



**California ISO**  
Shaping a Renewed Future

# **Administrative Pricing Rules**

## **Issue Paper**

**July 25, 2012**

# Administrative Pricing Rules

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## 1 Executive Summary

On June 13, 2012, FERC granted the ISO’s petition to waive tariff provisions relating to setting administrative prices and settling real time market transactions in response to the September 8, 2011 southwest power outage. The order accepted the ISO’s commitment to convene a stakeholder process, within 30 days from the date of the order, to examine tariff provisions regarding the ISO’s emergency tariff authority. The proposed scope of the initiative is:

1. What conditions justify market suspension?
2. Should the ISO have the ability to split the market into regions so that the entire market does not need to be suspended during a regional event?
3. Should the ISO have the authority to establish an administrative price that is different from the current default value currently which is the last valid price in the market prior to intervention or suspension?
4. If so, how should the ISO determine the appropriate administrative price?
5. What considerations warrant adjustments to the administrative price rather than returning to the default administrative price?
6. What hold harmless provisions should be established for tripped load, physical resources and convergence bidders during market suspension or force majeure events?
7. Is there a need to provide more clarity concerning the definition of a force majeure event and any actions the market participant or ISO must take and the settlement consequences?
8. Does the ISO need to improve its communication protocols to scheduling coordinators and resource owners and operators.
9. Should the ISO impose penalties on owners, operators and/or scheduling coordinators for failing to respond in a timely way to exceptional dispatches or operating orders in emergency conditions?
10. Should convergence bidding be suspended until some period of time after system restoration?
11. What other changes to the ISO’s emergency tariff provisions should be considered?
12. Other clarifications based on stakeholder comments to issue paper.

## 2 Plan for Stakeholder Engagement

Item	Date
Post Issue Paper	July 25, 2012
Stakeholder Conference Call	August 1, 2012
Stakeholder Comments Due	August 9, 2012
Post Straw Proposal	September 12, 2012
Stakeholder Meeting	September 19, 2012
Stakeholder Comments Due	September 26, 2012
Post Draft Final Proposal	October 18, 2012
Stakeholder Conference Call	October 25, 2012
Stakeholder Comments Due	November 1, 2012
Board Meeting	December 13-14, 2012

### 3 Background

On June 13, 2012, FERC granted the ISO's petition to waive tariff provisions relating to setting administrative prices and settling real-time market transactions in response to the September 8, 2011 southwest power outage<sup>1</sup>. The order accepted the ISO's commitment to convene a stakeholder process, within 30 days from the date of the order, to examine tariff provisions regarding the ISO's emergency tariff authority.

FERC found that the administrative prices established by the ISO to set price signals in order to manage the emergency (initially \$250, which was later reduced to \$100 per MWh) were not authorized by the tariff. Section 7.7.4(3) explicitly sets the administrative price at the level of the applicable price for the last valid settlement period which in the SDG&E area, for example, was \$54 per MWh. FERC disagreed with the ISO that the discretion provided in section 7.7.2 to take any action it "considers necessary" relieves the ISO of its requirement to comply with section 7.7.4(3) when setting the administrative price. FERC concluded that section 7.7.4(3) should be read in conjunction with section 7.1.3(h) that confers upon the ISO general authority to operate resources in a system emergency and that, if section 7.7.2 could be read as expansively as the ISO argued, then the ISO would have virtually unfettered discretion to justify any action or behavior in an emergency situation.

FERC also granted a tariff waiver to permit the ISO to hold tripped load and resources harmless; however, FERC declined to decide whether the September 8 southwest power outage constituted a force majeure event.

FERC believes that the ISO's commitment to revise this tariff language to avoid confusion in the event of a similar emergency or market disruption in the future through an upcoming stakeholder process, will address this issue going forward. Accordingly, FERC granted the ISO's request for waiver of section 7.7.4(3) in order to allow the \$250 per MWh and \$100 per MWh administrative prices and the waiver to hold tripped load and resources harmless.

### 4 Scope of Initiative

#### 4.1 Market Suspension during System Emergency

Tariff section 7.7 outlines the management of system emergencies. The ISO proposes to amend this tariff section and other sections, if necessary, (1) to clarify and supplement the ISO's authority during system emergencies to take the actions it took on September 8-9 and to clarify authority or to take such additional actions, including the assessment of penalties, as may be necessary manage market disruptions and (2) to consider stakeholder comments submitted to FERC in response to the ISO's waiver petition.<sup>2</sup>

Among the questions to be addressed are the following: Are additional criteria needed to beyond what is already included in section 7.7.1 to determine when the market can be suspended? Should clarity be added to section 7.7.2 regarding both the ISO and market responsibilities during market suspensions? What changes are necessary to section 7.7.4,

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<sup>1</sup> The FERC order is available at <http://www.ferc.gov/EventCalendar/Files/20120613122539-ER12-205-000.pdf>

<sup>2</sup> Substantive comments were filed in Docket ER12-205-00 by Powerex Corp., NRG Companies, Morgan Stanley Capital Group Inc., Financial Marketers, Western Power Trading Forum, California Department of Water Resources State Water Project, and Macquarie Energy LLC. The comments are available at <http://www.ferc.gov/docs-filing/elibrary.asp>.

regarding administrative prices, in order to allow the ISO set the administrative price different than the last valid interval market price? When and what criteria should be used to set the administrative price outside of the market? Should administrative prices be set regionally and/or should ISO apply administrative prices in regions where a market result in infeasible?

The ISO has attached Tariff Section 7.7 as Appendix A.

#### **4.2 Settlement during Market Suspension or Force Majeure Events**

This stakeholder process will also consider new provisions for the settlement of load, physical supply, interties, and convergence bidders when the market is suspended during system emergencies. Should market rules remedy inconsistencies between the administrative price and market participants' bid prices? If a remedy is required, should the remedy be implemented through hold harmless provisions or make-whole payments? Should bid cost recovery rules change during market suspension such that both imports and exports are eligible for bid cost recovery?

#### **4.3 Communication Improvements**

Stakeholders stated that CAISO needs clearer communication channels or standing default tariff provisions so that market participants know whether the information the ISO releases during a similar system emergency is valid. For example, are verbal dispatch instructions mandatory or voluntary during market suspension when the instruction may be inconsistent with the entities' bids? Assuming the market rules are sufficiently explicit should penalties be considered for not following instructions during a market suspension? The communication improvements should result in additional tariff provision as well as improvement to BPM documentation.

### **5 Next Steps**

The ISO will discuss the Issue Paper with stakeholders during a teleconference to be held on August 1, 2012. Stakeholders should submit written comments by August 9, 2012 to [AdminPricing@caiso.com](mailto:AdminPricing@caiso.com).

## Appendix A

### 7.7 Management Of System Emergencies

#### 7.7.1 System Emergency

When, in the judgment of the CAISO, the System Reliability of the CAISO Controlled Grid is in danger of instability, voltage collapse or under-frequency caused by transmission or Generation trouble in the CAISO Balancing Authority Area, or events outside of the CAISO Balancing Authority Area that could result in a cascade of events throughout the WECC grid, the CAISO will declare a System Emergency. This declaration may include a notice to suspend the Day-Ahead Market, HASP and Real-Time Markets, authorize full use of Black Start Generating Units, initiate full control of manual Load Shedding, and authorize the curtailment of Curtailable Demand (even though not scheduled as an Ancillary Service). The CAISO will reduce the System Emergency declaration to a lower alert status when it is satisfied, after conferring with Reliability Coordinators within the WECC, that the major contributing factors have been corrected, and all involuntarily interrupted Demand is back in service (except interrupted Curtailable Demand selected as an Ancillary Service). This reduction in alert status will reinstate the competitive markets if they have been suspended.

#### 7.7.2 Emergency Procedures

In the event of a System Emergency, the CAISO shall take such action as it considers necessary to preserve or restore stable operation of the CAISO Controlled Grid. The CAISO shall act in accordance with Good Utility Practice to preserve or restore reliable, safe and efficient service as quickly as reasonably practicable. The CAISO shall keep system operators in adjacent Balancing Authority Areas informed as to the nature and extent of the System Emergency in accordance with WECC procedures and, where practicable, shall additionally keep the Market Participants within the Balancing Authority Area informed.

##### 7.7.2.1 Declarations of System Emergencies

The CAISO shall, when it considers that conditions giving rise to a System Emergency exist, declare the existence of such System Emergency. A declaration by the CAISO of a System Emergency shall be

binding on all Market Participants until the CAISO announces that the System Emergency no longer exists.

**7.7.2.2 Responsibilities of UDCs and MSSs Operators During a System Emergency**

In the event of a System Emergency, UDCs shall comply with all directions from the CAISO concerning the management and alleviation of the System Emergency and shall comply with all procedures concerning System Emergencies set out in this CAISO Tariff, the Business Practice Manuals, and the Operating Procedures, and each MSS Operator shall comply with all directions from the CAISO concerning the avoidance, management and alleviation of the System Emergency and shall comply with all procedures concerning System Emergencies set forth in the CAISO Tariff, Business Practice Manuals and Operating Procedures. During a System Emergency, the CAISO and UDCs shall communicate through their respective control centers and in accordance with procedures established in individual UDC Operating Agreements, and the CAISO and the MSS Operator shall communicate through their respective control centers and in accordance with procedures established in the MSS Agreement.

**7.7.2.3 Responsibilities of Generating Units, System Units and System Resources During System Emergencies**

All Generating Units and System Units that are owned or controlled by a Participating Generator are (without limitation to the CAISO's other rights under this CAISO Tariff) subject to control by the CAISO during a System Emergency and in circumstances in which the CAISO considers that a System Emergency is imminent or threatened. The CAISO shall, subject to this Section 7, have the authority to instruct a Participating Generator to bring its Generating Unit on-line, off-line, or increase or curtail the output of the Generating Unit and to alter scheduled deliveries of Energy and Ancillary Services into or out of the CAISO Controlled Grid, if such an instruction is reasonably necessary to prevent an imminent or threatened System Emergency or to retain Operational Control over the CAISO Controlled Grid during an actual System Emergency. The CAISO shall have the authority to instruct an RMR Unit whose owner has selected Condition 2 of its RMR Contract to start-up and change its output if the CAISO has reasonably used all other available and effective resources to prevent a threatened System Emergency without declaring that a System Emergency exists. If the CAISO so instructs a Condition 2 RMR Unit, it shall compensate that unit in accordance with Section 11.5.6.3 and allocate the costs in accordance with

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Section 11.5.6.3.2. Each QF subject to an existing agreement with a Participating TO for the supply of Energy to the Participating TO and not subject to a QF PGA will make reasonable efforts to comply with the CAISO's instructions during a System Emergency without penalty for failure to do so.

### **7.7.3 Notifications By CAISO Of System Conditions**

The CAISO will provide the following notifications to Market Participants to communicate unusual system conditions or emergencies.

#### **7.7.3.1 System Alert**

CAISO will give an AWE Notice of a system alert when the operating requirements of the CAISO Controlled Grid are marginal because of Demand exceeding forecast, loss of major Generation or loss of transmission capacity that has curtailed imports into the CAISO Balancing Authority Area, or if it otherwise appears that there is insufficient Energy and Ancillary Services to meet Real-Time Demand in the CAISO Balancing Authority Area.

#### **7.7.3.2 System Warning**

The CAISO will give an AWE Notice of a system warning when the operating requirements for the CAISO Controlled Grid are not being met in the HASP or Real-Time Market, or the quantity of Regulation, Spinning Reserve, Non-Spinning Reserve, and Energy available to the CAISO is not acceptable for the Applicable Reliability Criteria. This system warning notice will notify Market Participants that the CAISO will, acting in accordance with Good Utility Practice, take such steps as it considers necessary to ensure compliance with Applicable Reliability Criteria, including the negotiation of Generation through processes other than competitive Bids.

### **7.7.4 Intervention In CAISO Market Operations**

The CAISO may intervene in the operation of the CAISO Markets and set the Administrative Price, if the CAISO determines that such intervention is necessary in order to prevent, contain or correct a System Emergency as follows.



- (1) The CAISO will not intervene in the operation of the Day-Ahead Market unless there has been a total or major collapse of the CAISO Controlled Grid and the CAISO is in the process of restoring it. The CAISO shall, where reasonably practicable, utilize Ancillary Services which it has the contractual right to instruct and which are capable of contributing to containing or correcting the actual, imminent or threatened System Emergency prior to issuing instructions to a Participating Generator under Section 7.7.2.3. In the event that the CAISO has exhausted all Economic Bids in the IFM, the CAISO shall use the scheduling priorities listed in Section 31.4 to clear the IFM.
- (2) Before any such intervention the CAISO must (in the following order):
  - (a) dispatch all Supply Bids offered or available to it regardless of price (including all Energy Bids and Ancillary Services Bids);
  - (b) dispatch all interruptible Loads made available by UDCs to the CAISO in accordance with the relevant agreements with UDCs;
  - (c) dispatch or curtail all price-responsive Demand that has been bid into the Day-Ahead Market and exercise its rights under all Load curtailment contracts available to it;
  - (d) exercise Load Shedding to curtail Demand on an involuntary basis to the extent that the CAISO considers necessary.
- (3) The Administrative Price in relation to each of the markets for Imbalance Energy and Ancillary Services shall be set at the applicable price in the Settlement Period immediately preceding the Settlement Period in which the intervention took place.
- (4) The intervention will cease as soon as the CAISO has restored all Demand that was curtailed on an involuntary basis.

#### **7.7.5 Emergency Guidelines**

The CAISO shall issue guidelines for all Market Participants to follow during a System Emergency. These guidelines shall be consistent with the specific obligations of Scheduling Coordinators and Market

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Participants referenced in Sections 7.7.10, 7.7.11, 7.7.2, 7.7.2.3 and 7.7.4(1). All Market Participants shall respond to CAISO Dispatch Instructions with an immediate response during System Emergencies.

**7.7.5.1** The CAISO shall in accordance with this Section 7.7.5 implement the Electrical Emergency Plan in consultation with the UDCs, the MSS Operators, or other entities, at the CAISO's discretion, when Energy reserve margins are forecast to be at the levels specified in the plan.

**7.7.5.2** Each UDC and MSS Operator will notify its End-Use Customers connected to the UDC's or the MSS's Distribution System of any voluntary curtailments notified to the UDC or to the MSS Operator by the CAISO pursuant to the provisions of the EEP.

### **7.7.6 Periodic Tests Of Emergency Procedures**

The CAISO shall develop and administer periodic unannounced tests of System Emergency procedures. Such tests shall be designed to ensure that the CAISO Market Participants are capable of promptly and efficiently responding to imminent or actual System Emergencies.

### **7.7.7 Prioritization Schedule For Shedding And Restoring Load**

On an annual basis, the CAISO shall, in consultation with Market Participants and subject to the provisions of Section 3, develop a prioritization schedule for Load Shedding should a System Emergency require such action. The prioritization schedule shall also establish a sequence for the restoration of Load in the event that multiple Scheduling Coordinators or Market Participants are affected by service interruptions and Load must be restored in blocks. For Load shed in accordance with Section 7.7.11.4.2, the prioritization schedule will only include those UDCs or MSS Operators that have Scheduling Coordinators that have failed to submit Bids with sufficient resources to meet the Load in the UDC or MSS Service Area. For Load shed in accordance with Section 7.7.11.4.3, the prioritization schedule will include all UDCs and MSS Operators.

### **7.7.8 Under Frequency Load Shedding (UFLS)**

**7.7.8.1** Each UDC's UDCOA with the CAISO and each MSS Agreement through which the MSS Operator undertakes to the CAISO to comply with the provisions of the CAISO Tariff shall describe the UFLS program for that UDC or for that MSS.

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### **7.7.9 [NOT USED]**

### **7.7.10 Further Obligations Relating To System Emergencies**

The CAISO and Participating TOs shall comply with their obligations in Section 9 of the TCA.

### **7.7.11 Use Of Load Curtailment Programs**

#### **7.7.11.1 Use of UDC's Existing Load Curtailment Programs**

As an additional resource for managing System Emergencies, the CAISO will, subject to Section 3, notify the UDCs when the conditions to implement their Load curtailment programs have been met in accordance with their terms. The UDCs will exercise their best efforts, including seeking any necessary regulatory approvals, to enable the CAISO to rely on their curtailment rights at specified levels of Operating Reserve. Each UDC shall by not later than October 1 of each year advise the CAISO of the capabilities of its Load curtailment programs for the forthcoming year, and the conditions under which those capabilities may be exercised, and shall give the CAISO as much notice as reasonably practicable of any change to such programs.

#### **7.7.11.2 Load Curtailment**

A Scheduling Coordinator may specify that Loads will be reduced at specified prices or, pursuant to a Participating Load Agreement, offer the right to exercise Load curtailment to the CAISO as an Ancillary Service or utilize Load curtailment itself (by way of self-provision of Ancillary Services) as Non-Spinning Reserve. The CAISO, at its discretion, may require direct control over such Curtailable Demand to assume response capability for managing System Emergencies. However, non-firm Loads shall not be eligible to provide Curtailable Demand if they are receiving incentives for interruption under existing programs approved by a Local Regulatory Authority, unless: a) participation in the CAISO's Ancillary Services markets is specifically authorized by such Local Regulatory Authority, and b) there exist no contingencies on the availability, nor any unmitigated incentives encouraging prior curtailment, of such interruptible Load for Dispatch as Curtailable Demand as a result of the operation of such existing program. The CAISO may establish standards for automatic communication of curtailment instructions to implement Load curtailment as a condition for accepting any offered Load curtailment as an Ancillary Service.

**7.7.11.3** The CAISO shall have the authority to direct a UDC or an MSS Operator to disconnect Load from the CAISO Controlled Grid if necessary to avoid an anticipated System Emergency or to regain Operational Control over the CAISO Controlled Grid during an actual System Emergency. The CAISO shall direct the UDC or the MSS Operator to shed Load in accordance with the prioritization schedule developed pursuant to Section 7.7.7. When CAISO Controlled Grid conditions permit restoration of Load, the CAISO shall restore Load according to the prioritization schedule developed pursuant to Section 7.7.7. The MSS Operator shall restore Load internal to the MSS.

**7.7.11.4 Load Shedding**

**7.7.11.4.1 [NOT USED]**

**7.7.11.4.2** If the CAISO forecasts in advance of the HASP that Load curtailment will be necessary due to a resource deficiency as determined pursuant to Section 40.7, the CAISO will identify any UDC or MSS Service Area that is resource deficient. The CAISO will provide notice to all Scheduling Coordinators if one or more UDC or MSS is deficient. If Load curtailment is required to manage a System Emergency associated with a resource deficiency determined pursuant to Section 40.7, the CAISO will determine the amount and location of Load to be curtailed and will allocate a portion of that required Load curtailment to each UDC or MSS Operator whose Service Area has been identified as being resource-deficient based on the ratio of its resource deficiency to the total Balancing Authority Area resource deficiency. Each UDC or MSS Operator shall be responsible for notifying its customers and Generators connected to its system of curtailments and service interruptions.

**7.7.11.4.3** If a Load curtailment is required to manage System Emergencies, in any circumstances other than those described in Section 7.7.11.4.2, the CAISO will determine the amount and location of Load to be reduced and to the extent practicable, will allocate a portion to each UDC or MSS Operator based on the ratio of its Demand (at the time of the Balancing Authority Area annual peak for the previous year) to total Balancing Authority Area annual peak Demand for the previous year taking into account system considerations and the UDC's or MSS Operator's curtailment rights under their tariffs. Each UDC or MSS Operator shall be responsible for notifying its customers and Generators connected to its system of curtailments and service interruption.

**7.7.12 Curtailment Under Emergency And Non-Emergency Conditions**

**7.7.12.1 Emergency Conditions**

To the extent practicable, the CAISO shall allocate necessary curtailments of Existing Rights or non-Converted Rights under emergency conditions in accordance with the instructions submitted by the Responsible PTO pursuant to Section 16. If circumstances prevent the CAISO's compliance with such instructions, the CAISO shall allocate such curtailments in a non-discriminatory manner consistent with Good Utility Practice.

**7.7.12.2 Non-Emergency Conditions**

Unless otherwise specified by the Responsible PTO in the instructions that it submits to the CAISO under Section 16, the CAISO will allocate any necessary curtailments under non-emergency conditions, pro rata, among holders of Existing Rights, at particular Scheduling Points and/or on particular contract paths, in the order of: (1) non-firm, (2) each priority of conditional firm, and (3) each priority of firm rights. Priorities for firm and conditional firm transmission service are indicated using the TRTC Instructions as described in Section 16.

**7.7.13 System Emergency Reports And Sanctions**

**7.7.13.1 Review of Major Outages**

The CAISO with the cooperation of any affected UDC shall jointly perform a review following a major Outage that affects at least ten (10) percent of the Load served by the Distribution System of a UDC or any Outage that results in major damage to the CAISO Controlled Grid or to the health and safety of personnel. The review shall address the cause of the Outage, the response time and effectiveness of emergency management efforts, and whether the operation, maintenance or scheduling practices of the CAISO, any Participating TOs, Eligible Customers, UDCs or Participating Generators enhanced or undermined the ability of the CAISO to maintain or restore service efficiently and in a timely manner.

**7.7.13.2 Provide Information to Review Outages**

Participating TOs, Participating Generators, Eligible Customers, Scheduling Coordinators and UDCs shall promptly provide information requested by the CAISO to review Outages pursuant to Section 7.7.13.1

and to prepare Outage reports. The CAISO shall seek the views of any affected Participating TOs, Participating Generators, Eligible Customers, Scheduling Coordinator or UDCs and allow such affected Participating TOs, Participating Generators, Eligible Customers, Scheduling Coordinators or UDCs to comment on any issues arising during the preparation of a report. All findings and reports arising from the CAISO's review shall be shared with Participating TOs, Participating Generators, Eligible Customers and UDCs.

**7.7.13.3 [NOT USED]**

**7.7.14 CAISO Facilities And Equipment**

**7.7.14.1 CAISO Facility and Equipment Outages**

The CAISO has installed redundant control centers, communication systems and computer systems. Most, but not necessarily all, equipment problems or failures should be transparent to Market Participants. This Section 7.7.14.1 addresses some situations when Market Participants could be affected, but it is impossible to identify and plan for every type of equipment problem or failure. Real-Time situations will be handled by the Real-Time CAISO dispatchers. The CAISO control room in Folsom is the Primary CAISO Control Center and the CAISO control room in Alhambra is the Backup CAISO Control Center.

**7.7.14.2 CAISO's Secure Communication System Unavailable**

**7.7.14.2.1 Unavailable Critical Functions of CAISO's Secure Communication System**

During a total disruption of the CAISO's secure communication system several critical functions of the CAISO will not be available including:

- (a) the CAISO's scheduling infrastructure computer systems will not be able to communicate with Scheduling Coordinators to receive any type of updated Bid or Schedule information;
- (b) the CAISO's scheduling infrastructure computer systems will not be able to communicate Congestion Management information and Schedule changes to the Scheduling Coordinators; and

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- (c) the CAISO will not be able to communicate general information, including emergency information, to any Market Participants.

### **7.7.14.2.2 Communications during Unavailability of CAISO's Secure Communication System**

During any period of CAISO's secure communication system unavailability, the CAISO shall:

- (a) make all reasonable efforts to keep Market Participants aware of current CAISO Controlled Grid status using voice communications;
- (b) use the most recent set of Day-Ahead Schedules, RUC Schedules, AS Awards, HASP Intertie Schedules, and Dispatch Instructions for each Scheduling Coordinator for the current and all future Settlement Periods and/or Trading Days until the CAISO's secure communication system is restored; and
- (c) attempt to take critical Bids, including ETC and TOR Self-Schedules changes, from Scheduling Coordinators via voice communications as time and personnel availability allows.

### **7.7.14.2.3 Primary CAISO Control Center – Loss of all Voice Communications**

In the event of loss of all voice communication at the Primary CAISO Control Center, the Primary CAISO Control Center will use alternate communications to notify the Backup CAISO Control Center of the loss of voice communications. The Backup CAISO Control Center will post information on the situation on the CAISO's secure communication system. Additional voice notifications will be made as time permits.

Once voice communications have been restored to the Primary CAISO Control Center, the CAISO will post this information on the CAISO's secure communication system.

### **7.7.14.2.4 Primary CAISO Control Center – Control Center Completely Unavailable**

In the event that the Primary CAISO Control Center becomes completely unavailable, the Primary CAISO Control Center will use alternate communications to notify the Backup CAISO Control Center that the Primary CAISO Control Center is unavailable. The Backup CAISO Control Center will post information on the situation on the CAISO's secure communication system. Additional voice notifications will be made as time permits.

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The Backup CAISO Control Center will post confirmation on the CAISO's secure communication system that all computer systems are functioning normally (if such is the case) and take complete control of the CAISO Controlled Grid. The Backup CAISO Control Center will notify the single point of contact at the transmission operations center of Pacific Gas and Electric Company by direct voice communication of the situation.

Once the Primary CAISO Control Center is again available, all functions will be transferred back, and the Primary CAISO Control Center will notify all Market Participants via the CAISO's secure communication system.

### **7.7.14.2.5 Primary CAISO Control Center - CAISO Energy Management System (EMS) Unavailable**

Should an outage occur to the redundant EMS computer systems in the Primary CAISO Control Center, an auto transfer should occur to transfer EMS operation to the redundant EMS back up computers at the Backup CAISO Control Center. Due to the severity of a total CAISO EMS computer outage, the Primary CAISO Control Center will post information on the CAISO's secure communication system that the Primary CAISO Control Center EMS computer is unavailable and that EMS control has been transferred to the Backup CAISO Control Center.

When the Primary CAISO Control Center EMS computer is restored, the Backup CAISO Control Center will initiate a transfer back of the EMS system to the Primary CAISO Control Center. The Primary CAISO Control Center will post information on the restored EMS computer system status on the CAISO's secure communication system.

### **7.7.14.2.6 Backup CAISO Control Center – Loss of all Voice Communications**

In the event of a loss of all voice communications at the Backup CAISO Control Center, the Backup CAISO Control Center will use alternate communications to notify the Primary CAISO Control Center of the loss of voice communications. The Primary CAISO Control Center will post information on the situation via the CAISO's secure communication system. Additional voice notifications will be made as time permits. Once voice communications have been restored to the Backup CAISO Control Center, the Primary CAISO Control Center will post this information on the CAISO's secure communication system.



**7.7.14.2.7 Backup CAISO Control Center – Control Center Completely Unavailable**

In the event that the Backup CAISO Control Center becomes completely unavailable, the Backup CAISO Control Center will use alternate communications to notify the Primary CAISO Control Center that the Backup CAISO Control Center is unavailable. The Primary CAISO Control Center will post information on the situation on the CAISO's secure communication system. Additional voice notifications will be made as time permits.

The Primary CAISO Control Center will post confirmation on the CAISO's secure communication system that all computer systems are functioning normally (if such is the case) and take complete control of the CAISO Controlled Grid. The Primary CAISO Control Center will notify the grid control center of Southern California Edison Company by direct voice communications of the situation.

Once the Backup CAISO Control Center is again available, all functions will be transferred back, and the Backup CAISO Control Center will notify all Market Participants via the CAISO's secure communication system.

**7.7.14.2.8 Use of IOUs' Energy Control Center Computers**

The CAISO and the IOUs will comply with the procedures for the utilization by the CAISO of the IOUs' Energy control center computers when developed. The CAISO will post such procedures on the CAISO's secure communication system when agreed.

**7.7.15 System Operations In The Event Of A Market Disruption**

**7.7.15.1 Actions in the Event of a Market Disruption, to Prevent a Market Disruption or to minimize the Extent of a Market Disruption**

The CAISO may take one or more of the following actions in the event of a Market Disruption, to prevent a Market Disruption, or to minimize the extent of a Market Disruption:

- (a) postpone the closure of the applicable CAISO Market;
- (b) remove Bids, including Self-Schedules, that have resulted in a Market Disruption previously;

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- (c) close the applicable CAISO Market and manually copy Bids, including Self-Schedules, from the previous day or other applicable market period;
- (d) close the applicable CAISO Market and use submitted Bids, including Self-Schedules, to the extent possible;
- (e) cancel the applicable CAISO Market, in which case import/export schedules shall be determined by submittal of E-Tags;
- (f) utilize Administrative Prices to settle metered Supply and Demand;
- (g) utilize Exceptional Dispatch and issue operating orders for resources to be committed and dispatched to meet Demand; and
- (h) suspend or limit the ability of all Scheduling Coordinators to submit Virtual Bids on behalf of Convergence Bidding Entities at specific Eligible PNodes or Eligible Aggregated PNodes, or at all Eligible PNodes or Eligible Aggregated PNodes.

### **7.7.15.2 Removal of Bids, in the Event of a Market Disruption, to Prevent a Market Disruption, or to minimize the Extent of a Market Disruption**

#### **7.7.15.2.1 Objective Measures**

In the event of a Market Disruption, to prevent a Market Disruption, or to minimize the extent of a Market Disruption, as provided in Section 7.7.15.1 (b), the CAISO may remove Bids, which as defined include Self-Schedules, from the relevant CAISO Market. The types of Bids that the CAISO may remove include those that have previously caused a Market Disruption. These are Bids that are not feasible based on the misalignment of resource-specific conditions and physical constraints represented in the Master File, current outage information, and the Bid itself. For example, these include: (1) Bids that pass through the automated Bid validation rules but are invalid for other reasons not detectable by the automated Bid validation, including derates reflected in SLIC; (2) Bids that are identified prior to the end of the CAISO Market run as causing a feasibility issue that prevents the CAISO Market run from clearing in the time allotted for the run, including ramp rates in SLIC that result in infeasible generation Bids; and (3) multiple Bids that do not pose a problem for processing through the CAISO Market when considered individually,

but may when submitted in combination with other Bids become infeasible and present an impediment to the successful completion of the CAISO Market.

**7.7.15.2.2 Consequences of Removal of a Bid**

The CAISO may remove part of a Bid, but retain other parts of the Bid for the applicable CAISO Market run and interval for the same or different product, and may retain parts of the Bid for subsequent CAISO Market runs or intervals. If a particular Energy or Ancillary Service Bid must be removed pursuant to Section 7.7.15.2.1, the CAISO will remove the entire Bid for that particular service and market. The Scheduling Coordinator may resubmit removed Bids in subsequent CAISO Markets, provided the Scheduling Coordinator complies with any operator instructions regarding the subject Bids. In the event a Bid is removed from an IFM run, the RUC Availability Bid associated with the removed IFM Bid may still be accepted for the corresponding RUC run, unless the RUC Availability Bid is determined to be the cause of the disruption. A problematic Bid as described in Section 7.7.15.2.1 will typically be identified as infeasible prior to publication of the CAISO Market interval in which it is causing a problem, in which case to the extent practicable the CAISO may remove the Bid, execute the CAISO Market without the removed Bid, and publish a CAISO Market result for that interval. In some instances, a Bid may be able to clear through the IFM without causing an infeasibility issue, but then it may be necessary to remove the RUC Availability Bid associated with the IFM Bid for the corresponding RUC run due to infeasibility issues raised for the RUC run. In the Real-Time Market, for example, for reasons discussed above the CAISO may be required to remove a Bid for a Non-Dynamic System Resource that would normally be dispatched in the HASP, yet may be able to utilize and accept the Bids submitted for the RTD and non-HASP RTUC runs of the Real-Time Market included within the same Scheduling Coordinator Bid submission. If an Ancillary Service Bid or Submission to Self-Provide Ancillary Services is removed from the IFM, the Scheduling Coordinator may resubmit these components in the RTM provided the issues identified in the IFM have been resolved and the Bid or submission is otherwise consistent with the Ancillary Service bidding rules in the CAISO Tariff.

If, for the reasons discussed above, the CAISO is required to remove a Bid in the advisory RTUC or RTD runs conducted for future intervals during the Real-Time Market, the removed Bid may still be used in the

binding runs of the Real-Time Market for the same interval if the problems previously experienced with the Bid do not arise. If the CAISO is required to remove an Ancillary Services Bid submitted in the Real-Time Market for consideration in the RTUC run, the CAISO may retain the Energy Bid submitted in association with the Ancillary Services Bid for that CAISO Market run.

#### **7.7.15.2.3 Settlement Consequences of Removal of Bids**

In the event that a Bid is removed from the Day-Ahead Market, the Scheduling Coordinator whose Bid is removed will not be subject to Settlement for the Day-Ahead Market for the affected service. The Scheduling Coordinator may then resubmit the Bid in the HASP/Real-Time Market for the same service and, to the extent the Bid is feasible and the issues identified have been resolved, it may be accepted in the Real-Time Market consistent with the CAISO Tariff requirements that apply to the HASP/Real-Time Market. In the case of Ancillary Services Bids, including Submissions to Self-Provide an Ancillary Service, that are removed from the Day-Ahead Market, the Scheduling Coordinator will not receive Settlement for the Ancillary Services in the Day-Ahead Market and will not receive an opportunity cost payment in the Day-Ahead Market for the offered service. If the Bid is accepted in the HASP/Real-Time Market, the Scheduling Coordinator will be subject to Settlement based on the CAISO Market in which the Bid actually clears. In the event that a Bid is removed from a CAISO Market run or interval, the CAISO may subsequently be required to issue an Exceptional Dispatch for the resource, in which case the Scheduling Coordinator will receive Exceptional Dispatch Settlement as provided in Section 11.5.6. In the event that a Demand Bid is removed from the Day-Ahead Market, because no Demand Bids for load can be submitted in the Real-Time Market, Scheduling Coordinators for the load not cleared in the Day-Ahead Market will be settled as Uninstructed Imbalance Energy as provided in Section 11.5.2.

#### **7.7.15.2.4 Reporting to Affected Scheduling Coordinators**

To the extent practicable, the CAISO will contact a Scheduling Coordinator's representative before removing a Bid and advise the representative of the issues encountered with the Bid. In the event that a Bid is removed, the Scheduling Coordinator's Bid will not be cleared through the specific CAISO Market from which it was removed. The CAISO will notify the Scheduling Coordinator as soon as practicable, but

no later than three (3) Business Days, after the applicable Bid was removed and will provide information specifying when its Bid was removed and the nature of the disruption.

**7.7.15.3 Choices of Action to Prevent a Market Disruption, in the Event of a Market Disruption, or to minimize the Extent of a Market Disruption**

The CAISO's choice of action in the event of a Market Disruption shall depend on the CAISO Market that is disrupted, the cause of the Market Disruption, the expected time to resolve the Market Disruption, and the status of submitted Bids and Self-Schedules at the time the Market Disruption occurs. Nothing in this Section 7.7.15 shall prevent the CAISO from taking any other action permitted under the CAISO Tariff.

**7.7.15.4 Reporting Requirements under Section 7.7.15**

The CAISO shall include reports on actions taken pursuant to Section 7.7.15 in the Exceptional Dispatch report provided in Section 34.9.4 of the CAISO Tariff. The report shall detail the frequency and types of actions taken by the CAISO pursuant to this Section 7.7.15, as well as the nature of the specific Market Disruptions that caused the CAISO to take action and the CAISO rationale for taking such actions, or the Market Disruption that was successfully prevented or minimized by the CAISO as a result of taking action pursuant to its authority under Section 7.7.15. This informational filing shall also contain general information on the Bids removed pursuant to Section 7.7.15, which may include the megawatt quantity, point of interconnection, specification of the Day-Ahead versus Real-Time Bid, and Energy or Ancillary Services Bid, and the CAISO's rationale for removal; provided, however, that any Scheduling Coordinator-specific individual Bid information will be submitted on a confidential basis consistent with FERC's rules and regulations governing requests for confidential treatment of commercially sensitive information.