response to a frequency deviation:
 - R1.1. Time
 - R1.2. Actual Frequency
 - R1.3. Scheduled Frequency
 - R1.4. Bias
 - R1.5. Actual Interchange
 - R1.6. Scheduled Interchange
- R2. By the 10th of the following month, each Balancing Authority shall report the following frequency event information to its RRO:
 - R2.1. MW magnitude for each generation, load, and islanding event with loss within one minute greater than the following values for each Interconnection:
 - R2.1.1. Eastern 750 MW
 - R2.1.2. Western 1100 MW
 - R2.1.3. ERCOT 625 MW
 - R2.2. Date/time in GMT of the event
- R3. Within 30 days of the RRO's request, each Balancing Authority shall provide the archived data collected in R2 for the set of events.

R4. Each Balancing Authorities with **less than 75%** of its share of Target Frequency Response shall identify and provide to its RRO the **reason(s)** for its Frequency Response being less than its Target Frequency Response.

R4.1. Upon request from its Balancing Authority, each Generator Operator that operates a generator larger than [10 MW] shall provide the following **generation data** for use in the development of models for Frequency Response for its Interconnection:

R4.1.1. ???

R4.2. Upon request from its Balancing Authority, each Load Serving Entity shall provide the percentage of each type of load (residential, commercial, and industrial) for use in the development of models of Frequency Response for its Interconnection.

C. Measures

M1. The BA shall have available for inspection the archived data (typically in electronic format) for one calendar year plus the current year, as specified in R1.

M2. The Balancing Authority shall have available for inspection evidence that each month a report was sent to its RRO and the report included all of the frequency event information, as specified in R2, 2.1, and 2.2.

M3. The Balancing Authority shall have available for inspection the archived data was submitted to the RRO, as specified in R6

M4. The Balancing Authority shall have available for inspection evidence that it submitted the information, as specified in R9.

M4.1 The Generator Operator shall

M4.2 The Load Serving Entity shall

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

Compliance Enforcement Authority (CEA)

1.2. Compliance Monitoring Period and Reset

The performance reset period for all requirements is one month.

1.3. Data Retention

For all requirements and measures, each Reliability Coordinator, Balancing Authority and Transmission Operator shall retain evidence of compliance for four years or since its most recent on-site compliance audit, whichever is greater. Each Reliability Coordinator, Balancing Authority and Transmission Operator shall retain all data used to show evidence it is following or followed any mitigation plan associated with this standard.

The Compliance Monitor shall retain data, including self-certifications, since its last on-site audit and all documentation from other compliance monitoring methods used since the last on-site compliance audit. The Compliance Monitor shall retain any data used in mitigation plans associated with this standard.

1.4. Additional Compliance Information

Each Reliability Coordinator, Transmission Operator and Balancing Authority shall demonstrate compliance through self-certification submitted to its Compliance Enforcement Authority annually.

The Compliance Enforcement Authority shall conduct a scheduled on-site review once every three years, and may conduct spot checks and investigations to assess performance.

2. Violation Severity Levels

2.1. Lower: Text

Additional paragraphs

2.2. Moderate:Text

2.3. High: Text

2.4. Severe: Text

E. Regional Variances

None.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking