



# **Compliance Audit Report Public Version**

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

**Calpine Corporation (CC)  
NCR 00006  
February 10-26, 2009**

**March 2, 2009**

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## Executive Summary

The Midwest Reliability Organization (MRO) conducted a compliance audit of Calpine Corporation (CC) as a part of its normal six year cycle. Review of documentation submitted by CC took place at the MRO offices on February 16-17, 2009. The team conducted audit conference calls on February 19 and 26, 2009 at the MRO office. The audit team consisted of two MRO staff members.

The North American Electric Reliability Corporation (NERC) has designated a subset of Reliability Standards for active compliance monitoring and reporting by the Regional Entities in their 2009 implementation plan. NERC has identified 49 standards as “actively monitored” which contain 418 requirements.

CC is registered with the MRO as responsible for 1 function. As a result of this registration and for this audit, CC is responsible for meeting compliance with 6 Reliability Standards which contain 11 requirements. CC is found to be in full compliance with all 11 requirements. In July 2008, a special CIP self-certification was conducted for all Registrants.

As a part of the audit process, CC completed an Audit Questionnaire and provided the MRO with supporting documentation for their audit. Upon completion of the initial review of evidence, the audit team requested additional documentation and identified the subject matter experts to be interviewed.

During the conference call, the CC staff was found to be cordial, willing to clarify any questions and, when needed, directed the audit team to the correct supporting documentation. The subject matter experts were open with their responses and were cooperative throughout the process.

## Audit Process

The CC Compliance Audit was conducted as a part of its normal six year cycle. The 2009 Compliance Program consists of 49 actively monitored Standards. 43 of these Standards were deemed not applicable, which are related to functions other than GO. Documentation was viewed from June 18, 2007 to the date of the audit.

The compliance audit process steps are detailed in the NERC Compliance Monitoring and Enforcement Plan (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.<sup>1</sup> The audit objectives are:

- Independently review CC's compliance with the requirements of the reliability standards that are applicable to CC based on CC's registered functions.
- Validate compliance with applicable reliability standards from the NERC 2009 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 standards, and review the status of associated mitigation plans.

### *Scope*

The CC Compliance Audit was conducted as a part of its normal six year cycle. The audit was conducted under the guidelines of the 2009 CMEP. All applicable NERC and MRO standards were reviewed during this audit. The audit team reviewed supporting documentation for the past 18 months.

### *Confidentiality and Conflict of Interest*

Confidentiality agreements and code of conduct documentation for the NERC representative and regional entity staff were available to the audited entity in advance of the audit. Work history and conflict of interest forms submitted by each audit team member were available to the audited entity if requested. 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.

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<sup>1</sup> North American Electric Reliability Corporation CMEP, paragraph 3.1, Compliance Audits

### ***Audit Proceedings***

The MRO presented a high level overview of the compliance audit process.

The auditor code of conduct was reviewed. MRO staff must adhere to confidentiality as required through the NERC Delegation Agreement.

### ***Methodology***

Audit criteria included standards, measures, and expectations based on best practices. The criteria were objective, measurable, complete and relevant to the objectives. The audit team accepted and was not limited to policies, procedures, screen-prints of EMS, copies of operator logs, audio clips, and correspondence. If needed, additional supporting documentation or clarification was requested.

The Audit team used the Reliability Standards Auditor Worksheets (RSAW) to review each reliability standard during the compliance audit. This is done to ensure consistency and fairness during each compliance audit.

### ***Audit Overview***

In January 2008 the MRO scheduled CC to receive a compliance audit November 5-6 as a part of their normal six year cycle. Due to hurricane damage sustained at the Calpine offices, the audit was postponed to February 18-19, 2009. On December 18, 2008 the MRO sent CC the audit package which included *the On-Site Notification, Pre-Audit Survey, Procedures for Conducting an Audit, Subject Matter Experts Spreadsheet, Preparing for Compliance and Compliance Audit* and the *2009 MRO Audit Questionnaire*.

### ***Audit***

Two weeks prior to the audit, CC supplied MRO with approximately 95% of supporting documentation needed to demonstrate compliance. MRO staff reviewed this documentation. The compliance staff utilized the NERC Standards and the RSAW while reviewing the supporting documents and the Audit Questionnaire response provided by CC.

After evaluation of the supporting documentation, a set of questions was developed to be posed to subject matter experts for CC and missing supporting evidence was identified. During the conference call, the team of auditors was able to review the necessary documents and conduct interviews of the subject matter experts. These interviews, in conjunction with supporting evidence, provided the audit team with a basis for professional judgment when validating compliance with reliability standards. Subject matter experts for the following standards were requested to be available: FAC-009 and PRC-005.

All documentation is stored at the MRO office in a fire proof locked cabinet.

***Exit Briefing***

Upon completion of the subject matter expert interviews, the MRO audit team was satisfied with the results of the interviews and documentation provided to find CC in full compliance of the 11 NERC requirements being audited. The MRO then commenced with the exit briefing with CC's approval.

### ***Company Profile***

Calpine is an independent power producer committed to producing clean, efficient, cost-competitive electricity. Our primary business is the generation and sale of electricity and electricity related products and services to wholesale and industrial customers through the operation of our owned and leased power generation assets with approximately 24,000 MW of generating capacity. Because Calpine is committed to providing customers with clean, fuel-efficient, reliable electricity, the company focuses on two key technologies: combined-cycle natural gas fired and geothermal power generation. At December 31, 2007, Calpine owned or leased a portfolio of 60 active, clean burning, natural gas-fired power plants throughout the U.S. and 17 active geothermal power plants in the Geysers region of northern California.

Official name of company:

Calpine Corporation

High level description of structure:

The facilities located within the MRO Region are situated internally within the Calpine Eastern Region. Each facility is led by a Plant/General Manager that reports to a Regional Vice President, Operations. The Regional VP, Operations reports to the Senior Vice President, Operations who in turn reports to the President, Calpine Power Company (CPC). Calpine Corporation performs engineering, operational and maintenance activities at the facilities.

Number of generator interconnect points within MRO:

Riverside Energy Center: American Transmission Co: (3 points): all 138 kV

Rockgen Energy Center: American Transmission Co: 3 points, all 138 kV

Mankato Energy Center: Xcel (NSP): 2 points, 115 kV and 345 kV

Total cap. of company resources and fuel mix: Base: 798 MW Peaking 1386 MW

Riverside Energy Center: 2 CTG, 1 STG combined cycle

Capacity: 518 MW (base) 602 MW (peaking)

Fuel mix: natural gas w/ #2 fuel oil capability

Rockgen Energy Center: 3 unit simple cycle gas turbines

Capacity: 471 (MW)

Fuel mix: natural gas w/ #2 fuel oil capability

Mankato Energy Center: 1 CTG, 1 STG, combined cycle

Capacity: 280 (Base) 324 (Peaking)

Fuel mix: natural gas w/ #2 fuel oil capability

***Audit Specifics***

The compliance audit conference calls were conducted on February 19 and 26, 2009.

**Audit Team**

<b>Audit Team Role</b>	<b>Title</b>	<b>Company</b>
Lead	Compliance Audit Manager	MRO
Member	Compliance Audit Manager	MRO

**CC Audit Participants**

<b>Title</b>	<b>CC Organization</b>
Regional Director, NERC Compliance	Compliance-Calpine Corp
Engineer	Asset Management-Calpine Corp
Operations Manager	Riverside Energy Center
Operations and Maintenance Manager	Mankato Energy Center
General Manager	Rockgen Energy Center
Maintenance Manager	Riverside Energy Center

## Audit Results

- CC provided the audit team with supporting documentation for review prior to the conference call. The team received approximately 95% of the supporting documentation needed for evidence. The audit team spent the two days prior to the conference call reviewing the supplied documentation. As a result of reviewing this evidence, the audit team developed questions for the subject matter experts and a list of additional required documentation.
- CC provided the requested additional documents within the next 5 business days.
- CC personnel were allowed to speak freely without interruption from management during the subject matter expert interviews.
- The audit team utilized the Reliability Standard Auditor Worksheets (RSAW) in order to assess compliance of the reliability standards. The primary questions of the subject matters were documented in addition to the requests for additional evidence..

*Findings*

## Compliance Audit

Conducted On: **Feb 10-26, 2009**

Entity: **Calpine Corporation (CC)**

Address: **717 Texas Ave, Houston, Texas 77002, United States**

NERC Compliance Registry ID: **NCR00006**

<b>Standard Requirement</b>	<b>Compliant</b>
FAC-008-1 R1	Yes
FAC-008-1 R2	Yes
FAC-008-1 R3	Yes
FAC-009-1 R1	Yes
FAC-009-1 R2	Yes
IRO-004-1 R4	Yes
PRC-004-1 R2	Yes
PRC-004-1 R3	Yes
PRC-005-1 R1	Yes
PRC-005-1 R2	Yes
PRC-017-0 R1	Yes

### *Compliance Culture*

Calpine Corporation completed the Internal Compliance Program Survey prior to the compliance audit.