

**Standard Capacity Product Amendment Filing
4th Replacement CAISO Tariff
April 9, 2009**

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9.3.10.3 Any Operator, upon identification of a situation likely to result in a Forced Outage within the next twenty-four (24) hours unless immediate corrective action is taken, where such action requires the removing from service or reducing the maximum output capability of a Generating Unit or a Resource-Specific System Resource by ten (10) MW or more from the value most recently recorded in SLIC, or removing a transmission facility from service, shall communicate directly with the CAISO Control Center. All such notifications of Forced Outages shall be communicated to the CAISO Control Center with as much notice as possible in order that the necessary security analysis and CAISO Controlled Grid assessments may be performed. If prior notice of a Forced Outage cannot be given, the Operator shall notify the CAISO of the Forced Outage within thirty (30) minutes after it occurs. Any Operator, upon identification of a situation likely to result in a Forced Outage but of a nature not requiring a removal from service until some time more than twenty-four (24) hours in the future will be subject to the provisions of Section 9 with respect to any necessary Outage except the requirements imposing time limits for notification will be waived and the request will be expedited by the CAISO provided notice is given as soon as possible.

9.3.10.3.1 If prior notice of a Forced Outage cannot be given, the Operator of a Generating Unit or a Resource-Specific System Resource is required to notify the CAISO within sixty (60) minutes after discovering any change in the maximum output capability of at least ten (10) MW or five percent (5%) of the value registered in the Master File, whichever is greater, from the value registered in SLIC that lasts for fifteen (15) minutes or longer.

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ARTICLE V – RESOURCE ADEQUACY

40 RESOURCE ADEQUACY DEMONSTRATION FOR ALL SCHEDULING COORDINATORS BIDDING AND SCHEDULING DEMAND IN THE CAISO BALANCING AUTHORITY AREA.

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40.1.1 Election of Load Serving Entity Status.

On an annual basis, in the manner and schedule set forth in the Business Practice Manual, the Scheduling Coordinator for a Load Serving Entity, not exempt under Section 40.1, shall inform the CAISO whether each such LSE elects to be either: (i) a Reserve Sharing LSE or (ii) a Modified Reserve Sharing LSE. A Scheduling Coordinator for a Load following MSS is not required to make an election under this Section. Scheduling Coordinators for Load following MSSs are subject solely to Sections 40.2.4, and 40.3, and with respect to their Local Capacity Area Resources identified in accordance with Section 40.2.4, Section 40.9.

The CAISO may confirm with the CPUC, Local Regulatory Authority, or federal agency, as applicable, the accuracy of the election by the Scheduling Coordinator for any LSE under its respective jurisdiction, or, in the absence of any election by the Scheduling Coordinator, the desired election for any LSE under its jurisdiction. The determination of the CPUC, Local Regulatory Authority, or federal agency will be deemed binding by the CAISO on the Scheduling Coordinator and the LSE. If the Scheduling Coordinator and CPUC, Local Regulatory Authority, or federal agency, as appropriate, fail to make the election on behalf of an LSE in accordance with the Business Practice Manual, the LSE shall be deemed a Reserve Sharing LSE.

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40.2.4 Load Following MSS.

A Scheduling Coordinator for a Load following MSS must provide an annual Resource Adequacy Plan that sets forth, at a minimum, the Local Capacity Area Resources, if any, procured by the Load following MSS as described in Section 40.3. The annual Resource Adequacy Plan shall utilize the annual coincident peak Demand determination provided by the California Energy Commission for such Load following MSS using Demand Forecast data submitted to the California Energy Commission by the Load following MSS, or, if the California Energy Commission does not produce coincident peak Demand Forecasts for the Load following MSS, the annual coincident peak Demand Forecast produced by the CAISO for such Load following MSS in accordance with its Business Practice Manual using Demand Forecast data submitted to the CAISO by the Load following MSS. The Local Capacity Area Resources identified by the annual Resource Adequacy Plan submitted by the Load following MSS shall be subject

to the Availability Standards, Non-Availability Charge, and Availability Incentive Payment specified in Section 40.9.

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~~40.3.4.1 [NOT USED]~~

~~40.3.4.2 [NOT USED]~~

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~~40.4.5 Reductions for Performance Criteria.~~

~~No later than 12 months after the effective date of this Section 40, the CAISO will issue a report outlining a proposal with respect to performance criteria for Resource Adequacy Resources. The CAISO will collaborate with the CPUC and other Local Regulatory Authorities to develop the performance criteria to be submitted to FERC. The Scheduling Coordinator for a Resource Adequacy Resource shall provide or make available to the CAISO, subject to the confidentiality provisions of this CAISO Tariff, all documentation requested by the CAISO to determine, develop or implement the performance criteria, including, but not limited to, NERC Generating Availability Data System data.~~

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40.5 Requirements Applicable to Modified Reserve Sharing LSEs Only.

40.5.1 Day Ahead Scheduling and Bidding Requirements.

- (1) Scheduling Coordinators on behalf of Modified Reserve Sharing LSEs serving Load within the CAISO Balancing Authority Area for whom they submit Demand Bids shall submit into the IFM aBids or Self-Schedules or Bid for both Demand and Supply, each equal to 115% of the hourly Demand Forecasts for each Modified Reserve Sharing LSE it represents for each Trading Hour for the next Trading Day. Subject to Section 40.5.5, the resources included in a Self-Schedule or a Bid in each Trading Hour to satisfy 115% of the Modified Reserve Sharing LSE's hourly Demand Forecasts will be deemed Resource Adequacy Resources and (a) shall be comprised of those resources listed in the Modified Reserve Sharing LSE's monthly Resource Adequacy Plan and (b) shall include

all Local Capacity Area Resources listed in the Modified Reserve Sharing LSE's annual Resource Adequacy Plan, if any, except to the extent the Local Capacity Area Resources, if any, are unavailable due to any Outages or reductions in capacity reported to the CAISO in accordance with this CAISO Tariff.

- (i) Local Capacity Area Resources physically capable of operating must submit: (a) Economic Bids for Energy and/or Self-Schedules for all their Resource Adequacy Capacity into the IFM and RUC and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services in the IFM for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services and for each Ancillary Service for which the resource is certified. For Resource Adequacy Capacity subject to this requirement for which no Economic Energy Bid or Self-Schedule has been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8. For Resource Adequacy Capacity subject to this requirement for which no Economic Bids for Ancillary Services or Submissions to Self-Provide Ancillary Services have been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8 for each Ancillary Service the resource is certified to provide. A Local Capacity Area Resource that has not fully submitted a Bid or Self-Schedule for all of its Resource Adequacy Capacity will be subject to the CAISO's optimization for the remainder of its capacity, which must be Bid into the Day-Ahead Market; hHowever, to the extent the Generating Unit providing Local Capacity Area Resource capacity constitutes a Use-Limited Resource under Section 40.6.4, the provisions of Section 40.6.4 will apply.

- ~~(ii) If the Resource Adequacy Resource submits a Bid for Ancillary Services, the Energy Bid associated with the Bid for Ancillary Services will be optimized by the CAISO. However, pursuant to Section 8.6.2, to the~~

~~extent the Local Capacity Area Resource self provides Ancillary Services and local Constraints result is in a solution in the MPM-RRD that involves Load reduction, then Self-Provided AS from the Local Capacity Area Resource will be converted into Ancillary Service Bids at the minimum Bid price for Ancillary Services as prescribed in Section 39.6.1.5.~~

(iii) ~~A~~ Resource Adequacy Resources must participate in the RUC to the extent that the resource has available Resource Adequacy Capacity that was offered into the IFM and is not reflected in an IFM Schedule ~~not submitted a Self-Schedule or already committed to provide Energy or capacity in the IFM.~~ Resource Adequacy Capacity ~~Resources participating in RUC~~ will be optimized using ~~required to offer into RUC and will be considered based on a zero dollar (\$0/MW-hour~~ RUC Availability Bid.

~~(iii)~~ Capacity from Resource Adequacy Resources selected in RUC will not be eligible to receive a RUC Availability Payment.

~~(iv)~~ Through the IFM co-optimization process, the CAISO will utilize available Local Capacity Area Resource Adequacy Capacity to provide Energy or Ancillary Services in the most efficient manner to clear the Energy market, manage congestion and procure required Ancillary Services. In so doing the IFM will honor submitted Energy Self-Schedules of the Local Capacity Area Resource Adequacy Capacity of the Modified Reserve Sharing LSE unless the CAISO is unable to satisfy 100 % of the Ancillary Services requirements. In such cases the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Local Capacity Area Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. If the IFM reduces the Energy Self-Schedule of Resource Adequacy Capacity to provide an Ancillary Service, the Ancillary Service Marginal Price for that Ancillary

Service will be calculated in accordance with Section 27.1.2 using the Ancillary Service Bids submitted by the Scheduling Coordinator for the Resource Adequacy Resource or inserted by the CAISO pursuant to this Section 40.5.1, and using the resource's Default Energy Bid to determine the Resource Adequacy Resource's opportunity cost of Energy. If the Scheduling Coordinator for the Modified Reserve Sharing LSE's Resource Adequacy Resource believes that the opportunity cost of Energy based on the Resource Adequacy Resource's Default Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling Coordinator may submit a detailed breakdown of the component costs justifying the increased amount to the CAISO and to the FERC no later than seven (7) days after the end of the month in which the submitted Energy Self-Schedule was reduced by the CAISO to provide an Ancillary Service. The CAISO will treat such information as confidential and will apply the procedures in Section 20.4 of this CAISO Tariff with regard to requests for disclosure of such information. The CAISO shall pay the higher opportunity costs after those amounts have been approved by FERC.

- (2) Resource Adequacy Resources of Modified Reserve Sharing LSEs that do not clear in the IFM or are not committed in RUC shall have no further offer requirements in HASP or Real-Time, except under System Emergencies as provided in this CAISO Tariff.
- (3) Resource Adequacy Resources committed by the CAISO must maintain that commitment through Real-Time. In the event of a Forced Outage on a Resource Adequacy Resource committed in the Day-Ahead Market to provide Energy, the Scheduling Coordinator for the Modified Reserve Sharing LSE will have up to the next HASP bidding opportunity, plus one hour, to replace the lesser of: (i) the

committed resource suffering the Forced Outage, (ii) the quantity of Energy committed in the Day-Ahead Market, or (iii) 107% of the hourly forecast Demand.

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40.6.1 Day-Ahead Availability.

Scheduling Coordinators supplying Resource Adequacy Capacity shall make the Resource Adequacy Capacity, except for that subject to Section 40.6.4, available Day-Ahead to the CAISO as follows:

- (1) Resource Adequacy Resources physically capable of operating must submit: (a) Economic Bids for Energy and/or Self-Schedules for all their Resource Adequacy Capacity into the IFM and RUC and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services in the IFM for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services and for each Ancillary Service for which the resource is certified. For Resource Adequacy Capacity subject to this requirement for which no Economic Energy Bid or Self-Schedule has been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8. For Resource Adequacy Capacity subject to this requirement for which no Economic Bids for Ancillary Services or Submissions to Self-Provide Ancillary Services have been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8 for each Ancillary Service the resource is certified to provide.
- (2) Resource Adequacy Resources that are Extremely Long-Start Resources must make themselves available to the CAISO by complying with the Extremely Long-Start Commitment Process under Section 31.7 or otherwise committing the ELS Resource upon instruction from the CAISO, if physically capable. Once the ELS Resource is committed by the CAISO, it is subject to the provisions of this Section 40.6.1 regarding Day-Ahead Availability and Section 40.6.2 regarding Real-Time Availability for the Trading Days for which it was committed.

- (3) Resource Adequacy Resources must be available except for limitations specified in the Master File, legal or regulatory prohibitions or as otherwise required by this CAISO Tariff or by Good Utility Practice.
- (4) Through the IFM co-optimization process, the CAISO will utilize available Resource Adequacy Capacity to provide Energy or Ancillary Services in the most efficient manner to clear the Energy market, manage congestion and procure required Ancillary Services. In so doing, the IFM will honor submitted Energy Self-Schedules of Resource Adequacy Capacity unless the CAISO is unable to satisfy 100 %t of the Ancillary Services requirements. In such cases, the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. If the IFM reduces the Energy Self-Schedule of Resource Adequacy Capacity to provide an Ancillary Service, the Ancillary Service Marginal Price for that Ancillary Service will be calculated in accordance with Section 27.1.2 using the Ancillary Service Bids submitted by the Scheduling Coordinator for the Resource Adequacy Resource or inserted by the CAISO pursuant to this Section 40.6.1, and using the resource's Default Energy Bid to determine the Resource Adequacy Resource's opportunity cost of Energy. If the Scheduling Coordinator for the Resource Adequacy Resource believes that the opportunity cost of Energy based on the Resource Adequacy Resource's Default Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling Coordinator may submit a detailed breakdown of the component costs justifying the increased amount to the CAISO and to the FERC no later than seven (7) days after the end of the month in which the submitted Energy Self-Schedule was reduced by the CAISO to provide an Ancillary Service. The CAISO will treat such information as confidential and will apply the procedures in Section 20.4 of this CAISO Tariff with regard to requests for disclosure of such information. The CAISO shall pay any higher opportunity

~~costs approved by FERC. Resource Adequacy Resources that do not submit Self-Schedules or Economic Bids reflecting all of their Resource Adequacy Capacity will be subject to the CAISO's optimization for the remainder of their Resource Adequacy Capacity Bids into the Day-Ahead Market. If the Resource Adequacy Resource submits a Bid for Ancillary Service(s), the Energy Bid associated with the Bid for Ancillary Services will be optimized by the CAISO.~~

- (5) ~~A~~ Resource Adequacy Resources must participate in the RUC to the extent that the resource has available Resource Adequacy Capacity that is not reflected in ~~an IFM Schedule Self-Schedule is already committed to provide Energy or capacity in the IFM.~~ Resource Adequacy ~~Capacity Resources participating in will be subject to~~ RUC ~~and~~ will be optimized ~~at using~~ a zero dollar ~~(\$0/MW-hour)~~ RUC Availability Bid.
- (6) Capacity from Resource Adequacy Resources selected in RUC will not be eligible to receive a RUC Availability Payment.

40.6.2 Real-Time Availability.

Resource Adequacy Resources that have ~~received an IFM Schedule for Energy or Ancillary Services or a RUC Schedule been committed by the CAISO in the Day-Ahead Market or the RUC for all or part of their Resource Adequacy Capacity or have submitted a Self-Schedule for part of their Resource Adequacy Capacity~~ must remain available to the CAISO through Real-Time, including ~~any Resource Adequacy Capacity of such resources that is not included in an IFM Schedule or RUC Schedule, except for Resource Adequacy Capacity that is subject to Section 40.6.4 capacity reflected in the Day-Ahead Schedule and any remaining capacity, for the scheduled and non-scheduled portions of their Resource Adequacy Capacity, subject to the provisions of Section 40.6.4.~~ ~~Resource Adequacy Resources that do not have an IFM Schedule or a RUC Schedule for any of their Resource Adequacy Capacity for a given Trading Hour may be required to be available to the CAISO through Real-Time as specified in Sections 40.6.3 and 40.6.7.~~ Resource Adequacy Resources with Resource Adequacy Capacity that does not have an IFM Schedule or a RUC Schedule for a given Trading Hour must submit to the RTM for that Trading hour: (a) Energy Bids and Self-Schedules for the full amount of the available Resource Adequacy

Capacity, including capacity for which it has submitted Ancillary Services Bids or Submissions to Self-Provide Ancillary Services; and (b) Ancillary Services Bids and Submissions to Self-Provide Ancillary Services for the full amount of the available Ancillary Service-certified Resource Adequacy Capacity and for each Ancillary Service for which the resource is certified, including capacity for which it has submitted Energy Bids and Self-Schedules. The CAISO will insert Generated Bids in accordance with Section 40.6.8 for any Resource Adequacy capacity subject to the above requirements for which the resource has failed to submit the appropriate bids to the RTM.

The CAISO will honor submitted Energy Self-Schedules of Resource Adequacy Capacity unless the CAISO is unable to satisfy 100% of its Ancillary Services requirements. In such cases, the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. If the CAISO reduces a submitted Real-Time Energy Self-Schedule for Resource Adequacy Capacity when that capacity is needed to meet an Ancillary Services requirement, the Ancillary Service Marginal Price for that capacity will be calculated in accordance with Sections 27.1.2 and 40.6.1.

40.6.3 Additional Availability Requirements for Short Start Units ~~and Dynamic System Resources.~~

A Short Start Units that is a Resource Adequacy Resource and that does not have an IFM Schedule or a RUC Schedule for any of its capacity for a given Trading Hour is required to participate in the Real Time Market in accordance with Section 40.6.2. Such a resource that is also a Use-Limited Resource subject to Section 40.6.4 is required, consistent with their applicable use plan, to submit Economic Bids or Self Schedules for Resource Adequacy Capacity into the Real Time Market.~~and Dynamic System Resources, unless a Dynamic System Resource is demonstrated to be incapable of meeting the definition of a Short Start Unit based on physical operating characteristics, that supply Resource Adequacy Capacity not committed under Section 40.6.1, and therefore are subject to Section 40.6.2, and Use-Limited Resources subject to Section 40.6.4 to the extent consistent with their applicable use plan, must submit Economic Bids or Self-Schedules for the Resource Adequacy Capacity into the Real-Time Market.~~

The CAISO may waive these availability obligations for a Short Start Units~~and Dynamic System Resources~~ that doeshave not have an IFM Schedule or a submitted a Self-Schedule or otherwise been selected in the IFM or RUC Schedule based on the procedure to be published on the CAISO Website.

40.6.4 Additional Availability Requirements for Use-Limited Resources.

40.6.4.1 Registration of Use-Limited Resources.

Hydroelectric Generating Units and Participating Load, including Pumping Load, are deemed to be Use-Limited Resources for purposes of this Section 40 and are not required to submit the application described in this Section 40.6.4.1. Scheduling Coordinators for other Use-Limited Resources, ~~other than for hydroelectric Generating Units and Participating Load, including Pumping Load,~~ must provide the CAISO an application in the form specified on the CAISO Website requesting registration of a specifically identified resource as a Use-Limited Resource. This application shall include specific operating data and supporting documentation including, but not limited to;

- (1) a detailed explanation of why the resource is subject to operating limitations;
- (2) historical data to show attainable MWhs for each 24-hour period during the preceding year, including, as applicable, environmental restrictions for NOx, SOx, or other factors; and
- (3) further data or other information as may be requested by the CAISO to understand the operating characteristics of the unit.

Within five (5) Business Days after receipt of the application, the CAISO will respond to the Scheduling Coordinator as to whether or not the CAISO agrees that the facility is eligible to be a Use-Limited Resource. If the CAISO determines the facility is not a Use-Limited Resource, the Scheduling Coordinator may challenge that determination in accordance with the CAISO ADR Procedures.

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40.6.5.1 Additional Availability Requirements for Dynamic Resource-Specific System Resources.

A Dynamic Resource-Specific System Resource that supplies Resource Adequacy Capacity, and is not otherwise a Use-Limited Resource under Section 40.6.4, will be subject ~~to the requirements of Sections~~ 40.6.1 and 40.6.2 and either Section 40.6.3 as a Short Start Unit or Section 40.6.7 as a Long Start Unit based upon the Dynamic Resource-Specific System Resource's registered physical operating characteristics.

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40.6.5 Additional Availability Requirements for System Resources.

In the IFM, the multi-hour block constraints of a System Resource, other than a System Resource capable of submitting a Dynamic Schedule or a Resource-Specific System Resource, are honored in the optimization. ~~Such a Multi-hour block System Resources that are not capable of submitting a Dynamic Schedule and are is also a~~ Resource Adequacy Resources must be capable of hourly ~~selection scheduling~~ by the CAISO in RUC if ~~it is~~ not fully ~~committed-scheduled~~ in the IFM. If ~~such a Resource Adequacy Resource is selected~~ scheduled in the RUC, the ~~CAISO will schedule the resource in the HASP for each hour of the resource's RUC schedule without regard to the multi-hour block constraint that was submitted to the IFM~~ System Resource must be dispatchable in those hours in the HASP and Real Time Market. For ~~an~~ existing System Resources ~~that provides Resource Adequacy Capacity with through~~ a call-option that expires prior to the ~~completion-close~~ of the IFM, such ~~a~~ System Resources listed on a Resource Adequacy Plan must be reported to the CAISO for consideration in the Extremely Long-Start Commitment Process.

40.6.5.1 Additional Availability Requirements for Dynamic Resource-Specific System Resources.

A Dynamic or Non-Dynamic Resource-Specific System Resource that supplies Resource Adequacy Capacity, and is not otherwise a Use-Limited Resource under Section 40.6.4, will be subject to the requirements of Sections 40.6.1 and 406.2 and either Section 40.6.3 as a Short Start Unit or Section 40.6.7 as a Long Start Unit based upon the Dynamic Resource-Specific System Resource's registered physical operating characteristics.

40.6.5.2 Dynamic Non-Resource-Specific System Resources

A Dynamic non-Resource-Specific System Resource that provides Resource Adequacy Capacity will be subject to the provisions of 40.6.1 and 40.6.2.

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40.6.7 ~~Availability Requirements for Long Start Units.~~

~~40.6.7.1 Release of Long Start Units.~~

Long Start Units not committed in the Day-Ahead Market will be released from any further obligation to submit Self-Schedules or Bids for the relevant Operating Day. Scheduling Coordinators for Long Start Units are not precluded from self-committing the unit after the Day-Ahead Market and submitting a Self-Schedule for Wheeling-Out in the HASP, unless precluded by terms of their contracts.

~~40.6.7.2 ——— Obligation of Long Start Units to Offer Remaining Capacity in Real-Time.~~

~~Long Start Units that have been committed by the CAISO in the Day-Ahead Market or the RUC for part of their Resource Adequacy Capacity or have submitted a Self-Schedule for part of their Resource Adequacy Capacity must remain available to the CAISO through Real-Time for the full value of their Resource Adequacy Capacity.~~

40.6.8 Use of Generated Bids.

Prior to completion of the Day-Ahead Market, the CAISO will determine if ~~dispatchable~~ Resource Adequacy Capacity subject to the requirements of Section 40.6.1 and for which the CAISO has not received notification of an Outage from Resource Adequacy Resources has not been reflected in a Bid and will insert a Generated Bid for such any dispatchable Resource Adequacy Capacity that is not reflected in a Bid into the CAISO Day-Ahead Market ~~and for which the CAISO has not received notification of an Outage.~~ Prior to running the Real-Time Market, the CAISO will determine if Resource Adequacy Capacity subject to the requirements of Section 40.6.2 and for which the CAISO has not received notification of an Outage has not been reflected in a Bid and will insert a Generated Bid for such capacity into the Real-Time Market. In addition, the CAISO will determine if all dispatchable Resource Adequacy Capacity from Short Start Units, not otherwise selected in the IFM or RUC, is reflected in a Bid into the ~~Real-Time Market~~HASP and will insert a Generated Bid for any remaining dispatchable Resource Adequacy Capacity for which the CAISO has not received notification of an Outage. A Generated Bid for Energy will equal the resources Default Energy Bid. A Generated Bid for Ancillary Services will equal zero dollars (\$0/MW-hour). Notwithstanding any of the provisions of Section 40.6.8 set forth above, the CAISO will not insert any Bid for a Resource Adequacy Resource that is a Use-Limited Resource.

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~~40.9. Availability Standards, Non-Availability Charges, and Availability Incentive Payments.~~

40.9.1 General.

Except for the exemptions specified in Section 40.9.2, the CAISO will track the availability of Resource Adequacy Capacity during the Availability Assessment Hours of each month, as specified in Section 40.9.3, in order to determine the amount of Resource Adequacy Capacity that was available to the CAISO. Each non-exempt Resource Adequacy Resource will be subject to the Availability Standards determined in accordance with either Section 40.9.4 or 40.9.7, whichever is applicable, for each month during each Resource Adequacy Compliance Year, starting with the 2010 Resource Adequacy Compliance Year. Scheduling Coordinators for Resource Adequacy Resources will be subject to Non-Availability Charges or Availability Incentive Payments as specified in either Section 40.9.4 or Section 40.9.7, whichever is applicable. MW values or percentages used by the CAISO in this Section 40.9 will be calculated to no less than two decimal places.

40.9.2 Exemptions.

The following exemptions apply to the CAISO's Availability Standards program of this Section 40.9:

- (1) Resources with a Pmax less than one (1.0) MW will not be used to determine Availability Standards, will not be subject to Non-Availability Charges or Availability Incentive Payments, and will not be subject to the additional Outage reporting requirements of this Section 40.9.
- (2) Resource Adequacy Capacity that was procured under a contract that was either executed or submitted to the applicable Local Regulatory Authority for approval prior to January 1, 2009, and is associated with specific Generating Units or System Resources, will not be subject to Non-Availability Charges or Availability Incentive Payments. Such contracted Resource Adequacy Capacity, except for non Resource-Specific System Resources, will be included in the development of Availability Standards and will be subject to any Outage reporting requirements necessary for this purpose. The exemption will apply only for the initial term of the contract and to the MW capacity quantity and Resource Adequacy Resources specified in the contract prior to January 1, 2009. The exemption shall terminate upon the conclusion of the initial contract term. Exempt contracts may be re-assigned or undergo novation on or after January 1, 2009, but the

exemption shall not apply for any extended contract term, increased capacity quantity or additional resource(s) beyond those specified in the contract prior to January 1, 2009. Scheduling Coordinators for Resource Adequacy Resources subject to these contracts will be required to certify the start date of the contract, the expiration date, the resource ID(s), and the amount of Resource Adequacy Capacity associated with each resource ID included in the contract.

(3) Demand response, wind resources, solar resources, and Qualifying Facilities will not be used to determine Availability Standards, will not be subject to Non-Availability Charges or Availability Incentive Payments, and will not be subject to the additional Outage reporting requirements of this Section 40.9.

(4) Resource Adequacy Capacity provided through contracts for Energy from non-specified resources delivered within the CAISO Balancing Authority Area will not be used to determine Availability Standards, will not be subject to Non-Availability Charges or Availability Incentive Payments, and will not be subject to the additional Outage reporting requirements of this Section 40.9; and

(5) Resource Adequacy Resources of a Modified Reserve Sharing LSE or a Load following MSS will be used to determine the Availability Standards and will be subject to any Outage reporting requirements necessary for this purpose. Non-Local Capacity Area Resource Adequacy Resources of a Modified Reserve Sharing LSE or a Load following MSS will not be subject to Non-Availability Charges or Availability Incentive Payments, but those entities shall remain responsible for any other applicable deficiency payments under this CAISO Tariff or the applicable MSS Agreement.

Exclusions from the Availability Standards and Outage reporting requirements established in this Section 40.9 are for this Section 40.9 alone and do not affect any other obligation arising under the CAISO Tariff.

40.9.3 Availability Assessment Hours.

The CAISO shall establish Availability Assessment Hours applicable for each month of each Resource Adequacy Compliance Year, starting with Resource Adequacy Compliance Year 2010, in order to assess

the extent to which each Resource Adequacy Resource has met the Availability Standards of this Section 40.9. The Availability Assessment Hours shall be a pre-defined set of hours in each month corresponding to the operating periods when high demand conditions typically occur and when the availability of Resource Adequacy Capacity is most critical to maintaining system reliability. The Availability Assessment Hours shall be comprised of five hours of each non-weekend, non-federal holiday day, and will vary by season as necessary such that, based on historical actual load data, the coincident peak load hour typically falls within the five-hour range each day during the month. The CAISO shall determine the Availability Assessment Hours on an annual basis prior to the start of each Resource Adequacy Compliance Year and shall specify them in the Business Practice Manual.

40.9.4 Availability Determinations.

This Section 40.9.4 addresses availability assessment for all Resource Adequacy Capacity, including the Resource Adequacy Capacity of Resource-Specific System Resources, subject to the Section 40.9 Availability Standards program; however, this Section 40.9.4 does not apply to Resource Adequacy Capacity provided by non-Resource-Specific System Resources which are addressed in Section 40.9.7.

40.9.4.1 Availability Standard.

The CAISO shall calculate and publish the monthly Availability Standards for the next Resource Adequacy Compliance Year in accordance with the schedule set forth in the Business Practice Manual. For Resource Adequacy Compliance Year 2010, the monthly Availability Standards applicable to Resource Adequacy Resources subject to this Section 40.9.4 will be based on the historical availability of Resource Adequacy Resources during the Availability Assessment Hours of the corresponding months during the period from June 2006 through December 2008. For subsequent years, the monthly Availability Standards will be based on historical availability over the previous three years. Each monthly Availability Standard will be calculated as the sum of the available Resource Adequacy Capacity of the included Resource Adequacy Resources across all the Availability Assessment Hours of the month, divided by the sum of the designated Resource Adequacy Capacity for the same set of hours and resources, and multiplied by 100 to obtain a number between zero and 100 percent. For the purpose of determining the available Resource Adequacy Capacity in each month, the CAISO will use the Outage information reported in SLIC and, when available, the Outage reports submitted pursuant to Section

40.9.5. To ensure consistency between the calculation of the monthly Availability Standard and the calculation of each resource's monthly availability, the data utilized for both calculations will be in accordance with the provisions of Sections 40.9.4.2. All Resource Adequacy Resources except for the following will be included in the calculation of the Availability Standards:

- (1) Resource Adequacy Resources exempted in Section 40.9.2;
- (2) Non-Resource-Specific System Resources;
- (3) Use-Limited Resources, until 2011 for Resource Adequacy Compliance Year 2012 at which time, Use-Limited Resources will be included in the set of Resource Adequacy Resources used to determine the Availability Standards; and
- (4) Resources between 1 MW and 10 MW subject to the reporting requirements of Section 40.9.5, until such time that the CAISO has received the outage reports and can begin to utilize the data.

40.9.4.2 Availability Calculation for a Resource Adequacy Resource.

The CAISO will calculate the monthly availability for each Resource Adequacy Resource subject to this Section 40.9.4 as the sum of the hourly available Resource Adequacy Capacity of the resource over all Availability Assessment Hours of the month, divided by the sum of the hourly Resource Adequacy Capacity of the resource as designated in the Supply Plan for the resource for those hours, and multiplied by 100 to obtain a number between zero and 100%.

A Resource Adequacy Resource will be determined to be less than 100% available in a given month if it has any Forced Outages, non-ambient de-rates, or temperature-related ambient de-rates that impact the availability of its designated Resource Adequacy Capacity during the Availability Assessment Hours of that month. Maintenance Outages and Scheduled Maintenance taken in a month will not decrease the Resource Adequacy Resource's calculated availability. Outages properly submitted for temperature-related ambient derates for a Use Limited Resource will be counted against its availability only until such time as the Use Limited Resource reaches its energy limit constraint, at which time such Outages or derates will non longer count against the availability of the Use Limited Resource for the relevant month.

The start and end times used in calculating the availability of each resource each month will be the Outage time reported in the SLIC system or through the alternative reporting process of Section 40.9.5 for resources not included in the SLIC system.

40.9.4.2.1 Substitute Capacity.

A Scheduling Coordinator may substitute capacity that is not Resource Adequacy Capacity for its Resource Adequacy Capacity that is on a Forced Outage or de-rate in order to mitigate the impact of the Forced Outage or de-rate on its availability calculation. Such substitution will be accepted by the CAISO in accordance with the following procedures.

(1) For Local Capacity Area Resources. A Scheduling Coordinator providing Resource Adequacy Capacity to satisfy a Local Capacity Area requirement may pre-qualify alternate resources by providing a prequalification request in accordance with the form and schedule specified in the Business Practice Manual. If the alternate resource is located at the same bus as the Resource Adequacy Resource it would replace and has similar operational characteristics, the CAISO will approve the pre-qualification request as a substitute resource for use in the subsequent Resource Adequacy Compliance Year. Additionally, when a Local Capacity Area Resource Adequacy Resource subsequently has a Forced Outage or de-rate, the Scheduling Coordinator may request to substitute a non-pre-qualified resource. The CAISO will grant the request if the alternate resource is (i) located at the same bus and meets the CAISO's operational needs, or (ii) if not located at the same bus, is located in the same Local Capacity Area, and which meets the CAISO's effectiveness and operational needs, including size of resource, as determined by the CAISO in its reasonable discretion.

(2) Non-Local Capacity Area Resources (Resource Adequacy Resources designated to meet system requirements). If a Resource Adequacy Resource that is not also a Local Capacity Area Resource has an outage that would count against its availability, the Scheduling Coordinator for that resource may, prior to the close of the IFM, request to substitute a non-Resource Adequacy Resource to be used in the place of the original resource. The CAISO shall approve the request if the substitute resource provides the same MW quantity of deliverable capacity as the original Resource Adequacy Resource.

40.9.4.2.2 Accounting for De-Rates.

In accounting for a de-rate of a unit that has not committed 100% of its Net Qualified Capacity in its Monthly Supply Plan, the CAISO will follow the following principles:

- (1) Any de-rate will be applied first to any non Resource Adequacy Capacity of the resource; and
- (2) Any de-rate to Resource Adequacy Capacity will be applied pro-rata to any contract capacity exempt under Section 40.9.2(2) and any non-exempt Resource Adequacy Capacity commitment from that resource.

40.9.5 Outage Reporting.

Scheduling Coordinators for Generating Units or Resource-Specific System Resources that are also Resource Adequacy Resources with a maximum output capability of 1 MW or more, but which do not meet the requirement to provide information on Forced Outages in accordance with Section 9.3.10, shall provided equivalent availability-related information in the form and on the schedule specified in the Business Practice Manuals. This information shall identify all Forced Outages, non-ambient de-rates, and temperature-related ambient de-rates that have occurred over the previous calendar month and shall contain all relevant details needed to enable the CAISO to perform the availability calculation for the resource in accordance with Section 40.9.4, including: the start and end times of any Outages or de-rates, the MW availability in all Availability Assessment Hours, and the causes of any Forced Outages or de-rates. Scheduling Coordinators for Resource Adequacy Resources whose maximum output capability is 10 MW or more shall report Outage-related information in accordance with the reporting obligations in Section 9.3.10.

40.9.6 Non-Availability Charges and Availability Incentive Payments.

A Resource Adequacy Resource that is subject to the availability assessment in accordance with Section 40.9.4 and whose monthly availability calculation under Section 40.9.4.2 is more than two and a half percent (2.5 %) below the monthly Availability Standard will be subject to a Non-Availability Charge for the month. A Resource Adequacy Resource subject to Section 40.9.4 whose availability calculation

under Section 40.9.4.2 is more than two and a half percent (2.5 %) above the monthly Availability Standard will be eligible for an Availability Incentive Payment for the month.

40.9.6.1 Determination of Resource Adequacy Capacity Subject to Non-Availability Charge.

The amount of Resource Adequacy Capacity of a Resource Adequacy Resource subject to the Non-Availability Charge will be determined as follows:

- (1) A Scheduling Coordinator for a Resource Adequacy Resource with actual availability calculated in accordance with Section 40.9.4.2 that is less than fifty percent (50%) for a given month will have the Non-Availability Charge applied to the entire Resource Adequacy Capacity of the resource.
- (2) A Resource Adequacy Resource with actual availability calculated in accordance with Section 40.9.4.2 that is greater than fifty percent (50%) but less than the Availability Standard minus two and a half percent (2.5 %) for a given month will have the Non-Availability Charge assessed to that portion of its Resource Adequacy Capacity equal to the Availability Standard minus two and a half percent (2.5 %) minus the resource's actual availability for the month calculated in accordance with Section 40.9.4.2.
- (3) No Non-Availability Charge will be applied when a Resource Adequacy Resource's actual availability, calculated in accordance with Section 40.9.4.2 for a given month, is equal to or greater than the Availability Standard less two and a half percent (2.5 %).
- (4) Any Forced Outage, non-ambient de-rate, or temperature-related ambient de-rates of a resource that the CAISO has accepted as a substitute for a Resource Adequacy Resource in accordance with Section 40.9.4.2.1 will be applied in calculating the availability of the Resource Adequacy Resource for which it is substituting.

40.9.6.2 Determination of the Non-Availability Charge.

The per-MW Non-Availability Charge rate will be the Monthly ICPM Capacity Payment price as specified in Schedule 6 of Appendix F of this CAISO Tariff. The Non-Availability Charge for a Resource Adequacy Resource shall be determined by multiplying the resource's capacity subject to the Non-Availability Charge calculated in accordance with Section 40.9.6.1 by the Non-Availability Charge rate.

40.9.6.3 Availability Incentive Payment.

Scheduling Coordinators for Resource Adequacy Resources that achieve monthly availability that is more than two and a half percent (2.5%) above the monthly Availability Standard are eligible to receive the monthly Availability Incentive Payment. This payment will be funded entirely through the monthly Non-Availability Charges assessed for the same month. For each resource eligible for the Availability Incentive Payment, its eligible capacity will be that portion of its designated Resource Adequacy Capacity equal to its actual availability calculated in accordance with Section 40.9.4.2 minus the Availability Standard percent minus two and a half percent (2.5%). The monthly Availability Incentive Payment rate will equal the total Non-Availability Charges assessed for the month divided by the total Resource Adequacy Capacity eligible to receive the Availability Incentive Payment that month, provided that the Availability Incentive Payment shall not exceed three times the Non-Availability Charge rate. The Availability Incentive Payment for each eligible resource will equal the product of its eligible capacity and the Availability Incentive Payment rate. Any remaining Non-Availability Charge funds that are not distributed to eligible Resource Adequacy Resources will be credited against the Real-Time neutrality charge for that Trade Month in accordance with Section 11.5.2.3.

40.9.6.4 Monthly Settlement.

The CAISO shall calculate and settle Non-Availability Charges and Availability Incentive Payments on a Trade Month basis so that all Non-Availability Charges collected for a Trade Month are allocated in accordance with Section 40.9.6.3 for that same Trade Month.

40.9.7 Availability Assessment for Resource Adequacy Capacity Provided by Non Resource-Specific System Resources.

Non-Resource-Specific System Resources that provide Resource Adequacy Capacity will comprise a distinct category for purposes of the CAISO's Availability Standards program. This category will have its own Availability Standards and availability calculations, as well as a separate account for setting Non-Availability Charges and Availability Incentive Payments.

40.9.7.1 Availability Standard for Non-Resource-Specific System Resources Providing Resource Adequacy Capacity.

The monthly Availability Standard for a non-Resource-Specific System Resource will be 100 % of the resource's designated Resource Adequacy Capacity for the month, to be provided in the form of

Economic Bids or Self-Schedules at the resource's designated Scheduling Point submitted to the IFM for all Availability Assessment Hours. Resources that achieve less than the 100 % Availability Standard will be subject to Non-Availability Charges. Resources that achieve the 100 % target will be eligible for Availability Incentive Payments. Non-Resource-Specific System Resources will not be included in the calculation of the Availability Standards for other Resource Adequacy Resources as determined in Section 40.9.4.

40.9.7.2 Availability Calculation for Non-Resource-Specific System Resources Providing Resource Adequacy Capacity.

The availability of Resource Adequacy Capacity provided by a non-Resource-Specific System Resource will be measured by its hourly offers of Economic Bids or Self-Schedules to provide Energy or, if certified to provide Ancillary Services, Self-Provision of Ancillary Service capacity into the CAISO Day-Ahead Market in accordance with the requirements of Section 40.6, for all of the Availability Assessment Hours. Specifically, the resource's availability will be calculated as the sum of the MW-hours reflected in the resource's submitted Day-Ahead Economic Bids and Self-Schedules over all Availability Assessment Hours, divided by the sum of the resource's designated Resource Adequacy Capacity for all Availability Assessment Hours, times 100 to obtain a number between zero and 100 percent. The Scheduling Coordinator for Resource Adequacy Capacity provided by non-Resource-Specific System Resources is expected to secure sufficient transmission rights to deliver the Resource Adequacy Capacity to its designated CAISO Scheduling Point. If in any given Availability Assessment Hour, the CAISO does not fully accept the Economic Bids or Self-Schedules submitted by the Scheduling Coordinator for the Resource Adequacy Capacity provided by non-Resource-Specific System Resources, the Scheduling Coordinator for that resource shall be deemed to have met its availability obligation for that hour.

40.9.7.3 Determination of Non-Availability Charges and Availability Incentive Payments for Non-Resource-Specific System Resources Providing Resource Adequacy Capacity.

Non-Resource-Specific System Resources that provide Resource Adequacy Capacity and that fail to meet the 100 % Availability Standard for a given month shall be assessed a Non-Availability Charge. This charge for a resource shall apply to that portion of the resource's designated Resource Adequacy Capacity equal to 100 % minus its actual availability calculated in accordance with Section 40.9.7.2. The Non-Availability Charge will then equal the resource's applicable capacity that is unavailable multiplied by

the a Non-Availability Charge rate equal to the Monthly ICPM Capacity Payment price as specified in Schedule 6 of Appendix F of this CAISO Tariff.

Funds collected for Non-Availability Charges pursuant to this Section 40.9.7.3 in a Trade Month will be used to provide Availability Incentive Payments to non-Resource-Specific System Resources providing Resource Adequacy Capacity that achieve 100 % availability for that same Trade Month. The funds will be distributed to each such resource in proportion to the resource's share of the total Resource Adequacy Capacity provided by non-Resource-Specific System Resources that achieve the 100 % Availability Standard.

Any Availability Incentive Payment to a non-resource specific System Resource providing Resource Adequacy Capacity under this Section 40.9.7 3 will be capped at three times the Non-Availability Charge rate multiplied by the amount of the resource's Resource Adequacy Capacity. Any remaining monthly surplus of Non-Availability Charges from non-Resource-Specific System Resources providing Resource Adequacy Capacity in a Trade Month will be credited against the Real-Time neutrality charge for that Trade Month in accordance with Section 11.5.2.3. Only revenues received from the assessment of Non-Availability Charges to non-Resource-Specific System Resources providing Resource Adequacy Capacity will be used to fund Availability Incentive Payments for non-Resource-Specific System Resources providing Resource Adequacy Capacity.

40.9.8 Reporting

The CAISO will, in accordance with the schedule specified in the Business Practice Manual, provide an informational report that will be posted on the CAISO Website and include the following information: (1) the Availability Standard value for each month of the year and (2) information on the average actual availability each month of Resource Adequacy Resources, the total amount of Non-Availability Charges assessed and the total amount of Availability Incentive Payments made.

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CAISO Tariff Appendix A

Master Definitions Supplement

Availability Assessment Hours

The hours of the month specified in accordance with Section 40.9.3

Availability Incentive Payment

which the CAISO will utilize for applying the Availability Standards program of Section 40.9.

The monthly payment that the CAISO may make to a Resource Adequacy Resource under the Availability Standards program in accordance with Section 40.9.

Availability Standards

The standard established in accordance with Section 40.9.4 and 40.9.7 to determine if a Resource Adequacy Resource is subject to Non-Availability Charges or Availability Incentive Payments.

* * *

Availability Incentive Rate

The monthly dollars per MW rate calculated by dividing the total Non-Availability Charges assessed for a given month by the total Resource Adequacy Capacity that is eligible to receive the Availability Incentive Payment for that month.

* * *

Non-Availability Charge

The monthly charge that the CAISO may assess to a Resource Adequacy Resource under the Availability Standards program in accordance with Section 40.9.

* * *

Resource Adequacy Capacity or RA Capacity

The ~~generation-supply~~ capacity of a Resource Adequacy Resource listed on a Resource Adequacy Plan and a Supply Plan.

* * *

Resource Adequacy Resource

A resource that is ~~required to offer designated in a Supply Plan to provide~~ Resource Adequacy Capacity. The criteria for determining the types of resources that are eligible to provide Qualifying Capacity may be established by the CPUC or other applicable Local Regulatory Authority and provided to the CAISO.

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