



**California ISO**  
Your Link to Power

ORIGINAL

California Independent  
System Operator Corporation

August 10, 2009

The Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, D.C. 20426

**Re: California Independent System Operator Corporation**  
**Docket No. ER09-1064-000**  
**Compliance Filing 005**

FILED  
SECRETARY OF THE  
COMMISSION  
AUG 10 10 14 36  
FEDERAL ENERGY REGULATORY  
COMMISSION

Dear Secretary Bose:

The California Independent System Operator Corporation ("CAISO") hereby submits an original and five copies of the instant filing in compliance with the June 26, 2009 Order of the Federal Energy Regulatory Commission ("Commission" or "FERC").<sup>1</sup>

Two additional copies of this filing are enclosed. Please stamp these copies with the date and time filed and return them to the messenger.

## I. Background

On April 28, 2009, the CAISO filed proposed modifications to the CAISO Tariff to adopt a Resource Adequacy ("RA") Standard Capacity Product ("SCP") and an Ancillary Services must-offer obligation ("A/S MOO") for RA Resources ("April 28 Filing").<sup>2</sup> The implementation of an SCP, with Availability Standards and incentives for RA Resources, was proposed to promote reliability; reward resources that are most available to support grid operations; discourage Load Serving Entities and resources from "leaning" on others to detriment of supply sufficiency; facilitate the selling, buying, and trading of capacity by Market Participants to meet RA requirements; and reinforce the planning Reserve Margins established by the California Public Utilities Commission and Local Regulatory Authorities. The implementation of A/S MOO was proposed to enhance grid reliability and market efficiency by allowing the CAISO's markets to co-optimize the use of RA Capacity that is currently subject to an RA must offer obligation to provide Energy, Ancillary Services, or a combination of both, in accordance with each RA Resource's certified physical capability and the grid's needs for Energy and Ancillary Services in each market interval, in order to attain the most efficient use of the available RA Capacity.

<sup>1</sup> *California Indep. Sys. Operator Corp.*, 127 FERC ¶ 61,298 (2009) ("June 26 Order").

<sup>2</sup> Capitalized terms not otherwise defined herein have the same meaning as set forth in the CAISO Tariff, Appendix A, Master Definitions Supplement.

In its June 26 Order, the Commission accepted in part and rejected in part the CAISO's proposed tariff modifications. Overall, the Commission approved the SCP and A/S MOO proposals, subject to revisions required for the cut-off date for the grandfathering exemption, the calculation of Non-Availability Charges, the Availability Standard for non-Resource Specific System Resources, and other clarifications to the Tariff language that the CAISO agreed to make. The Commission directed the CAISO submit, within 45 days, a compliance filing consistent with the directives of the June 26 Order. The CAISO submits the instant filing to comply with those directives.

## **II. Discussion**

### **A. Standard Capacity Product**

#### **1. Cut-Off Date for Grandfathering Exemption**

The CAISO's April 28 Filing in this matter proposed to include Section 40.9.2(2) in the CAISO Tariff, under which capacity that would otherwise be subject to the Availability Standards program, but is being provided under a contract executed prior to January 1, 2009, or submitted to a Local Regulatory Authority for execution approval prior to January 1, 2009, would not be subject to the Non-Availability Charges or Availability Incentive Payments.

In its June 26 Order, the Commission changed the cut-off date for exempting existing contracts from SCP from the CAISO's proposed effective date of January 1, 2009 to June 28, 2009. The Commission explained that for purposes of Section 205 of the Federal Power Act, the CAISO provided notice of its filing to the Commission and to the public on April 28, 2009, the date on which the SCP proposal was filed with the Commission. Consequently, the Commission allowed the grandfathering provision to become effective sixty-days later on June 28, 2009. The Commission found that an exemption for contracts executed prior to June 28, 2009 satisfies statutory notice requirements, while mitigating the potential for parties to contract around the SCP availability standards, and directed the CAISO to revise its tariff.<sup>3</sup>

Consistent with the Commission's directive, the CAISO in this compliance filing has revised CAISO Tariff Section 40.9.2(2), Exemptions, to provide that, upon request, capacity under a resource specific power supply contract that existed prior to June 28, 2009 and RA Capacity that was procured under a contract that was either executed or submitted to the applicable Local Regulatory Authority for approval prior to June 28, 2009, and is associated with specific Generating Units or System Resources, will not be subject to Non-Availability Charges or Availability Incentive Payments. The exemption will apply only for the initial term of the contract and to the MW capacity quantity and RA Resources specified in the contract prior to June 28, 2009. The exemption shall terminate upon the conclusion of the initial contract term.

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<sup>3</sup> June 26 Order at P. 65-66.

## **2. Grandfathering Treatment of Additional RA Capacity that Becomes Available During the Primary Term of a Contract**

In addition to establishing the cut-off date for grandfathering existing contracts, CAISO Tariff Section 40.9.2(2) provides that, in the event an exempt contract is re-assigned or undergoes novation, the grandfathering exemption will not apply to extended terms, increased capacity, or additional resources beyond those specified in the original contract.

In their motions to intervene and protests to the CAISO's April 28 Filing in this matter, the California Municipal Utilities Association ("CMUA") and Six Cities<sup>4</sup> requested clarification as to how the exemption will apply to contracts that do not specify a fixed MW amount of capacity or which otherwise contemplate that additional capacity would become available under the contract at a future time during the initial term of the contract.<sup>5</sup>

In its answer to the comments and protests, the CAISO agreed to include the clarification requested by CMUA and Six Cities in this compliance filing.<sup>6</sup> In the June 26 Order, the Commission found that the clarifications proposed by Six Cities and CMUA are just and reasonable. With respect to Six Cities' requested clarification, the Commission determined that recognizing capacity additions allowed under the original grandfathered contract during its initial term would preserve the original agreement without allowing indefinite contract extension. Regarding CMUA's proposed clarification, the Commission found that specifying a ratio of a particular resource, rather than a megawatt quantity, for exemption from the availability standards would be consistent with the intent of the grandfathering provision.<sup>7</sup>

Accordingly, the CAISO proposes to revise Section 40.9.2(2) to allow the capacity increases for RA Resources subject to these contracts to be grandfathered; provided that 1) the capacity increases are expressly contained in the provisions of the grandfathered contract and occur during the primary term provided in the contract, including increases determined by ratio or means other than a fixed MW amount of capacity, and 2) the capacity increases do not result from contract extensions or other amendment to the original terms and conditions of the grandfathered contract. The modification also requires Scheduling Coordinators for RA Resources subject to these contracts to include in their certification of grandfathered contracts citation to any contract provisions that might entitle them to increased capacity from the contracted resource(s) during the primary term of the contract and the amount of additional capacity to which they might be entitled.

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<sup>4</sup> The Cities of Anaheim, Azusa, Banning, Colton, Pasadena and Riverside California (collectively, "Six Cities").

<sup>5</sup> CMUA at 11-12; Six Cities at 10-11.

<sup>6</sup> CAISO Answer at 21-22.

<sup>7</sup> June 26 Order at P. 67.

### **3. Determination of Resource Adequacy Capacity Subject to Non-Availability Charge**

As included in the CAISO's April 28 Filing, CAISO Tariff Section 40.9.6.1 proposed the methodology for determining the RA Capacity that would be subject to monthly Non-Availability Charges under the SCP program. Under that proposal, the amount of RA Capacity of an RA Resource that would be subject to the Non-Availability Charge would be determined in three tiers. First, if an RA Resource's actual availability was less than 50 percent for a given month, the RA Resource's entire RA Capacity would be subject to the Non-Availability Charge. Second, if an RA Resource's availability was greater than 50 percent but less than the Availability Standard minus 2.5 percent for a given month, the resource would be assessed the Non-Availability Charge for that portion of the resource's RA Capacity equal to the Availability Standard percent minus 2.5 percent minus the resource's actual availability for the month, as calculated in accordance with Section 40.9.4.2. Third, if an RA Resource's availability was equal to or greater than the Availability Standard less 2.5 percent, it would not be subject to the Non-Availability Charge.

In the June 26 Order, the Commission rejected use of the 50 percent threshold as not just and reasonable. The Commission found that a resource performing at 49.9 percent of the target availability would be providing a substantially different service to the CAISO than a resource performing at one percent, yet both resources would be subject to penalties for their entire RA Capacity. The Commission also agreed with Northern California Power Agency ("NCPA") and Silicon Valley Power ("SVP") that the CAISO's proposed use of 50 percent availability as the threshold for subjecting a resource's entire RA capacity to Non-Availability Charges could create perverse incentives and potentially have an adverse impact on reliability. Instead, the Commission determined that the assessment of Non-Availability Charges should more accurately reflect the actual value of the capacity being provided and should establish incremental Non-Availability Charges throughout the entire dispatchable range of RA Capacity above a resource's minimum operating level. The Commission accordingly directed the CAISO to submit a revised proposal for the assessment of Non-Availability Charges that takes a graduated approach<sup>8</sup>

Based on the Commission directive, this compliance filing proposes a revised methodology for determining the RA capacity subject to Non-Availability Charges. Under this revised methodology, the three-tiered approach is eliminated, and the calculation of subject RA Capacity will be performed using a formula that reflects a graduated approach throughout the dispatchable range of each RA Resource's RA Capacity. The formula will produce a graduated result by calculating the MW quantity of the RA Resource's RA Capacity that will be subject to a Non-Availability Charge based on the extent to which the resource's monthly calculated availability (MW) is less than the monthly Availability Standard minus the 2.5 percent deadband. Specifically, when an RA Resource's actual monthly availability calculated in accordance with Tariff Section 40.9.4.2 is less than the Availability Standard for that month minus the tolerance band of

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<sup>8</sup> June 26 Order at P. 41.

2.5 percent, the Non-Availability Charge will be assessed to a portion of the resource's non-exempt RA Capacity determined in accordance with the following formula:

If the value of X satisfies  $RA*(S - .025) > X \geq P_{Min}$ , then  
 $P = RA*(S - .025) - X$

If the value of X satisfies  $P_{Min} \geq X \geq 0$ , then  
 $P = RA - (X/P_{Min})*[RA(1 - (S - .025)) + P_{Min}]$

Where:

**P =** The RA Resource's RA Capacity subject to Non-Availability Charge

**S =** Monthly Availability Standard as a fraction, so that  $0 < S < 1.0$

**RA =** The RA Resource's RA Capacity (MW) less any exempt capacity

**X =** The RA Resource's monthly RA availability calculated in accordance with Section 40.9.4.2 (MW)

**Pmin =** The RA Resource's Master File minimum operating limit (MW)

The CAISO submits that this revised methodology complies with the Commission's directive to develop a more graduated approach to determining the RA Capacity subject to Non-Availability Charges. Under the formula, Non-Availability Charges will apply to a resource's entire RA Capacity only in instances where that resource's monthly calculated availability is 0 MW. As the resource's monthly calculated RA availability increases above 0 MW toward meeting the Availability Standard, the capacity to which the Non-Availability Charges apply will correspondingly decrease, to the point where the subject capacity will equal zero MW when the calculated availability equals the Availability Standard minus 2.5%. In other words, under the revised methodology there is a direct linear relationship between availability and Non-Availability Charges. An RA Resource that fails to meet the monthly Availability Standard but whose monthly calculated availability was 30 MW will have the Non-Availability Charge applied to fewer MW than if its monthly calculated availability was 20 MW.

The CAISO believes that this approach fully complies with the letter and the intent of the Commission's order. The CAISO therefore requests that the Commission approve the revised methodology as being in compliance with the June 26 Order and as a just and reasonable approach for assessing Non-Availability Charges.

#### **4. Non-Resource Specific System Resources**

##### **a. Availability Standard**

In the April 28 Filing, the CAISO proposed to establish a separate and distinct Availability Standard for non-Resource Specific System Resources that supply RA Capacity, with its own metrics and a separate funding mechanism for managing the incentive charges and payments. Key features of the CAISO's proposal regarding non-Resource Specific RA Imports included the following: 1) non-Resource Specific RA Imports would be separated into their own category for determining their compliance with the Availability Standard; 2) the Availability Standard would be set at 100 percent with no tolerance band; 3) the availability of non-Resource Specific System Resources providing RA Capacity would be measured by their offer of capacity into the CAISO's Day Ahead Market at the resource's appropriate scheduling point; 4) the monies from Non-Availability Charges (assessed at the monthly ICPM capacity payment price) would be used to fund Availability Incentive Payments only to resources in that separate category; and 5) consistent with the 100 percent Availability Standard, the resources would be obligated to offer the full amount of their designated RA Capacity in each hour and their Scheduling Coordinators must secure sufficient transmission rights to deliver these import offers to the CAISO border.

In its June 26 Order, the Commission found that the CAISO did not provide adequate justification that the proposed 100 percent standard for non-Resource Specific System Resources was just and reasonable. The Commission explained that the 100 percent standard did not appear to be based on an analysis of the historic availability of such resources, but rather was formed on CAISO assumptions regarding the flexibility of these resources, and what such resources should be able to provide under ideal conditions.<sup>9</sup> The Commission also expressed concern that non-Resource Specific System Resources may be subject to transmission outages at the interties, or external generation or transmission constraints, which could prevent the imports from meeting the 100 percent Availability Standard. The Commission accordingly directed the CAISO, on compliance, to submit a revised Availability Standard proposal with regard to non-resource specific imports.<sup>10</sup>

In response to the Commission's directive, the CAISO in this compliance filing proposes to retain the separate availability category for non-Resource Specific System Resources, but to eliminate the 100 percent Availability Standard for the RA Capacity from these resources and replace it on a temporary basis with the same monthly Availability Standard as applied to the internal RA fleet, including the same tolerance band of 2.5 percent, until the CAISO is able to compile and evaluate performance data on these resources that will support a specific Availability Standard for this category. The CAISO believes that extending application of the RA fleet standard and tolerance band to all resources that provide RA capacity, whether they are located within the CAISO or external to its border, is a fair and equitable approach for the initial year of the

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<sup>9</sup> June 26 Order at P. 26.

<sup>10</sup> *Id.*, at P. 27.

SCP in the absence of historic performance data for the non-Resource Specific System Resources that could empirically support an alternative standard. Therefore, for RA Compliance Year 2010, the CAISO will assess the availability of all non-exempt RA Capacity using the same monthly standard. After the CAISO compiles sufficient data about the historic availability of the non-Resource Specific System Resources, it will evaluate that data in order to determine an appropriate availability standard for these resources.

The use of the RA fleet standard will not disadvantage the Non-Resource Specific System Resources. If the Scheduling Coordinator for such a resource offers its full non-exempt RA Capacity amount into the CAISO market and the CAISO does not fully accept the offer, this will not count against the resource's availability calculation. In addition, as discussed below, under the SCP unit substitution provisions, non-Resource Specific System Resources will be permitted to request unit substitution and substitute internal-CAISO resources for their imports. By substituting internal resources to provide energy at a Scheduling Point, Scheduling Coordinators for non-Resource Specific System Resources can minimize the chances that their SCP availability calculation will be adversely affected if transmission outages external to the CAISO limit their ability to offer energy to the Integrated Forward Market ("IFM"). As also discussed below, in the event that a non-Resource Specific System Resource is prohibited by CAISO Tariff Section 30.8 from bidding across an out-of-service transmission path at its designated Scheduling Point, the CAISO will exclude the hours in which the prohibition applies from the calculation of the availability metric for that resource. These measures should allow Scheduling Coordinators for these resources to manage the risks associated with the application of the SCP in the manner proposed.

At this time, the CAISO is unable to propose a metric specific to the non-Resource Specific System Resources based on their historical performance. The CAISO cannot perform the type of empirical analysis suggested by the Commission in the June 26 Order to calculate a metric for these resources based on their historic availability because the CAISO does not have the data needed to undertake such an evaluation. In particular, the IFM bidding behavior, which is the basis for calculating availability for these resources, was only initiated with the start-up of the new CAISO markets on April 1, 2009. Prior to that time, there was no bid-based day-ahead energy market that would provide a meaningful basis for setting an Availability Standard appropriate for the new market structure. As a consequence, the CAISO at present does not have sufficient outage or availability data to calculate an historically-based Availability Standard for these resources. For the same reason, the CAISO will not include actual availability data from these resources in determining the RA fleet average that will be used as the Availability Standard.

For the reasons discussed above, the CAISO believes that it has proposed a reasonable means by which to measure availability for this category of RA Capacity that will provide appropriate incentives to maximize availability, despite the absence of associated resource-specific physical supply resources and outage data.

## **b. Unit Substitution**

The CAISO's April 28 Filing included a unit substitution provision in CAISO Tariff Section 40.9.4.2.1 that would allow the Scheduling Coordinator for a supplier of RA Capacity that is tied to a specific generating resource to substitute, subject to CAISO approval, alternative non-RA Capacity in the event the RA Resource is on an Outage. In the transmittal letter for that filing, the CAISO stated that the provision would also allow, subject to approval in each instance, substitution of non-RA Capacity of a specific generating resource internal to the CAISO Balancing Authority Area for RA Capacity provided by a non-Resource Specific System Resource.<sup>11</sup>

In response to comments about this provision, the CAISO in its answer indicated that it would modify Section 40.9.4.2.1 on compliance to make clear that non-Resource Specific System Resources are permitted to substitute internal-CAISO resources for their imports. That amendment is reflected in this compliance filing.

## **c. Transmission Outages on CAISO Interties**

Comments on the April 28 Filing by Powerex and Six Cities claimed that the CAISO should have revised the Availability Standard for non-Resource Specific System Resources to make clear that any hours in which those resources are prohibited by CAISO Tariff Section 30.8 from bidding across out-of-service transmission paths at Scheduling Points should be excluded from the calculation of the Availability Standard.

The CAISO's answer agreed to make the suggested clarification.<sup>12</sup> The June 26 Order did not require the CAISO to incorporate Powerex's requested modification to Sections 40.9.7.1 and 40.9.7.2 to exclude from the availability calculation hours when a non-Resource Specific System Resource is precluded from bidding due to a transmission path that has been de-rated to zero, but it did state the Commission's expectation that the CAISO consider Powerex's request in developing its revised proposal.

The CAISO has revised Sections 40.9.7.1 and 40.9.7.2 in this compliance filing to reflect the suggested clarification. As indicated in the CAISO's answer, to implement this revision, the CAISO will need Scheduling Coordinators to provide this information to the CAISO on a monthly basis in order to reflect it in the calculation. Accordingly, the CAISO will also revise the Business Practice Manual for Reliability Requirements to provide a reporting format.

## **B. Ancillary Services Must Offer Obligation**

### **1. RA Resources that Self-Provide Ancillary Services**

The CAISO's A/S MOO proposal included modifications to Sections

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<sup>11</sup> April 28 Filing at p. 25.

<sup>12</sup> CAISO Answer at p. 43.



40.5.1(1)(i)(a) and 40.6.1(1)(a) to require that the Local Capacity Area Resources of Modified Reserve Sharing LSEs and RA Resources (respectively) physically capable of operating must submit Economic Bids for Energy and/or Self-Schedules for all their RA Capacity that is not covered by a Submission to Self-Provide Ancillary Services. In comments on the CAISO's April 28 Filing, NRG questioned why capacity resources that are used to self-provide Ancillary Services are not required to submit Energy Bids. NRG claimed that the CAISO's proposal to exempt self-provided Ancillary Services from A/S MOO is inconsistent with the stated objective for the RA program to assure that resources are made available to the CAISO through Day-Ahead submission of a Bid or Self-Schedule

In answer to NRG's comments, the CAISO agreed to adopt the change suggested by NRG.<sup>13</sup> The Commission's June 26 Order also agrees with NRG that the self provision of Ancillary Services should not reduce an RA Resource's obligation to offer Energy into the CAISO's markets. The Commission found that RA Resources have the obligation to offer energy into CAISO markets to ensure that such capacity is available and that markets will be sufficiently liquid. The Commission further found that the self provision of Ancillary Services does not satisfy this energy obligation and directed the CAISO to modify its tariff so that the self provision of Ancillary Services does not relieve an RA Resource from its Energy offer obligation.

The CAISO in this compliance filing has revised Sections 40.5.1(1)(i)(a) and 40.6.1(1)(a), to remove the qualifying phrase "that is not covered by a Submission to Self-Provide Ancillary Services."

## **2. Obligation To Remain Available in Real Time**

As modified in the April 28 Filing, CAISO Tariff Section 40.6.2 establishes the real-time availability requirements for RA Resources. In its comments on that filing, Powerex requested two clarifications to Section 40.6.2 to make clear that: 1) resources with schedules in the Day-Ahead Market are obligated to remain available only for those trading hours for which they are scheduled; and 2) resources not scheduled in the Day-Ahead Market have no real-time obligation to remain available, except those associated with short or long-start resources.

The CAISO's answer agreed that, for non-dynamic non-Resource Specific System Resources that provide RA capacity, the obligation to be available in real time applies only to those hours of the Trading Day for which the resource was awarded a Schedule in either the Integrated Forward Market or the Residual Unit Commitment process. The CAISO proposed to include both clarifications in Section 40.6.2 for non-dynamic, non-Resource Specific System Resources that provide RA Capacity, since other types of System Resources that provide RA capacity are covered in Sections 40.6.5.1 and 40.6.5.2 which specify offer obligations consistent with Sections 40.6.1 and 40.6.2.<sup>14</sup> The Commission's June 26 Order found that Powerex's proposed

<sup>13</sup> CAISO Answer at 68-69.

<sup>14</sup> CAISO Answer at 69.

clarifications to Section 40.6.2 would be helpful in clarifying the availability obligations, and directed the CAISO to make such modification in this compliance filing.<sup>15</sup>

Consistent with the CAISO's answer and the June 26 Order, the CAISO has revised Section 40.6.2 to include these clarifications.

### 3. Calculation and Use of CAISO Generated Bids

CAISO Tariff Section 40.6.8 describes the calculation and use of CAISO Generated Bids for RA Capacity subject to the requirements of Sections 40.5.1, 40.6.1, or 40.6.2 for which the CAISO has not received notification of an Outage. In comments on the CAISO's April 28 Filing, Powerex recommended, *inter alia*,<sup>16</sup> that the CAISO modify this section to clarify that, if a Scheduling Coordinator for an RA Resource submits a partial bid for the resource's RA Capacity, the CAISO will insert a Generated Bid only for the remaining RA capacity.

The CAISO's answer agreed to this change.<sup>17</sup> In addition, the Commission found that the CAISO should clarify that a generated bid should only be submitted by the CAISO for remaining RA Capacity if a generator has only submitted a partial bid, and directed the CAISO to make that clarification.<sup>18</sup>

The CAISO's compliance filing revises Section 40.6.8 to include the required clarification.

### III. Materials Provided In the Instant Compliance Filing

The following documents, in addition to this transmittal letter, support the instant filing:

Attachment A	Clean sheets incorporating the red-lined changes contained in Attachment B
Attachment B	Red-lined changes to the Tariff to implement the revisions contained in this filing

### IV. Effective Date

The CAISO requests that the Commission approve this compliance filing as submitted to be effective on January 1, 2010.

<sup>15</sup> June 26 Order at P. 28.

<sup>16</sup> The other tariff clarifications recommended by Powerex were not agreed to by the CAISO or adopted by the Commission in the June 26 Order. See June 26 Order at P. 133.

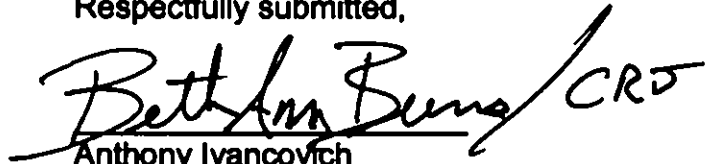
<sup>17</sup> CAISO Answer at 70.

<sup>18</sup> June 26 Order at P. 133.

**V. Conclusion**

The CAISO respectfully requests that the Commission accept the instant filing as complying with the directives of the June 26 Order.

Respectfully submitted,

A handwritten signature in black ink that reads "Beth Ann Burns" followed by the initials "CRD" to the right. The signature is written in a cursive style.

Anthony Ivancovich  
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System Operator Corporation

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, DC, this 10<sup>th</sup> day of August, 2009.

/s/  
Christopher R. Jones  
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401 9<sup>th</sup> Street, NW, Suite 1000  
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(202) 662-2181

**Attachment A – Clean Sheets**  
**Standard Capacity Product Amendment Filing**  
**ER09-1064-000**  
**Fourth Replacement CAISO Tariff**  
**August 10, 2009**

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION  
FERC ELECTRIC TARIFF  
FOURTH REPLACEMENT VOLUME NO. 1

Second Revised Sheet No. 786  
Superseding First Revised Sheet No. 786

- (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 and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services. For Local Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary Services, the resource must submit Economic Bids 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. However, 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) Resource Adequacy Resource 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. Resource Adequacy Capacity participating in RUC will be optimized using zero dollar (\$0/MW-hour) RUC Availability Bid.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION  
FERC ELECTRIC TARIFF  
FOURTH REPLACEMENT VOLUME NO. I

First Revised Sheet No. 789A  
Superseding Original Sheet No. 789A

**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 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. For Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary Services, the resource must submit Economic Bids 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.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION  
 FERC ELECTRIC TARIFF  
 FOURTH REPLACEMENT VOLUME NO. I

First Revised Sheet No. 790B  
 Superseding Original Sheet No. 790B

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.

- (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. Resource Adequacy Capacity participating in RUC will be optimized 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 for all or part of their Resource Adequacy Capacity must remain available to the CAISO through Real-Time for Trading Hours for which they receive an IFM or RUC schedule, 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.

Short Start Units or Long Start Units that are 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 is required to be available to the CAISO through Real-Time and 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



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Third Revised Sheet No. 795  
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**40.6.8 Use of Generated Bids.**

Prior to completion of the Day-Ahead Market, the CAISO will determine if Resource Adequacy Capacity subject to the requirements of Sections 40.5.1 or 40.6.1 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 CAISO Day-Ahead Market. 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. If a Scheduling Coordinator for an RA Resource submits a partial bid for the resource's RA capacity, the CAISO will insert a Generated Bid only for the remaining RA capacity. 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 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 be calculated as provided in the Business Practice Manuals. 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.

**40.6.9 Availability Requirements for Grandfathered Firm Liquidated Damages Contracts.**

Resource Adequacy Capacity represented by a Firm Liquidated Damages Contract and relied upon by a Scheduling Coordinator in a monthly or annual Resource Adequacy Plan shall be submitted as a Self-Schedule or Bid in the Day-Ahead IFM to the extent such scheduling right exists under the Firm Liquidated Damages Contract.

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- (2) Capacity under a resource specific power supply contract that existed prior to June 28, 2009 and 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 June 28, 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 June 28, 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 June 28, 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 June 28, 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.

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- (3) For a contract entered into prior to June 28, 2009 that provides for the amount of Resource Adequacy Capacity to increase during the original term of the contract, based on a ratio of the Resource Adequacy Resource's output or due to an addition of capacity, the exemption provided in subsection (2) of this Section 40.9.2 will apply to the additional capacity allowed under the contract: provided that the capacity increase (i) is expressly contained in the provisions of the contract, (ii) occurs during the primary term of the contract; and (iii) does not result from contract extensions or other amendments to the original terms and conditions of the contract. Scheduling Coordinators for Resource Adequacy Resources subject to contracts that provide for such capacity increases or additions must include in their certification, in addition to the requirements of subsection (2) of this Section 40.9.2, (i) the citation to any contract provisions that might entitle them to increased exempt Resource Adequacy Capacity from the contracted resources during the primary term of the contract; (ii) the amount of additional capacity to which they might be entitled; and (iii) the actual effective date of the capacity increase. If the actual amount of capacity and/or the actual effective date of the capacity increase is not known at the time of the initial certification, the Scheduling Coordinator shall provide a supplemental certification(s) when this information becomes known.
- (4) Demand response resources and resources whose Qualifying Capacity value is determined by historical output from the CPUC or a Local Regulatory Authority that does not adjust the historical output data to correct for the possible double-counting of Outages 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.

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- (5) 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
- (6) 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, which shall be applied 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 consecutive hours of each non-weekend, non-federal holiday day. The five hour period 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 annually determine the five hour range for the Availability Assessment Hours for each month of the next Resource Adequacy Compliance year prior to the start of each Resource Adequacy Compliance Year and shall specify them in the Business Practice Manual.

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(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. A Scheduling Coordinator for a non-Resource Specific System Resource that has an outage that would count against its availability may, prior to the close of the IFM, request to substitute a non-Resource Adequacy Resource that is internal to the CAISO Balancing Area Authority 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 one hundred percent (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.

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**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 one (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 provide 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

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de-rates. Scheduling Coordinators for Resource Adequacy Resources whose maximum output capability is ten (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 Resource Adequacy Resource with actual availability calculated in accordance with Section 40.9.4.2 that is less than the Availability Standard minus the tolerance band of two and a half percent (2.5%) for a given month will have the Non-Availability Charge assessed to that portion of its non-exempt Resource Adequacy Capacity equal to one hundred percent (100%) minus the ratio of its actual availability calculated in accordance with Section 40.9.4.2 to the Availability Standard minus two and a half percent (2.5%). The specific formula for determining RA Capacity subject to Non-Availability Charges is set forth in the Business Practice Manual for Reliability Requirements.

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- (2) 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%).
- (3) 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 rate shall not exceed three times the Non-Availability Charge rate. The Availability Incentive Payment the CAISO shall pay to 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.



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**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 utilize the same Availability Standard determined for other Resource Adequacy Resources in accordance with Section 40.9.4.1, but will have its own availability calculations as well as a separate account for settling 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 the Availability Standard determined in accordance with Section 40.9.4.1 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. The Availability Standard applicable to a non-Resource Specific System Resource shall not include any hours in which the resource was prohibited by Section 30.8 from bidding across an out-of-service transmission path at its designated Scheduling Point. A non-Resource Specific System Resource providing Resource Adequacy Capacity whose monthly availability calculation under Section 40.9.7.2 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 non-Resource Specific System Resource providing Resource Adequacy Capacity whose monthly availability calculation under Section 40.9.7.2 is more than two and a half percent (2.5%) above the monthly Availability Standard 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.

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**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, Bids for or submissions to Self-Provide 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 non-exempt Resource Adequacy Capacity for all Availability Assessment Hours, times one hundred (100) to obtain a number between zero (0) and one hundred percent (100%). 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. In determining monthly availability of a non-Resource Specific System Resource under Section 40.9.7.2, any hours in which the resource was prohibited by Section 30.8 from bidding across an out-of-service transmission path at its designated Scheduling Point will be excluded from the calculation. Scheduling Coordinators for non-Resource Specific System Resources must submit a monthly report of such hours occurring under Section 30.8, in the format and manner described in the Business Practice Manual for Reliability Requirements.

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

A Non-Resource-Specific System Resource that provides Resource Adequacy Capacity and whose actual availability calculated in accordance with Section 40.9.7.2 is less than the Availability Standard defined in Section 40.9.7.1 minus the tolerance band of two and one-half percent (2.5%) for a given month shall be assessed a Non-Availability Charge. This charge for such a resource shall apply to that portion of the resource's designated non-exempt Resource Adequacy Capacity equal to one hundred percent (100%) minus the ratio of its actual availability calculated in accordance with Section 40.9.7.2 to the Availability Standard minus two and one-half percent (2.5%). The Non-Availability Charge will then equal the resource's applicable capacity that is subject to Non-Availability Charges 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

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Resource Adequacy Capacity that exceed the Availability Standard established in Section 40.9.7.1 plus the tolerance band of two and one-half percent (2.5%) for that same Trade Month. The funds will be distributed to each such resource in proportion to the resource's share of the total non-exempt Resource Adequacy Capacity provided by non-Resource-Specific System Resources that are eligible for Availability Incentive Payments or the month.

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 non-exempt 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**

By July 1 of each year, the CAISO will 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.

**Attachment B – Blacklines**  
**Standard Capacity Product Compliance Filing**  
**ER09-1064-000**  
**Fourth Replacement CAISO Tariff**  
**August 10, 2009**

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**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 Bids or Self-Schedules for Demand equal to one hundred percent (100%) and for Supply equal to one hundred and fifteen percent (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 one hundred and fifteen percent (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 and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services. For Local Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary Services, the resource must submit Economic Bids 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. However, 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) Resource Adequacy Resource 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. Resource Adequacy Capacity participating in RUC will be optimized using 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 one hundred percent (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. The CAISO will not curtail for the purpose of meeting Ancillary Service requirements a Self-Schedule of a resource internal to a Metered Subsystem that was submitted by the Scheduling Coordinator for that Metered Subsystem. 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 Generated 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 Generated Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling Coordinator may submit evidence 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.



**Attachment B – Blacklines**  
**Standard Capacity Product Compliance Filing**  
**ER09-1064-000**  
**Fourth Replacement CAISO Tariff**  
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**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 Bids or Self-Schedules for Demand equal to one hundred percent (100%) and for Supply equal to one hundred and fifteen percent (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 one hundred and fifteen percent (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 ~~that is not covered by a Submission to Self-Provide Ancillary Services,~~ and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services. For Local Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary Services, the resource must submit Economic Bids 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. However, 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) Resource Adequacy Resource 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. Resource Adequacy Capacity participating in RUC will be optimized using 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 one hundred percent (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. The CAISO will not curtail for the purpose of meeting Ancillary Service requirements a Self-Schedule of a resource internal to a Metered Subsystem that was submitted by the Scheduling Coordinator for that Metered Subsystem. 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 Generated 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 Generated Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling Coordinator may submit evidence 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) one hundred and seven percent (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 ~~that is not covered by a Submission to Self-Provide Ancillary Services,~~ 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. For Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary Services, the resource must submit Economic Bids 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 one hundred percent (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 Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. The CAISO will not curtail for the purpose of meeting Ancillary Service requirements a Self-Schedule of a resource internal to a Metered Subsystem that was submitted by the Scheduling Coordinator for that Metered Subsystem. 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 Generated 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 Generated Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling Coordinator may submit evidence 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.

- (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. Resource Adequacy Capacity participating in RUC will be optimized 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 for all or part of their Resource Adequacy Capacity must remain available to the CAISO through Real-Time for Trading Hours for which they receive an IFM or RUC schedule, 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.

Short Start Units or Long Start Units that are 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 is required to be available to the CAISO through Real-Time and 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 one hundred percent (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, as long as such curtailment does not lead to a real-time shortfall in energy supply. 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.

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#### **40.6.8 Use of Generated Bids.**

Prior to completion of the Day-Ahead Market, the CAISO will determine if Resource Adequacy Capacity subject to the requirements of Sections 40.5.1 or 40.6.1 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 CAISO Day-Ahead Market. 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. If a Scheduling Coordinator for an RA Resource submits a partial bid for the resource's RA capacity, the CAISO will insert a Generated Bid only for the remaining RA capacity. 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 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 be calculated as provided in the Business Practice Manuals. 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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#### **40.9.2 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) Capacity under a resource specific power supply contract that existed prior to ~~January 4~~ June 28, 2009 and 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 ~~June 28, January 4~~, 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 4~~ June 28, 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 4~~ June 28, 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 ~~June 28, January 4~~, 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) For a contract entered into prior to June 28, 2009 that provides for the amount of Resource Adequacy Capacity to increase during the original term of the contract, based on a ratio of the Resource Adequacy Resource's output or due to an addition of capacity, the exemption provided in subsection (2) of this Section 40.9.2 will apply to the additional capacity allowed under the contract; provided that the capacity increase (i) is expressly contained in the provisions of the contract, (ii) occurs during the primary term of the contract; and (iii) does not result from contract extensions or other amendments to the original terms and conditions of the contract. Scheduling Coordinators for Resource Adequacy Resources subject to contracts that provide for such capacity increases or additions must include in their certification, in addition to the requirements of subsection (2) of this Section 40.9.2, (i) the citation to any contract provisions that might entitle them to increased exempt Resource Adequacy Capacity from the contracted resources during the primary term of the contract; (ii) the amount of additional capacity to which they might be entitled; and (iii) the actual effective date of the capacity increase. If the actual amount of capacity and/or the actual effective date of the capacity increase is not known at the time of the initial certification, the Scheduling Coordinator shall provide a supplemental certification(s) when this information becomes known.

~~(34)~~ Demand response resources and resources whose Qualifying Capacity value is determined by historical output from the CPUC or a Local Regulatory Authority that does not adjust the historical output data to correct for the possible double-counting of Outages 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.

~~(45)~~ 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

(56) 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.

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#### **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, prior to the close of IFM, 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. A Scheduling Coordinator for a non-Resource Specific System Resource that has an outage that would count against its availability may, prior to the close of the IFM, request to substitute a non-Resource Adequacy Resource that is internal to the CAISO Balancing Area Authority 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.

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#### **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.~~
- (21) 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 the tolerance band of two and a half percent (2.5%) for a given month will have the Non-Availability Charge assessed to that portion of its non-exempt 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, determined in accordance with the following formula:

If the value of X satisfies  $RA \cdot (S - .025) > X \geq P_{Min}$ , then  
 $P = RA \cdot (S - .025) - X$

If the value of X satisfies  $P_{Min} \geq X \geq 0$ , then  
 $P = RA - (X/P_{Min}) \cdot [RA(1 - (S - .025)) + P_{Min}]$

Where:

$P =$  The RA Resource's RA Capacity subject to Non-Availability Charge

$S =$  Monthly Availability Standard as a fraction, so that  $0 < S < 1.0$

$RA =$  The RA Resource's RA Capacity (MW) less any exempt capacity

$X =$  The RA Resource's monthly calculated RA availability calculated in accordance with Section 40.9.4.2 (MW)

$P_{min} =$  The RA Resource's Master File minimum operating limit (MW)

- (32) 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%).
- (34) 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.

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#### **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 utilize the same Availability Standard determined for other Resource Adequacy Resources in accordance with Section 40.9.4.1, but will have its own Availability Standards and availability calculations, as well as a separate account for settling 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 the Availability Standard determined in accordance with Section 40.9.4.1 on hundred percent (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. The Availability Standard applicable to a non-Resource Specific System Resource shall not include any hours in which the resource was prohibited by Section 30.8 from bidding across an out-of-service transmission path at its designated Scheduling Point. A non-Resource Specific System Resource providing Resource Adequacy Capacity whose monthly availability calculation under Section 40.9.7.2 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 non-Resource Specific System Resource providing Resource Adequacy Capacity whose monthly availability calculation under Section 40.9.7.2 is more than two and a half percent (2.5%) above the monthly Availability Standard ~~Resources that achieve less than the one hundred percent (100%) Availability Standard will be subject to Non-Availability Charges. Resources that achieve the one hundred percent (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, Bids for or submissions to Self-Provide 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 non-exempt Resource Adequacy Capacity for all Availability Assessment Hours, times one hundred (100) to obtain a number between zero (0) and one hundred percent (100%). 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. In determining monthly availability of a non-Resource Specific System Resource under Section 40.9.7.2, any hours in which the resource was prohibited by Section 30.8 from bidding across an out-of-service transmission path at its designated Scheduling Point will be excluded from the calculation. Scheduling Coordinators for non-Resource Specific System Resources must submit a monthly report of such hours occurring under Section 30.8, in the format and manner described in the Business Practice Manual for Reliability Requirements.

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

A Non-Resource-Specific System Resources that provides Resource Adequacy Capacity and whose actual availability calculated in accordance with Section 40.9.7.2 is less than the ~~that fail to meet the one hundred percent (100%)~~ Availability Standard defined in Section 40.9.7.1 minus the tolerance band of two and one-half percent (2.5%) for a given month shall be assessed a Non-Availability Charge. This charge for such a resource shall apply to that portion of the resource's designated non-exempt Resource Adequacy Capacity equal to one hundred percent (100%) minus the ratio of its actual availability calculated in accordance with Section 40.9.7.2 to the Availability Standard minus two and one-half percent (2.5%)~~one hundred percent (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 subject to Non-Availability Charges 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 on hundred percent (100%)~~exceed the aAvailability Standard established in Section 40.9.7.1 plus the tolerance band of two and one-half percent (2.5%) for that same Trade Month. The funds will be distributed to each such resource in proportion to the resource's share of

the total non-exempt Resource Adequacy Capacity provided by non-Resource-Specific System Resources that are eligible for Availability Incentive Payments or the month achieve the one hundred percent (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 non-exempt 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.

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