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#### 141 FERC ¶ 61,209 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman; Philip D. Moeller, John R. Norris, Cheryl A. LaFleur, and Tony T. Clark.

In re California Independent System Operator Corporation Docket No. IN13-4-000

# ORDER APPROVING STIPULATION AND CONSENT AGREEMENT

(Issued December 14, 2012)

1. The Commission approves the attached Stipulation and Consent Agreement (Agreement) between the Office of Enforcement (Enforcement) and the California Independent System Operator Corporation (CAISO). This order is in the public interest because it resolves an investigation by Enforcement regarding CAISO's compliance with Commission-approved Reliability Standards.<sup>1</sup> The investigation examined possible violations of the NERC Reliability Standards by CAISO surrounding a Disturbance<sup>2</sup> in the San Diego area of the state of California on March 31-April 1, 2010 (the Disturbance). CAISO admitted to the violations set forth below and agreed to pay a civil penalty of \$200,000 to the United States Treasury.

2. CAISO represents that in advance of the finalization of the Agreement it voluntarily has undertaken substantial efforts to address concerns identified during its internal review following the Disturbance and that it has completed the reliability enhancements set forth in the Agreement to meet the concerns identified by Enforcement during this investigation. CAISO will also make semi-annual compliance monitoring reports to Enforcement staff for a period of up to two years.

<sup>&</sup>lt;sup>1</sup> Section 215 of the Federal Power Act provides the Commission the authority to enforce the Reliability Standards. 16 U.S.C. § 8240 (2006); *see also* 18 C.F.R. § 40.2(a) (2011) (requiring compliance with the Reliability Standards).

<sup>&</sup>lt;sup>2</sup> Unless otherwise specified, capitalized terms in this Order have the meanings specified in the NERC Glossary of Terms used in Reliability Standards.

# I. <u>Background</u>

3. As relevant here, CAISO serves as a Balancing Authority and Transmission Operator for Load served by the San Diego Gas & Electric Company (SDG&E). On March 16, 2007, the Commission approved Reliability Standards applicable to those reliability functions<sup>3</sup> pursuant to section 215 of the Federal Power Act.<sup>4</sup> These standards became mandatory and enforceable within the contiguous United States on June 18, 2007.

4. CAISO also is responsible for Operational Control of the CAISO Controlled Grid, which consists of the system of transmission lines and associated facilities of the Participating Transmission Owners (which include SDG&E).<sup>5</sup> These responsibilities include enforcement of the "25 percent Internal Generation Requirement," which is one of the "Local Reliability Criteria" for the SDG&E area and requires that "Internal Generation [be] maintained at 25 percent of the Native Load at all times" (the 25% Requirement).

5. The 25 percent Requirement is designed "to minimize the risk of further uncontrolled separation, loss of Generation, and or system shutdown in the event of a severe system frequency decline" and serves to "protect[] southern California Load in the event of a system-wide under-frequency event," making "the southern California system more likely to survive a total separation from the transmission grid external to southern California."

6. On March 31, 2010, CAISO, in conjunction with SDG&E, established its Day-Ahead Schedule for April 1, 2010. CAISO scheduled the Central La Rosita II Generating Unit (La Rosita II) to provide a substantial portion of the Internal Generation needed to meet the 25 percent Requirement during the first several hours of April 1, 2010.

<sup>4</sup> 16 U.S.C. § 824(o) (2006).

<sup>5</sup> The terms "Generation," Generating Unit," "Operational Control," "CAISO Controlled Grid," and "Participating Transmission Owner" have the meanings specified in Appendix A to CAISO's Fourth Replacement Tariff, which was in effect at the time of the Disturbance.

<sup>&</sup>lt;sup>3</sup> Mandatory Reliability Standards for the Bulk-Power System, Order No. 693, FERC Stats. & Regs. ¶ 31,242, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

7. La Rosita II, however, had suffered an outage on the afternoon of March 31, 2010, and was not available to meet its schedule for April 1. Although CAISO knew that La Rosita II would not provide Internal Generation needed to maintain the 25 percent Requirement on April 1, CAISO failed to plan for replacing that Internal Generation.

8. On March 31, 2010, shortly before midnight, CAISO system operators granted a request from the Otay Mesa Generating Unit (Otay Mesa), which was providing Internal Generation needed to maintain the 25 percent Requirement, to shut down at midnight. In granting this request, CAISO system operators failed to consider whether other Internal Generation online would maintain the 25 percent Requirement in the absence of Otay Mesa and the unplanned outage of La Rosita II.

9. At 23:59 on March 31, 2010, an alarm alerted CAISO's operators that Internal Generation in the San Diego area had dropped below 25 percent of Native Load. The CAISO operators on shift had not previously encountered a breach of the 25 percent Requirement and had neither been adequately trained nor provided with a documented operating procedure on how to respond to this condition. They mistakenly concluded that they were allowed only 20 minutes in which to increase Internal Generation to meet the 25 percent Requirement; and, if not successful, that they were required to shed Load.

10. On April 1, 2010, at 00:17 and 00:21, the CAISO shift supervisor issued two erroneous directives to SDG&E to shed 290 MW of firm Load. Acting on those directives, SDG&E shed 332 MW of firm Load, depriving approximately 250,000 SDG&E customers of electricity for up to 43 minutes.<sup>6</sup>

# II. Violations

11. To determine whether CAISO complied with the Reliability Standards, Enforcement opened a non-public, preliminary investigation into the events surrounding the Disturbance.<sup>7</sup> As detailed in the Agreement, CAISO's insufficient training, planning, and operating procedures with regard to the 25 percent Requirement gave rise to CAISO's violation of four requirements set out in two Reliability Standards. CAISO has

<sup>&</sup>lt;sup>6</sup> Because utilities shed Load by distribution block based on predetermined local priorities, SDG&E could not shed precisely the 290 MW of Load specified in CAISO's directives.

<sup>&</sup>lt;sup>7</sup> On April 6, 2010, prior to the initiation of Enforcement's investigation, the CAISO issued a press release acknowledging that it "made mistakes, first allowing this situation to occur by not maintaining adequate local generation in San Diego, and then applying operating requirements incorrectly" in shedding Load to meet the 25% Requirement.

acknowledged responsibility for the mistakes leading to the Load-shedding and admitted to the violations.

12. CAISO violated PER-002-0, Requirement R1, which requires that Transmission Operators and Balancing Authorities "shall be staffed with adequately trained operating personnel," because its system operators on shift on March 31- April 1, 2010, did not know: (a) that they were not limited to 20 minutes to restore Internal Generation to 25 percent of Load; and (b) that Load should not be shed to maintain or restore the 25 percent Requirement. CAISO violated Requirement R3.1 in that CAISO's training program failed to define restoration of the 25 percent Requirement as a "training program objective," even though the 25 percent Requirement was incorporated in CAISO operating procedure G-206 and was, therefore, subject to Requirement R3.1.

13. CAISO violated Reliability Standard TOP-002-2a, Requirement R6, which requires each Balancing Authority and Transmission Operator to "plan to meet unscheduled changes in system configuration and generation dispatch . . . in accordance with NERC, Regional Reliability Organization, subregional, and local reliability requirements." As we explained in Order No. 693, TOP-002-2a required CAISO "to look ahead to the next hour, day and season, and have operating plans ready to meet any unscheduled changes in system configuration and generation dispatch."<sup>8</sup> The unscheduled outage of La Rosita II presented an occasion for CAISO "to look ahead" and commit resources to be used to maintain the 25 percent Requirement in light of the unscheduled outage and loss of Internal Generation. CAISO violated Reliability Standard TOP-002-2a, Requirement R6 when, instead of having the required plans and resources in place, it relied on intervention "as needed" by its Control Room personnel.

14. CAISO violated Reliability Standard TOP-002-2a, Requirement R1, which required CAISO to have "current plans that are designed to evaluate options and set procedures for reliable operation through a future time period." CAISO violated TOP-002-2a, Requirement R1 because its operating procedures and current plans failed to include the proscription against shedding Load to maintain or restore the 25 percent Requirement.

15. While in some circumstances, Load-shedding may be necessary to comply with a Reliability Standard, this was not such a circumstance.<sup>9</sup>

<sup>9</sup> Cf. Enforcement of Statutes, Orders, Rules and Regulations, 132 FERC ¶ 61,216 at P 78 (2010).

<sup>&</sup>lt;sup>8</sup> Mandatory Reliability Standards for the Bulk-Power System, Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1590, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

#### III. Stipulation and Consent Agreement

16. Under the Agreement, CAISO stipulates to the facts as set forth in the Agreement and admits to the violations of the four requirements of two NERC Reliability Standards, as set forth in this Order. CAISO agrees to pay a civil penalty of \$200,000 and to make the semi-annual compliance monitoring reports to Enforcement as set forth in the Agreement.

#### IV. Determination of the Appropriate Civil Penalty

17. In arriving at the appropriate civil penalty, Commission staff applied the Commission's Penalty Guidelines and considered the serious nature of the Disturbance and the harm caused by the shedding of firm Load under the circumstances of the Disturbance. Staff also considered CAISO's admission of the violations; its public acknowledgment, prior to the initiation of Enforcement's investigation, of responsibility for the failure to maintain the 25 percent Requirement and for the unnecessary Load-shedding that ensued; its cooperation throughout the investigation; and CAISO's remedial efforts to improve its training with respect to the 25 percent Requirement, to incorporate the 25 percent Requirement into its market software, and to revise its operating procedures by including the proscription against shedding Load to maintain or recover the 25 percent Requirement. The Commission concludes that the civil penalty is consistent with the Revised Policy Statement on Penalty Guidelines.<sup>10</sup>

18. The Commission concludes that the civil penalty and the compliance monitoring reports specified in the Agreement are fair and equitable and in the public interest.

The Commission orders:

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

By the Commission.

(SEAL)

Nathaniel J. Davis, Sr., Deputy Secretary.

<sup>&</sup>lt;sup>10</sup> Enforcement of Statutes, Orders, Rules and Regulations, 132 FERC  $\P$  61,216 (2010).

#### UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation Docket No. IN13-4-000

# STIPULATION AND CONSENT AGREEMENT

#### I. <u>Introduction</u>

1. Staff of the Office of Enforcement (Enforcement) of the Federal Energy Regulatory Commission (Commission) and the California Independent System Operator Corporation (CAISO) enter into this Stipulation and Consent Agreement (Agreement) to resolve a non-public investigation by Enforcement and staff of the Office of Electric Reliability of the Commission pursuant to Part 1b of the Commission's regulations, 18 C.F.R. Part 1b (2012). The investigation examined possible violations of the NERC Reliability Standards by CAISO related to its functions as a Balancing Authority and Transmission Operator and the issuance of two directives to shed firm Load in the San Diego area on April 1, 2010, directives which were unnecessary based on system conditions and thus erroneous. Unless otherwise specified, capitalized terms in this Agreement have the meanings specified in the NERC Glossary of Terms used in Reliability Standards (NERC Glossary).

#### II. Stipulated Facts

Enforcement and CAISO hereby stipulate to the following:

2. On March 31-April 1, 2010, a Disturbance occurred in the San Diego region of the CAISO Balancing Authority Area when a shift supervisor working in CAISO's Folsom control room issued two erroneous directives to San Diego Gas and Electric Co. (SDG&E) to shed 290 MW of firm Load. Acting on those directives, SDG&E shed 332 MW of firm Load, depriving approximately 250,000 SDG&E customers of electricity for up to 43 minutes.<sup>1</sup>

3. On April 6, 2010, the CAISO issued a press release acknowledging that it "made mistakes, first allowing this situation to occur by not maintaining adequate local

<sup>&</sup>lt;sup>1</sup> Because utilities shed Load by distribution block based on predetermined local priorities, SDG&E could not shed precisely the 290 MW of Load specified in CAISO's directives.

generation in San Diego, and then applying operating requirements incorrectly." The CAISO stated that it "improperly allowed a San Diego area power plant to shut down. This initial decision led the ISO to operate outside the San Diego import limitation, which requires at least 25 percent of San Diego's Load to be served by local generation." The CAISO further stated that its "review has determined that although the ISO acted in good faith and out of an abundance of caution to address the situation and protect the integrity of the entire electric grid, the ISO inappropriately applied an operating requirement that then called for Load shedding to reduce demand."

4. Following the Disturbance, Enforcement opened a non-public preliminary investigation into the cause of, and the events surrounding, the Disturbance. The investigation disclosed that with respect to one of the "Local Reliability Criteria" for the SDG&E area, which requires "Internal Generation [be] maintained at 25% of the Native Load at all times" (the 25% Requirement), CAISO violated four requirements of two Reliability Standards.

5. As a Balancing Authority, CAISO is responsible for balancing Load, Generation, and Interchange within its Balancing Authority Area; as a Transmission Operator, CAISO is responsible for reliable operation of the transmission facilities it operates. CAISO also is responsible for Operational Control of the CAISO Controlled Grid, which consists of the system of transmission lines and associated facilities of the Participating Transmission Owners (which include SDG&E).<sup>2</sup> CAISO system operators at CAISO's primary control center in Folsom, California and its back-up control center in Alhambra, California, execute CAISO's reliability functions.

6. The 25% Requirement in the San Diego area stems from a pre-CAISO underfrequency load shedding program developed in concert with, and incorporated into, the "coordinated off-nominal frequency load shedding and restoration plan for the Western Interconnection" (Coordinated Plan), initially adopted in 1997 by the Western System Coordinating Council.<sup>3</sup> In May 2000, SDG&E and Southern California Edison reached an agreement in which SDG&E agreed to install additional under-frequency relays to increase SDG&E's under-frequency Load-shedding capability to 75% and to limit

<sup>&</sup>lt;sup>2</sup> The terms "Generation," "Generating Unit," "Operational Control," "CAISO Controlled Grid," and "Participating Transmission Owner" have the meanings specified in Appendix A to CAISO's Fourth Replacement Tariff, which was in effect at the time of the Disturbance.

<sup>&</sup>lt;sup>3</sup> The Western System Coordinating Council is the predecessor to the Western Electricity Coordinating Council ("WECC").

imports in such a way that at least 25% of the Native Load is served by Generation that will remain connected to the SDG&E system during a separation event. This 75% Load shedding capability exceeded the amount necessary to comply with WECC's requirement that "control areas, coordinated groups of entities, and other entities serving Load" within the Western Interconnection "establish a program of automatic high-speed Load shedding designed to arrest frequency decay [in order to minimize] the risk of total system collapse in the event of separation...."

7. In July 2002, CAISO incorporated the 25% Requirement into its operating procedure G-206, then titled "Minimum RMR Commitment: San Diego Area," which remained in effect at the time of the Disturbance. According to CAISO, the enforcement of the 25% Requirement is designed "to minimize the risk of further uncontrolled separation, loss of generation, and or system shutdown in the event of a severe system frequency decline" and serves to "protect[] southern California Load in the event of a system-wide under-frequency event," making "the southern California system more likely to survive a total separation from the transmission grid external to southern California."

8. CAISO operates Day-Ahead and Real-Time Markets using market software based on Security-Constrained Economic Dispatch to balance Load and Generation. The 25% Requirement was not a constraint incorporated into CAISO's market software when the Disturbance occurred. Instead, CAISO and SDG&E created a coordinated daily procedure in order to ensure that enough Generation would be available for the next operating day to maintain the 25% Requirement. Under this procedure, CAISO required SDG&E to provide a daily Transmission Network Analysis (TNA) report, which the CAISO operations engineers considered when evaluating daily commitment needs for the SDG&E area.

9. According to CAISO's Day-Ahead Schedule for April 1, 2010, the Central La Rosita II Generating Unit (La Rosita II) was scheduled to provide a substantial portion of the Internal Generation needed to meet the 25% Requirement for the first several hours of that day. La Rosita II, however, had suffered an outage on the afternoon of March 31, 2010, and was not available to meet its schedule for April 1.

10. Although CAISO was aware on the afternoon of March 31, 2010, that La Rosita II would not provide the Internal Generation needed to maintain the 25% Requirement on April 1, CAISO failed to adequately plan for replacing the Internal Generation it would not be receiving from La Rosita II on that date, improperly relying instead on "operator intervention," including calling upon other Generating Units, as needed.

11. On March 31, 2010, San Diego-area Internal Generation fell below 25% because the CAISO mistakenly allowed the Otay Mesa Generating Unit (Otay Mesa), whose

Generation counted toward meeting the 25% Requirement, to shut down for the first four hours of April 1, 2010. The Scheduling Coordinator for Otay Mesa called the CAISO and asked whether Otay Mesa could go offline at midnight, advising that it was scheduled to be shut down but was still receiving dispatch instructions. After confirming that Otay Mesa was scheduled to shut down at midnight, CAISO's generation dispatchers granted the request at approximately 23:56.<sup>4</sup> In doing so, they failed to take into account the level of Internal Generation relative to Load after Otay Mesa went offline and failed to consider whether there was other Internal Generation online sufficient to maintain the 25% Requirement in the absence of Otay Mesa and the unplanned outage of La Rosita II. At 23:59, before Otay Mesa was completely shut down, an alarm appeared on monitors in the Folsom control room alerting the CAISO that Internal Generation in the San Diego area had dropped below 25% of Native Load.

12. The CAISO operators on shift had not previously encountered a breach of the 25% Requirement and had neither been adequately trained nor provided with a documented operating procedure on how to respond to this condition. They immediately sought to have Otay Mesa stay online, but they learned that the shutdown process had proceeded past the point at which it could be reversed. CAISO operators attempted to recover the 25% Requirement by increasing local Generation through additional Generating Units. Although CAISO operators were aware that the level of imported energy in the San Diego area on the morning of April 1, 2010, was within the applicable stability limit, the operators mistakenly concluded that: (a) they were allowed only 20 minutes in which to increase Internal Generation to meet the 25% Requirement; and (b) if not successful, they were required to shed Load. While in some circumstances, Load-shedding may be necessary to comply with a Reliability Standard, this was not such a circumstance.<sup>5</sup>

# III. Violations

13. CAISO's insufficient training, planning, and operating procedures with regard to the 25% Requirement gave rise to CAISO's violation of four requirements set out in two

<sup>5</sup> *Cf. Revised Policy Statement on Penalty Guidelines*, 132 FERC ¶ 61,216, at P 78 (2010) ("In assessing the penalty for the underlying violation, where shedding Load was necessary in order to comply with a Reliability Standard, we will not consider under section 2A1.1(b)(2) of the Penalty Guidelines the resulting MWh of Load shed to comply with the Reliability Standards. We will however consider the fact that the underlying violation required Load shedding in assessing the risk created by the underlying violation under section 2A1.1(b)(1) of the Penalty Guidelines.").

<sup>&</sup>lt;sup>4</sup> All times are Pacific Daylight-Savings Time (PDT) using a 24-hour clock.

Reliability Standards. CAISO has acknowledged responsibility for the mistakes leading to the Load-shedding and admitted to the violations.

# A. Reliability Standard PER-002-0, Requirements R1 and R3.1.

At all relevant times, Reliability Standard PER-002-0 required the CAISO to 14. "provide [its] personnel with a coordinated training program that will ensure reliable system operations." Requirement R1 of this standard required that Transmission Operators and Balancing Authorities "shall be staffed with adequately trained operating personnel." Requirement R3.1 required CAISO to establish "training program objectives" that would ensure its operators had "the knowledge and competencies needed to apply" its operating procedures in "normal, emergency, and restoration conditions." As CAISO explained, "Load should not be shed to maintain or recover the 25% local generation requirement." CAISO violated Requirement R1 because its system operators on shift on March 31-April 1, 2010, did not know this proscription against shedding Load to maintain or recover the 25% Requirement. Consequently, CAISO was not "staffed with adequately trained operating personnel" on April 1, 2010, in regard to the 25% Requirement. CAISO violated Requirement R3.1 in that CAISO's training program failed to define restoration of the 25% Requirement as a "training program objective," even though the 25% Requirement was incorporated in CAISO operating procedure G-206 and was, therefore, subject to Requirement R3.1.

# B. Reliability Standard TOP-002-2a, Requirement R6

15. At all relevant times, Reliability Standard TOP-002-2a, Requirement R6 required each Balancing Authority and Transmission Operator to "plan to meet unscheduled changes in system configuration and generation dispatch . . . in accordance with NERC, Regional Reliability Organization, subregional, and local reliability requirements." As the Commission explained in Order No. 693, TOP-002-2a, required the CAISO "to look ahead to the next hour, day and season, and have operating plans ready to meet any unscheduled changes in system configuration and generation dispatch."<sup>6</sup> "The goal . . . is to ensure that resources and operational plans are in place to enable system operators to maintain the Bulk-Power System in a reliable state."<sup>7</sup> The unscheduled outage of La Rosita II presented an occasion for CAISO "to look ahead" and commit resources to be

<sup>&</sup>lt;sup>6</sup> Mandatory Reliability Standards for the Bulk-Power System, Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1590, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>&</sup>lt;sup>7</sup> Id.

used to maintain the 25% Requirement in light of the unscheduled outage and loss of Internal Generation. CAISO violated Reliability Standard TOP-002-2a, Requirement R6 when, instead of having the required "resources and operational plans ... in place," it relied on intervention "as needed" by its Control Room personnel.

# C. <u>Reliability Standard TOP-002-2a, Requirement R1</u>

16. At all relevant times, Reliability Standard TOP-002-2a, Requirement R1 required "current plans that are designed to evaluate options and set procedures for reliable operation through a future time period." CAISO violated this requirement because its operating procedures and current plans concerning the 25% Requirement did not include sufficient instructions for recovering the 25% Requirement after a breach. Although CAISO confirmed that "Load should not be shed to maintain or recover the 25% local generation requirement" in any circumstances, its operating procedures did not address this proscription.

# IV. <u>Remedies and Sanctions</u>

17. For purposes of settling any and all civil and administrative disputes arising from Enforcement's investigation, CAISO stipulates to the facts as set forth in the preceding paragraphs and admits to the violations set forth in this Agreement. The CAISO was cooperative throughout the compliance enforcement process.

18. CAISO agrees to undertake the following obligations:

# A. <u>Civil Penalty</u>

19. CAISO shall pay a civil penalty in the amount of \$200,000 to the United States Treasury within 10 days of the Effective Date of this Agreement.

# B. <u>Reliability Enhancement Measures Already Completed</u>

20. CAISO voluntarily has undertaken substantial efforts to address concerns identified during its own internal review following the Disturbance, which address the concerns identified by Enforcement during the course of its investigation. CAISO represents that in advance of the finalization of a settlement it has completed the following reliability enhancements to meet the concerns identified during this investigation:

# a. San Diego Procedures Training

In July 2010, CAISO held a training session to review the operating procedures applicable to the San Diego area and how the Reliability

Standards apply to these procedures. CAISO presented a detailed study of the March 31-April 1, 2010 Load-shedding incident for training on the operation of the 25% Requirement and other applicable minimum generation requirements in the San Diego area. These documents identify the training objectives with respect to the 25% Requirement and the applicable NERC, regional and local reliability requirements to the San Diego area, as required by PER-002-0 Requirement R3.1.

#### **b.** Revised Operating Procedures

CAISO revised its principal operating procedures applicable to the San Diego area and issued a Revised Technical Bulletin concerning the 25% Requirement, so that these procedures now state that Load-shedding may not be used to recover the 25% Requirement.

#### c. Incorporated 25% Requirement in Market Software

CAISO has now included the 25% Requirement as a constraint in its market software, so that unplanned outages as occurred in this instance will be adjusted for in the Security Constrained Economic Dispatch.

#### d. Modified Monitoring of 25% Requirement

CAISO modified its Energy Management System (EMS) and Plant Information (PI) screens to make it easier for operators to ascertain (or calculate) Internal Generation as a percentage of Load and to determine the impact on the 25% Requirement of adding or removing specific internal Generating Units. CAISO included materials on the use of these screens in its revised training materials for the San Diego area. In addition, CAISO modified its alarms so that operators receive warning before Internal Generation has declined below 25%.

#### e. Increased Staffing

In 2011, the CAISO added 24/7 staffing by operating engineers in the control room. The addition of the operating engineers to the control room staff has provided numerous reliability-related benefits, including providing shift personnel with immediate access to critical reliability-related information, such as establishment and validation of system operating limits based upon real-time conditions, running studies prior to authorizing equipment to go out of service, evaluation and validation of contingencies, updated path ratings, troubleshooting EMS or market related issues, and quick follow-up of outage questions.

# f. Enhanced Training

The CAISO has created training simulator rooms that replicate in smaller scale the actual control rooms in Alhambra and Folsom for enhanced operator training. Simulator training using these new facilities is now provided quarterly to the operators. The improved training facilities allow for better and more realistic training that replicates the operational behavior of the Bulk Electric System during normal and emergency conditions.

# C. <u>Compliance Monitoring</u>

21. CAISO shall provide, for one year, starting six months from the Effective Date of this Agreement, semi-annual compliance monitoring reports to Enforcement. The first semi-annual report shall be submitted within ten days after the end of the calendar month which is six months from the Effective Date of this Agreement. Each semi-annual compliance monitoring report will: (1) advise whether CAISO has maintained compliance with the Reliability Standards; (2) describe any new measures taken to ensure compliance with the Reliability Standards in regard to the 25% Requirement; and (3) provide an update of the reliability-related compliance measures instituted and training administered during the preceding semi-annual period.

22. Upon request by Enforcement, CAISO shall provide all documentation supporting its reports. After receipt of the second semi-annual report described in paragraph 21, Enforcement may, at its sole discretion, require CAISO to submit such reports for one additional year.

# V. <u>Terms of Consent Agreement</u>

23. The Effective Date of this Agreement shall be the date on which the Commission issues an order approving this Agreement without modification or condition.

24. Unless the Commission issues an order approving the Agreement in its entirety and without modification or condition, the Agreement shall be null and void and of no effect whatsoever, and neither Enforcement nor CAISO shall be bound by any provision or term of the Agreement unless otherwise agreed to in writing by Enforcement and CAISO.

25. The parties shall treat the Agreement as confidential until approved by each party and until the Commission issues an order approving the Agreement without modification or condition. The Agreement shall be made public only after the Commission's approval without modification or condition.

26. In providing information and documents (CAISO information) to the Commission in connection with the investigation and/or the settlement of the investigation, CAISO invoked the protective provisions of the Commission's regulations, including 18 C.F.R §§ 1b.9, 1b.20 and 388.112, which provide for the confidential treatment of information submitted to the Commission; and requested that CAISO information be exempt from the mandatory public disclosure requirements of the Freedom of Information Act (5 U.S.C. 552, 552(b)(4)). Other than the public release of the Agreement after the Commission issues an order approving the Agreement in its entirety and without modification or condition, all CAISO information remains subject to the applicable Commission regulations and shall not be disclosed publicly by the Commission other than in accordance such regulations.

27. The Agreement binds CAISO and its agents, successors and assigns. The Agreement does not create or impose any additional or independent obligations on CAISO, any affiliated entity, their respective agents, officers, directors or employees, other than the obligations specifically set forth in this Agreement.

28. In connection with the payment of the civil penalty provided for herein, CAISO agrees that the Commission's order approving the Agreement without modification or condition shall be a final order assessing a civil penalty under the Federal Power Act, 16 U.S.C. § 791a, et seq., as amended. CAISO further waives rehearing of any Commission order approving the Agreement without modification or condition, and judicial review by any court of any Commission order approving the Agreement without modification or condition.

29. Commission approval of this Agreement without modification or condition shall fully, irrevocably, and unconditionally release CAISO, its agents, officers, directors, and employees, both past and present, and any successor in interest to CAISO from liability for, and forever bar the Commission from bringing against CAISO, its agents, officers, directors, and employees, both past and present, and any successor in interest to CAISO, any and all direct and/or indirect administrative, civil, or other claims (whether or not known) arising out of, related to, or connected with the Disturbance or the investigation. In further consideration for this release, CAISO represents that it is not aware of any material facts concerning the Disturbance that were not disclosed to Enforcement during the investigation and which might reasonably be considered to be a violation of any Reliability Standard. Upon the Effective Date of this Agreement, Enforcement's investigation of CAISO shall terminate.

30. Failure to make a timely payment or to comply with 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 and may subject CAISO to additional action under the enforcement and penalty provisions of the Federal Power Act.

31. If CAISO does not make the payment above at or before the time agreed to by the parties, interest will begin to accrue and be payable to the United States Treasury, pursuant to the Commission's regulations at 18 C.F.R. § 35.19(a)(2)(iii) (2012), from the date that payment is due.

32. The signatories to the 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 or CAISO has been made to induce the signatories or any other party to enter into the Agreement.

33. 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.

34. This Agreement is executed by each party in duplicate, each of which, so executed, shall be treated as an original for all purposes.

Agreed to and accepted this  $\frac{19}{12}$  day of <u>Nevember</u>2012

Mann C.

Norman Bay Director, Office of Enforcement Federal Energy Regulatory Commission

Date: 11.20.12

Eric Schmitt Vice President, Operations California Independent System Operator Corporation

Date: 11 19

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