



Compliance Audit Report Public Version

**Braintree Electric Light Department
NCR07022**

May 26 to July 09, 2008

**Confidential Information
(Including Privileged and Critical Energy
Infrastructure Information)
Has Been Removed**

July 9, 2008

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Executive Summary

This final compliance audit report is the public version. Confidential information (including privileged and critical energy infrastructure information) has been redacted from this report. The full final compliance audit report was submitted to the audited entity and NERC.

The offsite compliance audit of Braintree Electric Light Department (Braintree) was conducted between May 26 and July 9, 2008. The audit was completed using data submitted by Braintree and telephone and email data exchanges. The audit team evaluated Braintree's compliance with twenty-five reliability standards identified in the NERC 2008 Implementation Plan for the period of the last twelve months or monitoring timeframes specified in each reliability standard. Of the twenty-five standards audited, ten were deemed to be applicable; of the remaining standards all ten were judged to be compliant. It should be noted that per the NPCC direction to the auditors, the Braintree registered categories of Purchasing-Selling Entity (PSE) and Transmission Owner (TO) were omitted from this audit due to the existing Braintree delist request, which is currently under review by NPCC. Therefore, those standards and requirements listed in the February 11, 2008 audit letter, which applied to PSE and TO be deemed not applicable for this audit.

Braintree provided subject matter experts for each standard resulting in a more clear understanding of the Braintree business model and accelerated the audit process. The evidence provided to demonstrate compliance required extensive requests for additional information and evidence. The Braintree audit team was aggressively responsive once they understood the scope of the information required. The audit team would like to thank the Braintree team for the support offered through the audit.

Audit Process

All registered entities are subject to audit for compliance with all reliability standards applicable to the functions for which the registered entity is registered.¹ The audit objectives are:

- Independently review Braintree's compliance with the requirements of the reliability standards that are applicable to Braintree based on the Braintree registered functions.
- Validate compliance with applicable reliability standards from the NERC 2008 Implementation Plan list of actively monitored standards.

The audit was completed using data submitted by Braintree and telephone and email data exchanges. The audit team evaluated Braintree's compliance with twenty-five reliability

¹ North American Electric Reliability Corporation CMEP, paragraph 3.1, Compliance Audits

standards identified in the NERC 2008 Implementation Plan for the period of the last twelve months or monitoring timeframes specified in each reliability standard.

Of the twenty-five standards audited (fifteen of the standards were deemed to be not applicable to Braintree), ten were judged to be compliant based on the data submitted in response to the audit request and further data provided as a result of follow up questions.

The compliance audit process steps are detailed in the NERC CMEP. The NERC CMEP generally conforms to the United States Government Accountability Office Government Auditing Standards and other generally accepted audit practices.

Objectives

All registered entities are subject to audit for compliance with all reliability standards applicable to the functions for which the registered entity is registered.² The audit objectives are:

- Independently review Braintree's compliance with the requirements of the reliability standards that are applicable to Braintree based on the registered functions.
- Validate compliance with applicable reliability standards from the NERC 2008 Implementation Plan list of actively monitored standards.
- Validate evidence of self-reported violations and previous self-certifications, confirm compliance with other requirements of the reliability standard, and review the status of associated mitigation plans.
- Document the Braintree's compliance culture.

Scope

The audit included all standards identified in the February 11, 2008 audit letter for the previous year. The audit was a regularly scheduled audit and no self reported violations or compliance investigations were involved.

Confidentiality and Conflict of Interest

Confidentiality agreements executed by the independent contractors and code of conduct documentation for the NERC representative and regional entity staffs were provided to the audited entity in advance of the audit. The audited entity was given an opportunity to object to an audit team member on the basis of a possible conflict of interest or the existence of other circumstances that could interfere with the audit team member's impartial performance of duties. The audited entity accepted the audit team member participants with no objections.

² North American Electric Reliability Corporation CMEP, paragraph 3.1, Compliance Audits

Off-site Audit

Braintree was provided with a pre-audit request letter identifying the standards and requirements subject to audit. The audit letter was sent to Braintree more than 60 days in advance of the scheduled audit. This is an off site audit conducted every six years or as determined to be necessary by the region. Braintree had not self reported any violations

The audit team leader requested that Braintree employees representing subject matter expertise regarding all of registered functions of Braintree be made available for interviews should the need arise. These interviews in conjunction with evidence provide the audit team with a basis for professional judgment when validating compliance with reliability standards.

Generally accepted government auditing standard 3.39 places responsibility on each auditor and audit organization to exercise professional judgment in planning and performing an audit or attestation engagement, it does not imply unlimited responsibility, nor does it imply infallibility on the part of either the individual auditor or the audit organization. Absolute assurance is not attainable because of the nature of evidence and the characteristics of fraud. Professional judgment does not mean eliminating all possible limitations or weaknesses associated with a specific audit, but rather identifying, considering, minimizing, mitigating, and explaining them.

Methodology

The audit team prepared reliability standards auditor worksheets (RSAWs) to evaluate each standard. The RSAW's are used to ensure consistency and to document evidence of compliance or non-compliance with the standards. All relevant documents are considered and to the extent they form portion of the audit trail are included in the RSAW's.

Audit Overview

The audit overview was conducted at 10:00AM May 27, 2008 via conference call. The auditors reviewed their individual careers and noted that they had signed a confidentiality agreement. A brief explanation of the audit process was given and the timelines were discussed. Braintree was given the opportunity to reject either auditor should they feel that there was a possible conflict of interest or they thought the auditors would not be impartial. Braintree accepted the audit team.

Audit

The audit was performed off site by John Brannan and Anthony Giasi as the auditors. The auditors developed overall two lists of questions for Braintree to answer; the lists were then sent to Braintree for their review on separate occasions, after which two follow-up conference calls were arranged in order to jointly review the lists of questions. Braintree

then took the time necessary to develop the answer and submitted them by email to the auditors.

It should be noted that per the NPCC direction to the auditors, the Braintree registered categories of Purchasing-Selling Entity and Transmission Owner were omitted from this audit due to the existing Braintree delist request, which is currently under review by NPCC. Therefore, those standards and requirements listed in the February 11, 2008 audit letter, which applied to PSE and TO be deemed not applicable for this audit.

Exit Briefing

The exit briefing was conducted via conference call at 10:00AM 7/09/2008. The teleconference was between John Brannan and Anthony Giasi of NPCC and Ken Stone, William Bottiggi, John-Eric Nelson, Charles Coyne and Brian Evans-Mongeon of Braintree. NPCC staff reviewed the audit process and summarized the findings of the audit. After reviewing all the data, Braintree was judged to be compliant with ten of the twenty-five standards, however fifteen of the standards were deemed to be not applicable to Braintree.

Braintree was presented an opportunity to question the audit findings and provide comment on the audit. Braintree representatives reported that the audit process could be improved if the pre-audit questions and the RSAW requirements were more in line with each other. The audit team explained that there is currently an effort to do that exact task. Braintree representatives reported that the audit process was most informative.

Company Profile

The Braintree Electric Light Department (BELD) is a municipal electric utility established in 1892 serving the Town of Braintree, MA. Beginning in 2000, BELD began offering Cable and Internet services to the Town as well and we currently have approximately 5,000 Cable and Internet customers. The day-to-day operations are controlled by our General Manager, William Bottiggi, and the organization is controlled by a 3-member elected Board of Commissioners. BELD has just over 100 employees between the Electric Division and the Broadband Division. The Town of Braintree is located approximately 15 miles south of Boston.

Due to the fact that BELD is a municipal electric utility we are the only electric provider to the Town of Braintree currently serving approximately 15,000 electric customers. The BELD peak load is 93.5MW and it occurred on August 2, 2006 at HE 5:00pm. BELD is a member of ISO New England.

BELD is connected to the NSTAR 115kV transmission system at 2 different locations in town, Station 9 Grove St. and Station 11 Swifts Beach. There are currently (3) 115kV to 13.8kV distribution substations feeding approximately 25 distribution feeders. These 3 distribution substations are Station 4 Plain Street, Station 8 Churchill Station and Station 10 Middle Street. The BELD 115kV transmission system is 9.44 miles in length and is entirely underground. The 13.8kV distribution system has approximately 241 miles of circuit mixed between overhead and underground distribution. Per ISO New England, none of the BELD substations are classified as bulk power system facilities under the Document A-10.

BELD currently owns and operates 2 different generating stations. The first is a 2.25MW diesel fuel unit called Potter Diesel and the second is a 96MW dual-fueled combined cycle unit called Potter 2. The primary fuel for Potter 2 is natural gas with #2 fuel oil as the secondary fuel. BELD plans to convert Potter 2 to run on Ultra Low Sulfur Diesel (ULSD) instead of #2 fuel oil. The Potter Diesel unit is part of the NSTAR system blackstart restoration plan. BELD is also in the planning stages of building a new 116MW simple cycle unit with construction set to begin in April 2008 and completion expected in spring 2009. The new unit, called Thomas A. Watson Station, will consist of (2) 58MW simple cycle Rolls Royce engines also having a primary fuel of natural gas with ULSD as the secondary fuel.

Audit Specifics

The compliance audit was conducted from May 26 to July 9, 2008 at the offices of the NPCC Audit Staff.

Audit Team Role	Title	Company
Lead	Contracted Consultant	NPCC-Compliance Audit Program
Member	Contracted Consultant	NPCC-Compliance Audit Program
Member	Manager Compliance Audit Program	NPCC-Compliance Audit Program

Braintree

Name	Title	[Audited Entity] Organization
Kenneth E. Stone	Energy Services & Accounting Manager	Braintree
Charles Coyne	Production Division Manager	Braintree
John-Erik Nelson	Principal Mechanical Engineer	Braintree
William Bottiggi	General Manager	Braintree

Audit Results

Braintree provided a CD containing data used to demonstrate their compliance with the standards identified in the audit letter from NPCC. When the auditors had additional questions, conference calls were used to request additional documentation until they were convinced that the standards and requirements had been met and Braintree had demonstrated compliance.

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Findings

Reliability Standard	Requirement	Finding
BAL-005-0	R1.	Compliant
CIP-001-1	R1	Compliant
	R2	Compliant
	R3	Compliant
	R4	Compliant
COM-002-2	R1	Compliant
EOP-002-2	R9	Not Applicable
EOP-004-1	R2	Not Applicable
	R3	Not Applicable
EOP-009-0	R1	Compliant
	R2	Compliant
FAC-003-1	R1	Not Applicable
	R2	Not Applicable
	R3	Not Applicable
FAC-008-1	R1	Not Applicable
	R2	Not Applicable
	R3	Not Applicable
FAC-009-1	R1	Not Applicable
	R2	Not Applicable
INT-001-2	R1	Not Applicable
INT-004-1	R1	Not Applicable
	R2	Not Applicable
IRO-001-1	R8	Compliant
IRO-004-1	R4	Compliant
PRC-004-1	R1	Not Applicable
	R2	Not Applicable
	R3	Not Applicable
PRC-005-1	R1	Not Applicable
	R2	Not Applicable
PRC-008-0	R1	Compliant
	R2	Not Applicable
PRC-010-0	R1	Not Applicable
	R2	Not Applicable
PRC-011-0	R1	Not Applicable
	R2	Not Applicable

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Reliability Standard	Requirement	Finding
PRC-016	R1 – R3	Not Applicable
PRC-017	R1 – R3	Not Applicable
PRC-021	R1	Not Applicable
	R2	Not Applicable
TOP-002-2	R3	Compliant
	R13	Compliant
	R14	Compliant
	R15	Compliant
	R18	Compliant
TOP-003-0	R1	Compliant
	R2	Not Applicable
	R3	Not Applicable
VAR-001-1	R5	Not Applicable
VAR-002-1	R1	Compliant
	R2	Compliant
	R3	Not Applicable
	R4	Compliant
	R5	Not Applicable

Compliance Culture

The audit team reviewed the Braintree compliance culture. The regional entity compliance staff may review additional aspects of the Braintree compliance culture. During all contacts with the Braintree staff they acted professionally in their approach to compliance and understood the importance of the compliance and its role in maintaining reliability.