

169 FERC ¶ 61,092
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Richard Glick and Bernard L. McNamee.

Calpine Corporation

Docket No. IN17-1-000

ORDER APPROVING STIPULATION AND CONSENT
AGREEMENT

(Issued November 1, 2019)

1. The Commission approves the attached Stipulation and Consent Agreement (Agreement) between the Office of Enforcement (Enforcement), Texas Reliability Entity, Inc. (Texas RE), North American Electric Reliability Corporation (NERC), and Calpine Corporation (Calpine) (collectively, the Parties). This order is in the public interest because it resolves on fair and equitable terms Enforcement's investigation under Part 1b of the Commission's regulations, 18 C.F.R. Part 1b (2019), into whether Calpine violated the Reliability Standard for protection systems maintenance and testing, PRC-005-1 R2, as well as California Independent System Operator Tariff (CAISO), section 9.3.10.3.1, relating to forced outages.¹

2. Calpine agrees to pay a civil penalty of \$375,000 to Texas RE, a civil penalty of \$25,000 to the United States Treasury, and to be subject to compliance monitoring as provided in the Agreement. Calpine stipulates to the facts set forth in Section II of the Agreement, but neither admits nor denies the alleged violations.

I. Facts

3. Calpine is a private power generation company, incorporated in Delaware, and with its principal place of business in Houston, Texas. Calpine maintains or has under construction a fleet of 80 power plants, representing nearly 26,000 MWs of generation capacity. Calpine's combined operations serve customers throughout North America. In the United States, Calpine's operations are located in 23 states, with a significant presence in Texas, California, and the Mid-Atlantic. Among the plants relevant to this Investigation is the Gilroy Energy Center (Gilroy), an approximately 141 MW peaking

¹ Reliability Standard PRC-005-1 (Transmission and Generation Protection System Maintenance and Testing), at Requirement R2; CAISO, CAISO OATT, § 9.3.10.3.1, Forced Outages.

facility comprised of three natural gas-fired, simple cycle combustion turbines located in Gilroy, California.

4. Following a call on its internal compliance hotline concerning, among other things, the failure to report outages at its Gilroy plant, Calpine initiated an internal investigation. In addition to the alleged Tariff violations, Calpine identified possible violations of PRC-005-1 R2. On April 9, 2015, Calpine self-reported to the Western Electric Coordinating Council, Inc. (WECC) 10 violations of PRC-005-1 R2 at Gilroy. Subsequently, on June 16, 2015, Calpine self-reported to Enforcement two violations of CAISO Tariff section 9.3.10, and also notified Enforcement of the same violations it previously self-reported to WECC. Calpine broadened its internal investigation of PRC-005-1 R2 compliance, eventually initiating a fleet-wide investigation. Thereafter, on December 29, 2015, Calpine self-reported to Texas RE nearly 200 additional instances of a PRC-005-1 R2 violation.

5. Following a joint investigation with Texas RE, Enforcement concluded there were 215 total instances of noncompliance during the period from December 29, 2012 to December 26, 2015, which represents approximately three percent of the more than 5,400 records examined. Of these, 10 occurred in WECC, six occurred in the Midwest Reliability Organization, Inc. (MRO), and 199 occurred in Texas RE.² These instances of noncompliance with PRC-005-1 R2 involved monthly, quarterly, annual and/or periodic tests for thirty-six batteries at eight generating plants in 205 instances.

6. Among other things, Enforcement focused its investigation on whether Calpine centrally directed falsified record keeping across its fleet. After examining the evidence, Enforcement concluded that the falsified record keeping was the result of individual circumstances at each plant.

7. Enforcement also concluded that Calpine twice violated CAISO Tariff section:

9.3.10.3.1 by failing to report forced outages to its Scheduling Coordinator in CAISO. Reporting outages, both planned and unplanned, is important to the proper functioning of the market. Among other things, proper outage reporting enables CAISO to maintain system reliability, and allows CAISO to maximize schedule feasibility relative to congestion and demand. It also allows market participants to plan effectively to operate their resources.

² Because the 10 initial instances Calpine self-reported relating to Gilroy were adjudicated by the North American Electric Reliability Corporation (NERC) and posted as a Compliance Exception on January 28, 2016 (WECC2015014850), they are not part of the Agreement.

8. Enforcement credited Calpine for filing self-reports.
9. Calpine cooperated fully with Enforcement during the Investigation.
10. Calpine has had a prior violation of PRC-005-1 R2. However, that violation was different in nature from the instant conduct and does not contribute towards the penalty amount.

II. Violations

11. Enforcement, NERC, and Texas RE determined that Calpine violated PRC-005-1 R2. From December 29, 2012 to December 26, 2015, Calpine either failed to perform a battery test, failed to retain testing records, or created falsified testing records 215 times.³ Of the 215 instances, 206 were self-reported, and the remaining nine were identified during the investigation. Further, Enforcement concludes that of the 215 instances, 79 were falsified. Calpine did not have testing records for the remaining 136 testing instances.

12. Enforcement determined that Calpine violated CAISO Tariff section 9.3.10.3.1 on October 28, 2013 and February 2, 2015. In both instances, Calpine was aware that Gilroy was unable to run and did not report an outage CAISO Scheduling Coordinator.

III. Stipulation and Consent Agreement

13. The Parties have resolved the Investigation by means of the attached Agreement.

14. Calpine stipulates to the facts set forth in Section II of the Agreement, but neither admits nor denies the alleged violations set forth in Section III of the Agreement.

15. Calpine agrees to pay a civil penalty of \$375,000 to Texas RE, and a civil penalty of \$25,000 to the United States Treasury.

16. Calpine agrees to submit two annual compliance monitoring reports, in accordance with the terms of the Agreement, with a third annual report at Enforcement's option.

17. Calpine agrees to the terms of the Mitigation Plan attached as Appendix I to the Agreement.

³ Because NERC posted the initial 10 instances as a Compliance Exception, they do not contribute to the penalties in the Agreement. However, they are included here to accurately reflect the number of instances of a violation that occurred during this period.

IV. Determination of Appropriate Sanctions and Remedies

18. In recommending the appropriate remedy, Enforcement considered the factors described in the Revised Policy Statement on Penalty Guidelines,⁴ including the fact that Calpine cooperated with Enforcement during the Investigation.

19. The Commission concludes that the Agreement is a fair and equitable resolution of the matters concerned and is in the public interest, as it reflects the nature and seriousness of the conduct and recognizes the specific considerations stated above and in the Agreement.

20. The Commission also concludes that Calpine's civil penalty is consistent with the Revised Policy Statement on Penalty Guidelines.⁵

21. The Commission directs Calpine to make the civil penalty payments as required by the Agreement within ten days of the Effective Date of the Agreement.

The Commission orders:

The attached Stipulation and Consent Agreement is hereby approved without modification.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

⁴ *Enforcement of Statutes, Orders, Rules and Regulations*, 132 FERC ¶ 61,216 (2010).

⁵ *Id.* at P 182 n.259

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Calpine Corporation

Docket No. IN17-1-000

STIPULATION AND CONSENT AGREEMENT

I. INTRODUCTION

1. The Office of Enforcement (Enforcement) of the Federal Energy Regulatory Commission (Commission), the North American Electric Reliability Corporation (NERC), Texas Reliability Entity, Inc. (Texas RE) and Calpine Corporation (Calpine, collectively, the Parties) enter into this Stipulation and Consent Agreement (Agreement) to resolve a non-public, formal investigation (Investigation). Enforcement is conducting the Investigation pursuant to Part 1b of the Commission's regulations, 18 C.F.R. Part 1b (2019). The Investigation concerns Calpine's compliance with Reliability Standard PRC-005-1 R2, which among other things contains certain battery testing requirements, and whether Calpine violated the California Independent System Operator Corporation Tariff (CAISO, Tariff) section 9.3.10.3.1, relating to forced outages.

2. Calpine stipulates to the facts in Section II, but neither admits nor denies the alleged violations in Section III. Calpine agrees to: (a) pay a civil penalty to Texas RE of \$375,000; (b) pay a civil penalty of \$25,000 to the United States Treasury; and (c) perform the compliance and mitigation activities, and be subject to compliance monitoring, as provided in Section IV.

II. STIPULATIONS

Enforcement, NERC, Texas RE and Calpine stipulate and agree to the following facts.

3. Calpine is a private power generation company, incorporated in Delaware, and with its principal place of business in Houston, Texas. Calpine maintains or has under construction a fleet of 80 power plants, representing nearly 26,000 MWs of generation capacity. Calpine's combined operations serve customers throughout North America. In the United States, Calpine's operations are located in 23 states, with a significant presence in Texas, California, and the Mid-Atlantic. One of its generation facilities relevant to the Investigation is the Gilroy Energy Center (Gilroy), an approximately 141 MW peaking facility comprised of three natural gas-fired, simple cycle combustion turbines located in Gilroy, California.

4. On February 6, 2015, a Calpine employee submitted a complaint through Calpine's internal compliance hotline alleging that the Operations and Maintenance (O&M) Manager for Gilroy had engaged in various kinds of improper behavior. Among other things, the complaint alleged that the manager failed to report certain outages and that the manager ordered certain employees to falsify missing battery testing records.

Within hours of receiving the hotline call, Calpine elevated the matter to senior management, including Calpine's Chief Legal Officer, Chief Compliance Officer, Chief Administrative Officer and Chief Financial Officer. Calpine promptly opened an internal investigation and, after gathering the necessary facts, moved expeditiously to address the matter by terminating the manager's employment and taking other corrective actions.

5. PRC-005-1 R2 is a NERC Reliability Standard that governs maintenance and testing of certain Protection systems, including certain batteries. The Parties agree that PRC-005-1 R2 applies to the batteries at issue. However, PRC-005-1 R2 has undergone multiple revisions over time, with varying phase-in dates, such that multiple versions simultaneously regulate testing until the end of the phase-in period. As a result, the instances of noncompliance occurred under different versions of the standard. However, the Parties agree that none of the differences between versions are material for purposes of resolving this matter. For ease of reference, the Agreement therefore refers to all applicable versions of the standard as PRC-005-1 R2.

6. On April 9, 2015, Calpine self-reported to the Western Electric Coordinating Council, Inc. (WECC) 10 violations of PRC-005-1 R2 at Gilroy. On June 16, 2015, Calpine self-reported two violations of CAISO Tariff section 9.3.10, and also notified Enforcement of the same violations it previously self-reported to WECC, which were identified in the same internal investigation. Calpine also broadened its internal investigation of PRC-005-1 R2 compliance to a facility in Texas, and upon finding additional instances of noncompliance there, initiated a fleet-wide investigation into PRC-005-1 R2 compliance. Thereafter, on December 29, 2015, Calpine self-reported the results of its internal investigation, in which it reviewed more than 5,400 records and identified nearly 200 additional instances of a PRC-005-1 R2 violation, to Texas RE.¹

7. On August 2, 2016, Enforcement opened a preliminary, non-public investigation. On October 27, 2016, the Commission converted this matter to a formal, nonpublic

¹ Calpine participates in the Multi-Region Registered Entity (MRRE) Coordinated Oversight Program (Program). The ERO Enterprise developed the Program to increase efficiencies in resource allocation for registered entities while maintaining the reliability of the Bulk Power System. Specifically, the Program is designed to eliminate unnecessary duplication of compliance monitoring and enforcement activities. The Program coordinates the compliance and enforcement activities for a MRRE between the Lead Regional Entity (LRE) and the Affected Regional Entities (AREs). Calpine joined the Program on August 21, 2015. As it relates to this violation, Texas RE is the LRE, and MRO is the ARE. As such, Texas RE coordinated the disposition of this violation with MRO. This Agreement resolves the violation under the corresponding Texas RE Violation ID TRE2015015440.

investigation.² Enforcement sent data requests to Calpine and CAISO, interviewed or took investigative testimony from current and former Calpine employees, and reviewed materials Calpine provided both in response to data requests and on its own.

8. Throughout the Investigation, Enforcement worked extensively with Texas RE to verify Calpine's self-reported instances of a PRC-005-1 R2 violation. Texas RE invested significant resources in the Investigation, working to identify the applicable facilities and in scope devices for PRC-005-1 R2. Texas RE also validated the evidence Calpine provided, and worked with Calpine to identify any additional instances of noncompliance with PRC-005-1 R2.

9. With regard to PRC-005-01 R2, Enforcement concluded there were 215 total instances of noncompliance during the period from December 29, 2012 to December 26, 2015, which represents approximately three percent of the more than 5,400 records examined. Of these, 10 occurred in WECC, six occurred in the Midwest Reliability Organization, Inc. (MRO), and 199 occurred in Texas RE.³ These instances of noncompliance involved monthly, quarterly, annual and/or periodic tests for thirty-six batteries at eight generating plants in 205 instances.

10. With regard to CAISO Tariff section 9.3.10.3.1, Enforcement did not find evidence to support additional violations beyond the two Calpine self-reported. The first violation occurred on October 28, 2013. The second occurred on February 2, 2015. Enforcement notes that in both instances, CAISO called on the Gilroy unit to run, and only then did Calpine declare the unit unavailable. Failing to report a unit's unavailability can present several problems. Among other things, proper outage reporting enables CAISO to maintain system reliability, and allows CAISO to maximize schedule feasibility relative to congestion and demand. It also allows market participants to plan effectively to operate their resources.

11. Calpine voluntarily undertook a fleet-wide review of battery maintenance compliance, collecting records for more than 6,000 battery tests. Using both its internal audit team and independent contractors, Calpine identified battery tests for which testing records could not be found, and reviewed each existing record in a concerted effort to detect additional instances of record falsification. Among other things, Calpine examined the records for indicia of falsification, including duplicate data, suspicious similarities,

² *Calpine Corporation*, Order of Non-Public, Formal Investigation, Docket No. IN17-1-000 (issued Oct. 27, 2016).

³ Because the 10 initial instances Calpine self-reported relating to Gilroy were adjudicated by the North American Electric Reliability Corporation (NERC) and posted as a Compliance Exception on January 28, 2016 (WECC2015014850), they are not part of this Agreement.

and unsigned records.

12. A central focus of Enforcement's Investigation was whether Calpine centrally directed falsified record keeping across its fleet. Enforcement concludes that this was not the case. Rather, the falsified record keeping was the result of individual circumstances at each plant. In connection with its fleet-wide review of PRC-005-1 R2 compliance, Calpine took adverse employment actions against 10 additional employees.

13. Calpine provided Enforcement with detailed information concerning its compliance program, including the resources it invests and its efforts to promote a culture of compliance. Calpine invested significant resources into PRC-005-1 R2 compliance and significantly modified its Protection System Maintenance Program (PSMP) to improve its review and oversight of maintenance and testing. Calpine updated its asset management software to standardize inspections, testing, and corrective maintenance across its generation fleet. Calpine now outsources a significant amount of its battery testing to independent contractors. Calpine also incorporated battery testing into its internal compliance audit process.

14. Enforcement credited Calpine for filing self-reports.

15. Calpine cooperated fully with Enforcement during the Investigation.

16. Calpine has had a prior violation of PRC-005-1 R2. However, that violation was not similar to the current violation and was not factored into the penalty.

17. There were no other mitigating or aggravating factors or extenuating circumstances that would affect the assessed penalty amount.

III. VIOLATIONS

18. Enforcement, NERC, and Texas RE determined that Calpine violated PRC-005-1 R2. From December 29, 2012 to December 26, 2015, Calpine either failed to perform a battery test, failed to retain testing records, or created falsified testing records 215 times.⁴ Of the 215 instances, 206 were self-reported, and the remaining nine were identified during the Investigation. Further, Enforcement concludes that of the 215 instances, 79 were falsified. The 79 falsified instances represent less than one percent of the battery testing records fleet wide. Calpine did not have testing records for the remaining 136

⁴ As noted above, NERC posted the initial 10 instances as a Compliance Exception; they do not contribute to the penalty and are otherwise not part of this Agreement. However, they are included in these figures in order to accurately reflect the number of instances of a violation that occurred during the relevant period.

testing instances. The testing intervals involved in the 215 instances break down as follows: 60 monthly tests, 119 quarterly tests, 27 annual tests, and nine periodic (5-year) tests.

19. Enforcement determined that Calpine violated CAISO Tariff section 9.3.10.3.1 on October 28, 2013 and February 2, 2015.⁵ In both instances, certain Calpine employees at Gilroy were fully aware that Gilroy was unable to run but did not report an outage.

IV. REMEDIES AND SANCTIONS

20. For purposes of settling all claims, civil and administrative disputes and proceedings arising from or related to its conduct evaluated in Enforcement's Investigation, Calpine agrees with the facts as stipulated in Section II, but it neither admits nor denies the violations described in Section III. Calpine further agrees to undertake obligations set forth in the following paragraphs.

A. Civil Penalty

21. Calpine must pay a civil penalty of \$375,000 to Texas RE. Texas RE will divide that penalty amount in two parts based on the relative net-energy-for-load (NEL)⁶ for Texas RE and MRO. Texas RE will present an invoice to Calpine within 20 days of the Effective Date. Upon receipt, Calpine will pay within 30 days. Texas RE must notify Enforcement and NERC if it does not timely receive the payment.

22. Calpine must pay a civil penalty of \$25,000 to the United States Treasury by wire transfer within ten days of the Effective Date.

B. Disgorgement

23. Enforcement determined that Calpine was not unjustly enriched by its conduct, so disgorgement is unnecessary.

C. Mitigation and Compliance Reporting

⁵ Different versions of CAISO Tariff section 9.3.10.3.1 were in effect for each of the violations. However, the changes are immaterial to this Agreement.

⁶ NERC publishes net-energy-for-load (NEL) in its annual business plan and budget, and uses it as a method to prorate fee assessments. The calculation used for this Agreement is based on the NERC 2017 budget, which indicates the following NEL values in the ERO: Texas RE 9.124%, and MRO 11.098%. For the purposes of penalty calculation in this Agreement, the NEL values correspond to weighted penalties of 45.119% to Texas RE and 54.881% to MRO.

1. Mitigation

24. The Parties separately negotiated a mitigation plan addressing compliance with PRC-005-1 R2 (Mitigation Plan). The Mitigation Plan is attached as Appendix I and is hereby incorporated into this Agreement, and all Parties agree to its terms. No additional mitigation is required.

2. Compliance Reporting

25. Calpine must submit annual compliance monitoring reports (Compliance Report(s)) to Enforcement, Texas RE and NERC. Calpine must submit Compliance Reports for two years, with an optional third year at Enforcement's sole discretion. The Compliance Reports must be submitted within 30 days of each successive anniversary of the Effective Date.

26. Each Compliance Report must identify any known violations of PRC-005-1 R2, forced outage reporting requirements in the applicable tariff, or Commission regulations relating to either, that occurred during the period. For each violation or instance of noncompliance, the Compliance Report must include a description of: (1) the nature of the violation and what steps were taken to rectify the situation; (2) all related compliance measures and procedures that Calpine instituted or modified; and (3) all related compliance training that Calpine administered, including the dates it occurred, the topics covered, and the procedures used to confirm which personnel attended.

27. Each Compliance Report must include an affidavit executed by an officer of Calpine stating that it is true and accurate to the best of his/her knowledge.

28. Upon request by Enforcement, Texas RE or NERC, Calpine must provide documentation supporting the contents of its Compliance Reports.

V. TERMS

29. The "Effective Date" of this Agreement shall be the date on which the Commission issues an order approving this Agreement without material modification. When effective, this Agreement shall resolve the matters specifically addressed herein that arose on or before the Effective Date as to Calpine and any affiliated entity, and their respective agents, officers, directors, or employees, both past and present.

30. Commission approval of this Agreement without material modification releases Calpine and forever bars the Commission, Texas RE and NERC from holding Calpine,

any affiliated entity, any successor in interest, and their respective agents, officers, directors, or employees, both past and present, liable for all administrative or civil claims arising out of the conduct addressed and stipulated to in this Agreement, which occurred on or before the Agreement's Effective Date.

31. Failure by Calpine to make civil penalty payments, or to comply with the compliance reporting obligations agreed to herein, or any other provision of this Agreement, shall be deemed a violation of a final order of the Commission issued pursuant to the Federal Power Act (FPA), 16 U.S.C. §792, *et seq.*, and may subject Calpine to additional action under the enforcement provisions of the FPA.

32. If Calpine does not make the required civil penalty payments described above within the times agreed by the parties, interest shall begin to accrue at the rates specified at 18 C.F.R. § 35.19a(a)(2)(iii) from the date that payment is due, in addition to any other enforcement action and penalty that the Commission may take or impose.

33. This Agreement binds Calpine and its agents, successors, and assignees. This Agreement does not create any additional or independent obligations on Calpine, or any affiliated entity, its agents, officers, directors, or employees, other than the obligations identified in this Agreement.

34. The signatories to this Agreement agree that they enter into the Agreement voluntarily and that, other than the recitations set forth herein, no tender, offer or promise of any kind by any member, employee, officer, director, agent or representative of Enforcement, Texas RE, NERC or Calpine has been made to induce the signatories or any other party to enter into the Agreement.

35. Unless the Commission issues an order approving the Agreement in its entirety and without material modification, the Agreement shall be null and void and of no effect, and neither Enforcement, Texas RE, NERC nor Calpine shall be bound by any provision or term of the Agreement, unless otherwise agreed to in writing by Enforcement, NERC, Texas RE and Calpine.

36. In connection with the civil penalties, Calpine agrees that the Commission's order approving the Agreement without material modification is a final and unappealable order assessing a civil penalty under section 316A(b) of the FPA, 16 U.S.C. § 825o-1(b). Calpine waives findings of fact and conclusions of law, rehearing of any Commission order approving the Agreement without material modification, and judicial review by any court of any Commission order approving the Agreement without material modification.

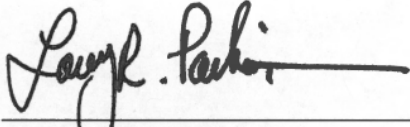
37. This Agreement can be modified only if in writing and signed by Enforcement, Texas RE, NERC, and Calpine, and any modifications will not be effective unless approved by the Commission.

38. Each of the undersigned warrants that he or she is an authorized representative of the entity designated, is authorized to bind such entity, and accepts the Agreement on the entity's behalf.

39. The undersigned representative of Calpine affirms that he or she has read the Agreement, that all of the matters set forth in the Agreement are true and correct to the best of his or her knowledge, information and belief, and that he or she understands that the Agreement is entered into by Enforcement, Texas RE, and NERC in express reliance on those representations.

40. This Agreement may be executed in counterparts, each of which so executed shall be deemed to be an original.

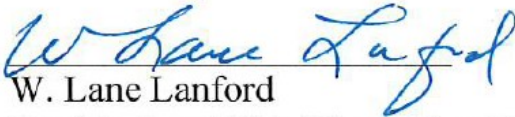
Agreed to and accepted: October 21, 2019



Larry Parkinson
Director, Office of Enforcement
Federal Energy Regulatory Commission



Sonia Mendonca
Vice President, Interim General Counsel,
Corporate Secretary, and Director of Enforcement
North American Electric Reliability Corporation



W. Lane Lanford
President and Chief Executive Officer
Texas Reliability Entity, Inc.



W. Thaddeus Miller
Executive Vice Chairman and Chief Legal Officer
Calpine Corporation

APPENDIX I

Mitigation Plan

Mitigation Plan Summary

Registered Entity: Calpine Corporation

Mitigation Plan Code:

Mitigation Plan Version: 1

<u>NERC Violation ID</u>	<u>Requirement</u>	<u>Violation Validation On</u>
TRE2015015440	PRC-005-1b R2.	04/27/2016

Mitigation Plan Submitted On:

Mitigation Plan Accepted On:

Mitigation Plan Proposed Completion Date: **August 6, 2019**

Actual Completion Date of Mitigation Plan:

Mitigation Plan Certified Complete by CPN On:

Mitigation Plan Completion Verified by TRE On:

Mitigation Plan Completed? (Yes/No): **No**

Compliance Notices

Section 6.2 of the NERC CMEP sets forth the information that must be included in a Mitigation Plan. The Mitigation Plan must include:

- (1) The Registered Entity's point of contact for the Mitigation Plan, who shall be a person (i) responsible for filing the Mitigation Plan, (ii) technically knowledgeable regarding the Mitigation Plan, and (iii) authorized and competent to respond to questions regarding the status of the Mitigation Plan. This person may be the Registered Entity's point of contact described in Section B.
 - (2) The Alleged or Confirmed Violation(s) of Reliability Standard(s) the Mitigation Plan will correct.
 - (3) The cause of the Alleged or Confirmed Violation(s).
 - (4) The Registered Entity's action plan to correct the Alleged or Confirmed Violation(s).
 - (5) The Registered Entity's action plan to prevent recurrence of the Alleged or Confirmed violation(s).
 - (6) The anticipated impact of the Mitigation Plan on the bulk power system reliability and an action plan to mitigate any increased risk to the reliability of the bulk power-system while the Mitigation Plan is being implemented.
 - (7) A timetable for completion of the Mitigation Plan including the completion date by which the Mitigation Plan will be fully implemented and the Alleged or Confirmed Violation(s) corrected.
 - (8) Implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined or recommended to the applicable governmental authorities for not completing work associated with accepted milestones.
 - (9) Any other information deemed necessary or appropriate.
 - (10) The Mitigation Plan shall be signed by an officer, employee, attorney or other authorized representative of the Registered Entity, which if applicable, shall be the person that signed the Self Certification or Self Reporting submittals.
 - (11) This submittal form may be used to provide a required Mitigation Plan for review and approval by regional entity(ies) and NERC.
- The Mitigation Plan shall be submitted to the regional entity(ies) and NERC as confidential information in accordance with Section 1500 of the NERC Rules of Procedure.
 - This Mitigation Plan form may be used to address one or more related alleged or confirmed violations of one Reliability Standard. A separate mitigation plan is required to address alleged or confirmed violations with respect to each additional Reliability Standard, as applicable.
 - If the Mitigation Plan is accepted by regional entity(ies) and approved by NERC, a copy of this Mitigation Plan will be provided to the Federal Energy Regulatory Commission or filed with the applicable governmental authorities for approval in Canada.
 - Regional Entity(ies) or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.
 - Remedial action directives also may be issued as necessary to ensure reliability of the bulk powersystem.
 - The user has read and accepts the conditions set forth in these Compliance Notices.

Entity Information

Identify your organization:

Entity Name: **Calpine Corporation**

NERC Compliance Registry ID: **NCR00006**
Address: **717 Texas Ave, Ste. 1000
Houston TX 77002**

Identify the individual in your organization who will serve as the Contact to the Regional Entity regarding this Mitigation Plan. This person shall be technically knowledgeable regarding this Mitigation Plan and authorized to respond to Regional Entity regarding this Mitigation Plan:

Name: **Calpine Corporation**
Title: **Phillip Porter**
Email: **Phillip.Porter@calpine.com**
Phone: **925-557-2274**

Violation(s)

This Mitigation Plan is associated with the following violation(s) of the reliability standard listed below:

Violation ID	Date of Violation	Requirement
Requirement Description		
TRE2015015440	12/29/2012	PRC-005-1b R2.
Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall provide documentation of its Protection System maintenance and testing program and the implementation of that program to its Regional Reliability Organization on request (within 30 calendar days). The documentation of the program implementation shall include:		

Brief summary including the cause of the violation(s) and mechanism in which it was identified:

Calpine Corporation maintains a comprehensive Protection System Maintenance Program (PSMP) that includes extensive battery inspection and testing requirements, with monthly, quarterly, annual, and periodic battery bank capacity testing performed in accordance with IEEE battery inspection standards.

During a spot check of battery inspection and testing records at the Baytown Energy Center conducted by the company’s Internal Audit staff the week of August 3, 2015, auditors identified indications of discrepancies in quarterly battery report records. These discrepancies were reviewed and confirmed by the Plant Manager. Upon notification of the discrepancies, Regulatory Compliance immediately began a detailed investigation of site protection system inspections and testing documentation. That review determined that some site battery inspection records had been falsified by personnel charged with performing the inspections.

Based on that determination, Regulatory Compliance, with the assistance of the company’s Internal Audit staff, initiated an extensive fleet-wide review of in scope battery inspections and testing records including all plants in the Texas Reliability Entity’s footprint. Exceptions are discussed in footnote 1.1 Calpine notified Texas Reliability Entity (TRE) of the initial findings and began an extensive investigation of PRC-005 records. For each site included in the review, every battery inspection and testing record dating from last NERC Regional Entity audit to September 2015 was reviewed for compliance with Calpine’s PSMP.1 The company’s extensive investigation of battery inspection and testing records has determined that, for three of the company generation sites, a number of battery inspection records had been falsified by site personnel, and that for additional sites, some company-required battery bank inspections had not been performed as required by the company’s PSMP. Specific findings are listed below by type of inspection.

Monthly Battery Inspection Review Findings: 98.3% completion

Of 3946 monthly scheduled battery inspections, a total of 66 monthly inspections did not meet Calpine’s program requirements. No documentation was available for 18 monthly scheduled inspections at the Magic Valley generation facility, for 12 scheduled monthly inspections at the Hidalgo generation facility, and for 36 scheduled monthly inspections at the Channel generation facility.

Review of site routine daily/weekly Operator rounds (which also include battery inspections) found that that a significant portion of the required monthly inspection items had been separately documented in those daily or weekly routine Operator rounds. A total of 3880 out of 3946, or 98.3% of monthly inspection activities reviewed had been completed in compliance with Calpine’s maintenance program.

Quarterly Battery Inspections: 91.5% completion

The company’s internal review determined that for three sites, battery inspection data had been falsified. A total of 6 quarterly battery inspections at the Rockgen generation site, 9 at Baytown, and 33 at Brazos Valley had been completed without actually performing the required maintenance.2 Additionally, 11 quarterly battery inspections at Channel, 27 at Hidalgo and 12 at Magic Valley, could not be located or verified. 14 quarterly battery inspections at Bosque and 3 at Corpus Christie had been completed, but were missing some information. A total of 1233 out of 1348, or 91.5% of quarterly battery inspection activities reviewed were completed fully and accurately.

Annual Battery Inspections: 94.9% completion

A total of 2 annual battery maintenance activities at Brazos Valley had been completed without actually performing the work.² In addition, documentation was not available for 5 annual battery maintenance activities at Channel, 6 annual inspections at Hidalgo and 2 annual inspections at Magic Valley. A total of 279 out of 294, or 94.9% of the annual battery maintenance documentation reviewed were completed correctly.

Periodic Battery Performance Inspections: 100% completion

Periodic capacity testing at all Calpine plant locations was completed in accordance with Calpine's maintenance and testing program.

The company has taken disciplinary actions up to and including employee termination in conformance with the company's Progressive Discipline Policy. The company has also implemented corrective actions including retraining personnel and implementing formal site review of all completed PRC-005 inspection and testing. In addition, the company has developed and is nearly complete with full implementation of significant improvements to the company's Maximo Computerized Maintenance Management System (CMMS). Changes address CMMS records for all PRC-005 required inspection and testing. This CMMS work has been completed.

Note 1: The company's fleet in the Reliability First region and the NPCC region underwent separate scheduled Regional Entity audits in 2015 that included PRC-005 compliance. The company's geothermal Geysers facility, which underwent separate on-site review by Compliance personnel, was audited by the Regional Entity in 2014, and which sustained major damage due to wild fires in 2015, was not included in the review.

Note 2: The company's investigation determined that documentation of quarterly battery maintenance activities at the Baytown, Brazos Valley, and Rockgen facilities, and annual battery maintenance at Brazos Valley was falsified by personnel assigned to complete the tasks.

Relevant information regarding the identification of the violation(s):

The deficiencies addressed in this Mitigation Plan were identified internally and have been intensively investigated by company compliance personnel. The review has identified areas for improvement, and the company has actively worked to implement the changes listed in the mitigation section of this report to address those deficiencies. Calpine's PSMP, which already included a rigorous testing schedule and activities that significantly exceed current NERC inspection and testing requirements, has been modified to improve internal inspection review of all completed work. Calpine's testing schedule adheres to IEEE standards and includes monthly, quarterly, and annual sections and testing, as well as periodic load testing. Operating personnel conduct battery inspections as part of their routine rounds. In addition, the fully-manned facilities include real-time alarming to the manned control rooms.

Plan Details

Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the violation(s) identified above in Section C.1 of this form:

- 1. Complete monthly, quarterly, annual battery maintenance activities for any missed activities to ensure that battery maintenance activities are up to date.**
- 2. Revise Calpine's fleet-wide PSMP to clarify inspection and testing requirements and explicitly mandate internal review of all completed inspections at each generating facility; at least one level of documented formal review will be required.**
- 3. Revise Calpine's Maximo CMMS to implement improved preventive maintenance records developed by Regulatory Compliance for all PRC-005 required inspections, testing, and corrective maintenance. These changes will standardize CMMS activities across the fleet and provide additional review capability including providing standard templates and job plans. The standardized templates will be required at Calpine plants. CMMS will be used so that maintenance staff can check to see what jobs are assigned to them. Calpine further agrees to implement a technical control to require management approval before completed job tasks regarding PRC-005 can be finalized in Maximo CMMS.**
- 4. Develop a detailed set of video instructions that specifically address implementation of improvements in the Maximo CMMS configuration for PRC-005 required maintenance. The program will include detailed instructions for implementing PRC-005 job plans and preventive maintenance (PM) records.**
- 5. Calpine non-geothermal plants will contract with an independent contractor, who is familiar with industry standards and recommended best practices, to complete all future required quarterly and annual battery performance activities. Calpine agrees to implement a process that requires that PRC-005 related work of independent contractors will be reviewed and approved by the applicable Facility manager to ensure that maintenance activities are in accordance with PRC-005 requirements.**
- 6. Implement a Progressive Discipline Policy for issues related to falsified, inaccurate and missing inspection records; employees involved with the falsified testing documentation and some of the missing documentation will be terminated or reprimanded.**
- 7. Calpine will complete an internal spot check of compliance with PRC-005 on the majority of the Calpine generation fleet. However, the scope of the review initially will not include certain generation facilities within the NPCC region. Calpine agrees to conduct an internal review of the battery maintenance records at the applicable NPCC generating facilities that were not included in the 2014 or 2015 NPCC compliance audits. Calpine will determine whether the periodic maintenance activities records at these facilities were in compliance with NERC Reliability Standards, missing, or falsified. If Calpine finds that records at these facilities were not in compliance with NERC Reliability Standards or falsified, Calpine will inform Enforcement and NERC. To the extent Calpine has not already done so, Calpine will perform all required maintenance activities and ensure that all battery maintenance records are current for the applicable NPCC generating facilities.**
- 8. Calpine will develop and implement automated periodic reports that will be sent to Calpine's Regulatory Compliance team. The reports will provide the compliance team with a list of pending work orders and associated deadlines.**
- 9. Calpine will perform annual compliance reviews at the Corporate Compliance level of the individual generating facilities' compliance with PRC-005. Annually, Calpine's Corporate Compliance group will**

sample maintenance activities records from across its fleet of facilities to ensure that records are completed and not falsified.

10. Calpine will provide semi-annual compliance training to Calpine personnel to emphasize the importance of compliance with NERC Reliability Standards, the importance of following procedures, and the consequences of falsifying records.

11. Calpine will amend its Code of Conduct to explicitly state that employees are prohibited from falsifying documentation and may result in termination of employment.

Provide the timetable for completion of the Mitigation Plan, including the completion date by which the Mitigation Plan will be fully implemented and the violations associated with this Mitigation Plan are corrected:

Proposed Completion date of Mitigation Plan: **August 06, 2019**

Milestone Activities, with completion dates, that your organization is proposing for this Mitigation Plan:

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date	Entity Comment on Milestone Completion	Extension Request Pending
Complete all missed battery maintenance activities	1. Complete monthly, quarterly, annual and periodic battery maintenance activities for any missed activities to ensure that battery maintenance activities are up to date.	12/31/2015	12/31/2015	All milestone activities were completed, and completion verified, as of 12/31/2015. Please refer to evidence provided in response to TRTE2015015440 Texas RE Request for Information to Calpine Corporation Questions NOS. 1.1 through 1.45 dated 02/01/2016: Please see Calpine response to item 1.36 "Please confirm that Calpine has completed monthly, quarterly, and annual battery maintenance activates and testing for all devices referenced in or related to Calpine's December 29, 2015 Self Report: sub-item "c" "Please provide the results of all testing conducted as part of this process, including an indication of whether each device in question performed according to relevant specifications". (Refer to Calpine's Attachment 1.36.c.to the Texas RE RFI).	No

<p>Develop video instructions that address implementation of improvements in the Maximo CMMS configuration</p>	<p>2. Develop a detailed set of video instructions that specifically address implementation of improvements in the Maximo CMMS configuration for PRC-005 required maintenance. The program will include detailed instructions for implementing PRC-005 job plans and preventive maintenance (PM) records.</p>	<p>12/31/2015</p>	<p>12/31/2015</p>	<p>Please refer to evidence provided in response to TRTE2015015440 Texas RE Request for Information to Calpine Corporation Questions NOS. 1.1 through 1.45 dated 02/01/2016:</p> <p>Please see Calpine response to item 1.38 "Please provide the video instructions referenced in Calpine's December 29, 2015 Self-Report that address "implementation of improvements in the Maximo CMMS configuration for PRC-005 required maintenance. (Refer to Calpine's response in Attachment 1.38).</p>	<p>No</p>
<p>Non-geothermal plants to contract an independent contractor</p>	<p>3. Calpine non-geothermal plants to contract an independent contractor, who is familiar with industry standards and recommended best practices, to complete all future required quarterly and annual battery performance activities</p>	<p>12/31/2015</p>	<p>12/29/2015</p>	<p>Please refer to evidence provided in response to TRTE2015015440 Texas RE Request for Information to Calpine Corporation Questions NOS. 1.1 through 1.45 dated 02/01/2016:</p> <p>Please see Calpine response to item 1.41 "Please provide all documents concerning Calpine's statement on page 3 of its December 29, 2015 (No Suggestions) that [a]ll Calpine non-geothermal plants have been directed to contract with qualified service providers to complete all future required quarterly, annual, and battery performance activities not previously completed."</p> <p>Calpine has hired an independent contractor for all non-geothermal plants, please reference sample report, BT-REP-NERC-BATQ-R20170401.PDF</p>	<p>No</p>

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date	Entity Comment on Milestone Completion	Extension Request Pending
Revise Fleet-wide Procedures to Clarify Inspection & Testing Requirements	4. Revise Calpine's fleet-wide PSMP to clarify inspection and testing requirements and explicitly mandate internal review of all completed inspections at each generating facility; at least one level of documented formal review is required.	12/31/2015	12/31/2015	<p>This milestone included a fleet-wide training component on the revised procedures.</p> <p>Please refer to evidence provided in response to TRTE2015015440 Texas RE Request for Information to Calpine Corporation Questions NOS. 1.1 through 1.45 dated 02/01/2016:</p> <p>Please see Calpine response to item 1.2 "Refer to page 4 of Calpine's December 29, 2015 Self-Report. Please specifically identify the modifications to Calpine's PSMP to 'improve internal inspection review of all completed work' and provide a narrative description of how each change to the PSM will accomplish this improvement."</p>	No

<p>Revise Maximo Configuration for PRC-005 Required Maintenance</p>	<p>5. Revise Calpine's Maximo CMMS to implement improved preventive maintenance records developed by Regulatory Compliance for all PRC-005 required inspections, testing, and corrective maintenance. These changes standardized CMMS activities across the fleet and provided additional review capability including providing standard templates and job plans. The standardized templates are now required at Calpine plants. CMMS is now used so that maintenance staff can check to see what jobs are assigned to them. Calpine further agrees to implement a technical control to require management approval before completed job tasks regarding PRC-005 can be finalized in Maximo CMMS.</p>	<p>08/06/2019</p>	<p>03/06/2019</p>	<p>Please refer to evidence provided in response to TRE2015015440 Texas RE Request for Information to Calpine Corporation Questions NOS. 1.1 through 1.45:</p> <p>Please refer to Calpine's response to item 1.37 "Please provide all documents concerning the revisions to Calpine's Maximo Computerized Maintenance Management System (CCMS) to implement preventive maintenance records." as referenced on page 3 of Calpine's December 29, 2015 Self-Report" (Refer to attachment 1.37 of Calpine's response) and:</p> <p>Please refer to Calpine's response to item 1.39 "Please provide a narrative description of the 'reconfiguration of the CMMS for PRC-005 required inspections and testing' as referenced on page 3 of Calpine's December 20, 2015 Self-Report. As part of your response, please identify the specific improvements to CMMS that will permit Calpine to 'standardize CMMS activities across the fleet and provide additional review capability.'" a. Please provide all documents concerning the 'reconfiguration of the CMMS for PRC-005 required inspections and testing' discussed above.</p> <p>Please refer to Calpine's response to item 1.40 "Please state whether Calpine has completed 'reconfiguration of the CMMS for PRC-005 required inspections and testing' as referenced on page 3 of Calpine's December 29, 2015 Self-Report. If not, please identify the remaining</p>	<p>No</p>
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				steps Calpine needs to perform." Please also refer to recent additional revisions to Maximo PMs in 2019: file Maximo NERC Battery Job Plan v2019 Commented-.pdf	
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Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date	Entity Comment on Milestone Completion	Extension Request Pending
Progressive Discipline Policy Applied	6. Implement a Progressive Discipline Policy for issues related to falsified, inaccurate and missing inspection records.	02/06/2016	02/06/2016	Please refer to Calpine's response to Texas RE Second Request for Information Calpine TRE2015015440.pdf dated 3/21/2017. Please refer to Calpine's response to item 1.35 (a), which requests that Calpine provided all documents concerning Calpine's implementation of the Progressive Discipline Policy concerning the issues related to Calpine's December 29, 2015 Self-Report.	No

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date	Entity Comment on Milestone Completion	Extension Request Pending
Amend Code of Conduct	7. Calpine will amend its Code of Conduct to explicitly state that employees are prohibited from falsifying documentation and may result in termination of employment.	08/06/2019	5/13/2019	Please see language regarding data falsification included in document Calpine Code of Conduct.pdf, which addresses prohibited conduct: • The fabrication or falsification of data or evidence is explicitly prohibited. Fabrication of data is the deliberate creation, recording and reporting of nonexistent results. Data falsification is the deliberate manipulation of data to change, or omit data, including the deceptive manipulation of images; Please see Company internal communication regarding modified Code of Conduct: file: c19-05-13 Code of Conduct Acknowledgement 2019 F Final.pdf dated 5/13/2019.	No
Complete an internal spot check of compliance with PRC-005	8. Calpine to complete an internal spot check of compliance with PRC-005 on the majority of the Calpine generation fleet and conduct an internal review of the battery maintenance records at the applicable NPCC generating facilities.	08/06/2019	07/31/2019	Please refer to Calpine's response to Texas RE Second Request for Information Calpine TRE2015015440.pdf dated 3/21/2017, which requests a complete listing of protection system maintenance for multiple plants, including all NPCC facilities; and Calpine's response to Texas RE Third Request for Information Calpine TRE2015015440.pdf dated 5/16/2017, which requests copies of test reports for a statistical sampling of the protection system items Texas RE selected from the spreadsheet Calpine completed in response to the Texas RE Second Request for Information Calpine TRE2015015440.pdf Reference report NPCC Batteries Review.xlsx	No

Develop and implement automated periodic reports	9. Calpine will develop and implement automated periodic reports that will be sent to Calpine's Regulatory Compliance team. The reports will provide the compliance team with a list of pending work orders and associated deadlines.	08/06/2019	08/06/2019	Please see example Calpine internal Battery Work Order report provide to Compliance: file Weekly_Maximo_Report_Review_-_08-06-2019.pdf Please also see example control execution in Calpine's compliance monitoring system prompting routine review by Compliance of reports: file Calpine_Reg_Compliance_PRC-005-CE.pdf	No
Perform annual compliance reviews	10. Calpine will perform annual compliance reviews at the Corporate Compliance level of the individual generating facilities' compliance with PRC-005. Annually, Calpine's Corporate Compliance group will sample maintenance activities records across its fleet of facilities to ensure records are completed and not falsified.	04/01/2017	4/1/2017	Please refer to the following documents: Plan document Calpine PRC-005 Compliance Assurance Plan.pdf dated 9/22/2016, Report that demonstrates performance of the annual compliance review: PRC-005 Assurance Review.xlsx	No
Semi-annual compliance training	11. Calpine will provide semi-annual compliance training to Calpine personnel to emphasize the importance of compliance with NERC Reliability Standards, the importance of following procedures, and the consequences of falsifying records.	08/06/2019	06/13/2019	Please reference the following files: Semi-annual Training 1: c.19-05-13 Code of Conduct Acknowledgement 2019 FINAL.pdf Learning Center Notification: Your SkillPort Training Plan Has Been Updated.msg Semi-annual Training 2: Compliance Awareness Examples - 2019Q3.pdf	No

Reliability Risk

Reliability Risk

While the Mitigation Plan is being implemented, the reliability of the bulk Power System may remain at higher Risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are known or anticipated : (i) Identify any such risks or impacts, and; (ii) discuss any actions planned or proposed to address these risks or impacts.

The impact to the BES was minimal before the Mitigation Plan was implemented December 31, 2015, and remains so at present.

Prevention

Describe how successful completion of this plan will prevent or minimize the probability further violations of the same or similar reliability standards requirements will occur

The company's PSMP includes rigorous and frequent battery inspections. The revised PSMP now explicitly requires formal review for all completed maintenance activities at each generating station. The company has implemented additional training on inspection requirements, and the company has applied appropriate discipline. Finally, in conjunction with regularly scheduled internal audit examinations, regulatory compliance plans to conduct periodic spot checks for compliance with the PRC-005 standard. To that end, we have implemented an annual fleet wide, statistical random sample review of protection elements. The Plan is described in greater detail at Item 5. under "Mitigation Activities". The steps described in this Mitigation Plan will help to ensure that inspection and maintenance testing across Calpine's fleet is performed accurately and within the required timeframe.

Describe any action that may be taken or planned beyond that listed in the mitigation plan, to prevent or minimize the probability of incurring further violations of the same or similar standards requirements

Authorization

An authorized individual must sign and date the signature page. By doing so, this individual, on behalf of your organization:

- * Submits the Mitigation Plan, as presented, to the regional entity for acceptance and approval by NERC, and
- * if applicable, certifies that the Mitigation Plan, as presented, was completed as specified.

Acknowledges:

1. I am qualified to sign this mitigation plan on behalf of my organization.
2. I have read and understand the obligations to comply with the mitigation plan requirements and ERO remedial action directives as well as ERO documents, including but not limited to, the NERC rules of procedure and the application NERC CMEP.
3. I have read and am familiar with the contents of the foregoing Mitigation Plan.

Calpine Corporation Agrees to be bound by, and comply with, this Mitigation Plan, including the timetable completion date, as accepted by the Regional Entity, NERC, and if required, the applicable governmental authority.

Authorized Individual Signature: _____

(Electronic signature was received by the Regional Office via CDMS. For Electronic Signature Policy see CMEP.)

Authorized Individual

Name: ***Phillip Porter***

Title: ***Vice President, Compliance***

Authorized On: ***September 06, 2019***